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APPROACHES TO THE INVESTIGATIVE PRAXIS

COORDINATORS

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Each of the works was evaluated and favorably reviewed for publication through a committee formed exprofeso (p. 113)

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CONTENIDO

INTRODUCTION

The electronic journal Praxis Investigativa REDIE emerged in June 2009. Since its inception it is projected as a strategic option publisher Durango Educational Research Network to disseminate educational research, both national and state levels.

Over time, its quality indicators were consolidated: the number of papers published in each issue of the journal increased and the number of authors from outside the Durango Network of Educational Researchers increased; likewise, its pages included the participation of researchers from different states of our Mexican republic, as well as with foreign researchers from countries such as Cuba and Venezuela.

Little by little their pages were being a reference of quality works that began to be cited by other researchers; however, except for two or three works, all the articles were published in Spanish which limited, without doubt, its dissemination.

Based on the recognition of this situation and considering that the works could offer serious and quality information to English-speaking readers, the decision was made to publish an electronic book with the best works published in the last five years.

For this purpose, a Scientific Committee was formed consisting of five PhDs and Researchers with different national and international publications. Each of them was asked to evaluate the works according to three criteria:

- Quality of the methodological process followed (investigations) or of the constructed argumentative line (essays)
- Validity of the results (investigations) or of the analysis carried out (tests)
- Interest for speakers of other languages

The results allowed selecting the best jobs. Subsequently, each of the authors was asked to move their article to the English language. In total, 13 articles were selected and translated by the project coordinators deciding to create two books.

The present book (number two) is constituted by seven of these works. They deal with different areas of investigative praxis. Some areas are referred directly by the investigations themselves (chapters two, three, four and five), while others perform various analyzes on the methodology of the investigation (chapters one, six and seven).

Each of these works was evaluated satisfactorily by the Scientific Committee and at this time we make them available to the English-speaking public, hoping to represent a contribution to their respective fields of study.

APPLICATION OF MULTILEVEL STATISTICAL ANALYSIS

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Abstract

The present study demonstrates an implementation of multilevel statistical analysis, specifically the multilevel regression (considering two levels) in the context of educational research. Before, lectured about levels of explanation used in psychology and applications of multilevel analysis, considering their advantages compared to traditional regression. To illustrate the application of the multilevel regression analysis took into account the statistical software MLwiN 2.20 and the database of public access NELS: 88, which corresponds to an educational research of large longitudinal type held in the American context. Through the method of pets IGLS were tested five models, whereas fixed and random effects, with the objective of verifying the influence of variables on level 1; that is, the level of the student as well as variables on level 2; i.e., the level of the school in the scores of proof of mathematics. There was the strongest effects to the socio-economical level, both at the level of the school as the level of the student, ethnicity at the level of the student, as well as of this variable aggregated to the level of the school. The model with fixed and random coefficients showed a better adjustment and the variable ethnicity had more strong random effect, followed by sex, showing that men and whites and Asians had a better performance in mathematics, but that this performance was different between the schools.

Key words: Multilevel statistical analysis; educational research; NELS: 88.

Introduction

This study aims to exemplify the application of multilevel statistical analysis on the data from the NELS88. Initially but we highlight examples of multilevel explanations in psychology and importance of multilevel statistical analysis for an adequate understanding of the problems of research of the psychologist. In this sense, surely the idea of levels of analysis is as old as the own psychology. It is common in this discipline is the influence of the individual, group of friends, family, society and even countries or different cultures. Some examples can facilitate this understanding.

Examples of multilevel explanations in psychology

The multilevel explanations can be seen in equation C = f (PA) in which Kurt Lewin emphasized the necessity of studying dispositional traits that motivate the behavior, as well as the environmental characteristics, which form the psychological situation (Lewin, 1936). The equation explains, therefore, that the behavior is a function of the person and the environment. A systemized study more about levels of analysis in psychology is to Doise (2002) who theorized about four levels of analysis in social psychology: the levels of analysis of intra-individual processes, inter-individual and situational, inter-group and at the societal level or ideological, and on the levels of psychological, sociological and psycho-sociological process of anchoring of the social representations (Amaral, 1997).

In the area of pro-social behavior, as an example, the fact that these behaviors involve social processes, cognitive, motivational and biological led to approach them in a multilevel perspective, considering (Penner, Dovidio, Piliavin & Schroeder, 2005): a) the level "meso" which involves dyads (traditional focus of psychology) in the context of a specific situation; (b) the micro level which involves the origins of pro-social trends (neural bases) and sources of variation of these trends in individuals and (c) the macro level which involves contexts of groups and large organizations - voluntary cooperation.

Another example comes from the area of anti-social behavior. Herrenkohl et al. (2000) in a study of longitudinal character, and from a perspective that puts emphasis on dynamic influence of risk factors between different periods of development, those authors studied the effect of five areas of important variables (risk factors) in juvenile violence, namely: individual, family, school, peers and the community. Some important variables were (individual domain): gender, hyperactivity; (domain): family violence and parental crime; (domain): low school performance, changes in school; (Pairs): having friends of criminals and members of gangs and in the field of community: economic deprivation and disorganization of the Community.

The last example comes from studies of values in which there is an intersection of cultural and social psychology. According to the theory of basic values, these can be understood in a hierarchical structure of personal values, core values and social values (Gouveia, 2003) and in accordance with the theory of circular structure of motivational types developed by Schwartz (1992) these motivational types (10 values) were present in all cultures as the personality traits in the model of the big five dashes (McCrae & John, 1992) or the recognition of emotions (Elfenbein And ambady, 2002). According to Schwartz and Bardi (2001) that the values differ between individuals within societies and between nations and Fisher, Vauclair, Fontaine and Schwartz (2010) stressed that "One of the challenges for cross-cultural psychology is to identify structures of psychological constructs at the individual country level" (p.135).

Multilevel Statistics Applications

In the context of empirical research studies with the application of the multilevel statistics have been developed in various areas of psychology, social psychology, educational, environmental and development (Brown, Perkins & Brown, 2003; Dedrick et al., 2009; van den Berg, Vlek & Coeterier, 1998; Regoeczi, 2003). In a review article of multilevel statistical surveys, Dedrick et al. highlighted that multilevel or hierarchical data are common in education, psychology or sociology. More emphatic, Rasbash, Steele, Browne and Prosser (2004) stated that in the social sciences, biological and medical data, organized hierarchically are the norm, and if you ignore this structure brings negative consequences for the analysis.

In addition, Laros and Marcian (2008b) explained the advantages of multilevel regression analysis in comparison to traditional regression analysis when you have data that have a hierarchical structure. These authors explained that even though the regression is often used in the social sciences and humanities in many cases the independence of observations, which is a fundamental assumption of multivariate analysis, is violated. These authors continue explaining that both in the social sciences and humanities, the data collected include often information of individuals who are grouped in clusters, leading to dependence between the observations. This feature of the data in turn leads to an underestimation of the standard errors of regression coefficients.

According to these authors' cases like one described above the correct is to take into account the hierarchical structure of the data and use the multilevel analysis, because it works simultaneously with multiple levels of aggregation. This analysis properly estimated standard errors, confidence intervals and hypothesis testing (Laros & Marciano, 2008b). When the researchers ignore the hierarchical structure of data and interpret an effect which is the group as being of the individual, from a statistical point of view loses power and signal (Tabachnick & Fidell, 2007).

Dedrick et al. (2009) explained that dealing with the school context, students are grouped into classes which in turn form schools that form school districts. In this sense, even though studies have already been developed in the international context in several areas, it seems that in the national context its use has been more connected to research in educational assessment (Andrade & Laros, 2007; Laros & Marciano, 2008ab; Jesus, 2004). Because of this, it presents the analysis of a database available in educational assessment, known as NELS: 88.

Method

The NELS:88, National Education Longitudinal Study of 1988, it is a database of public access of the government of the United States that affects a large longitudinal research with students from the eighth grade (Laros & Marciano, 2008b). According to these authors, this research involves many variables which can be considered as predictors of academic performance, such as gender, ethnicity, do homework, educational level of the parents of the student, socio-economical level (level 1 variables; student's level), percentage of minority, geographic region, type of school (variables in level 2; level of school).

Multilevel Regression Analysis of NELS: 88

For the multilevel regression analysis of NELS:88 We used the *statistical software* MLwinN 2.20 pets *iterative generalised least squares* (IGLS) considering the random and fixed part of the model (Rasbash, Steele, Browne & Goldstein, 2009; Snijders, 2007). Specifically, were tested five models to explain the variable math; i.e., to explain the performance of pupils in mathematics. The Model 1 is the empty template; the Model 2 is the model with the inclusion of control variables, socioeconomic status and education of parents, both at the level of the student as the level of the school; the Model 3 is the model with the inclusion of variables on level 1, i.e., the variables at the level of the student (race, sex and homework); the Model 4 is the model with the variables of the level of aggregate school (race, sex household duty of private household, minority and geographic region) and the Model 5 is the model after inserting variables on level 1 that have a random regression coefficient.

Participants/data

For a better understanding of these variables these are characterized in Table 1 below in accordance with the participants/data from the study. The variables were recoded to obtain results always positive (e.g.: man and woman = 1 = 0).

Results and Discussion

For the presentation of the results was followed by the format of those presented by Laros and Marciano (2008ab).

Table 1. Characterization of the sample according to data from the NELS: 88

Characteristic	Criteria	Code	*F*	%
Gender[a]	Man	1	10564	49%
	Woman	2	11016	51%
Ethnicity[b]	Asia or From Pacific Islands	1	1277	6%
	Hispanic	2	2633	12%
	Black, of origin Non-hispanic	3	2480	11%
	White, of origin Non-hispanic	4	14933	69%
	American Indian or native from Alaska	5	257	1%
Homework	None	0	1779	8%
	Less than 1 hour	1	8949	41%
	1 hour	2	4942	23%
	2 hours	3	2285	11%
	3 hours	4	1653	8%
	4 to 6 hours	5	1563	7%
	7 to 9 hours	6	262	1%
	10 or more hours	7	147	1%
Parent's schooling	Secondary education incomplete	1	2116	10%
	Complete secondary education	2	4099	19%
	Technical level	3	8627	40%
	Graduation	4	3341	15%
	MBA	5	2086	10%
	Masters or Doctorate	6	1311	6%
Percentage of minority	None	0	2760	13%
	1 to 5%	1	4905	23%
	6 to 10%	2	2478	11%
	11 ~ 20%	3	2928	14%
	21 ~ 40%	4	3173	15%
	41 ~ 60%	5	1879	9%
	61 ~ 90%	6	1943	9%
	91 ~100%	7	1514	7%
Geographical Region of school[c]	North East	1	4246	20%
	Central North	2	5659	26%
	South	3	7470	35%
	West	4	4205	19%

Notes: a = recoded: 2 = 0; b = recoded: 1 and 4 = 1 and 2, 3 and 5 = 0;
c = recoded: 1 and 2 = 0 and 3 and 4 = 1

The data can still be characterized in relation to socioeconomic level of the school (M = 0.04, SD = 0.51) and socioeconomic level of the student (M = -0.03, DP = 079).

Table 2. Multilevel regression results for models with only the intercept (Model 1) and of the model with the control variables (model 2).

EXPLANATORY VARIABLES MODEL (M1)				
Fixed effect		**Effect**	**EP**	**Reason t**
Intercepto		50,80	0.17	_
Random effect - Level 2 - σ^2_{u0}				
Variance - Intercepto		26.56	1.37	19.39
Random effect - Level 1 - σ^2_{and}				
Variance of R_{ij}		76.62	0.76	100.82
Intra-Class Correlation (ICC)	0.26			
Deviance M1	156,965			
No of parameters estimated	3			
EXPLANATORY VARIABLES		**MODEL 2 (M2)**		
Fixed effect		**Effect**	**EP**	**Reason t**
Intercepto		50,98	0.10	_
Socioeconomic level of School		3.81	0.80	4.75
Socioeconomic level of student		3.43	0.15	22.87
Parent's schooling		0.58	0.09	6.44
Aggregated Parent's schooling		0.52	0.54	0.96
Random effect - Level 2 - σ^2_{u0}				
Variance - Intercepto		6.77	0.46	14.72
Random effect - Level 1 - σ^2_{and}				
Variance (Rij)		69.71	0.69	101.03
Intra-Class Correlation	0.09			
Deviance M2	153.941			
No. estimated parameters	7			
Difference *Deviance*M1 - *Deviance* M2	3,025			
Difference of parameters M2 - M1	4			
Test χ^2	756			
The Level 1 variance explained	9%			
The Level 2 variance explained	75%			

Initially presents the results of the first model (the null model, M1, model with fixed effects and random), which is the model with only the intercept, which presented a value of 50.98. According to Laros and Marciano (2008b) In this case, this value is understood as the general average in math test. Since the variance of the intercept presented a reason *t* 19.39, much >1.96, interprets that this average is not equal between schools. The Variance Rij (76.62, with *t* = 100.82) shows that in schools there is variability (intra-school) between the test scores in mathematics.

The ICC of 0.26 represents approximately 26% of the variability of the scores on the test of Mathematics is explained by the level of the school. It is suggested that high values show that there is no independence in the comments and certainly justifies the use of multilevel analysis in place of a traditional regression analysis (Laros & Marciano, 2008b; Tabachnick & Fidell, 2007). Tem-se sugerido, por outro lado, que este valor deve ao menos ser diferente de zero para se justifica o uso da análise multinível (Hox, 2002). In addition, it has been observed that even a small amount of this coefficient can inflate the Type I error (Tabachnick & Fidell, 2007).

Table 2 also shows the results for the M2, which is the model with the addition of the control variables: socio-economical level of school, socio-economical level of the student, parents' schooling and parental schooling aggregated. With the exception of this last variable all were statistically significant (>1.96) in accordance with the reason *t*. All effects were positive, which indicates that the higher the socioeconomic level and parental schooling, the higher the probability of higher scores in mathematics. The variance of the level of the school that was 26.56 in M1 fell to 6.77 in M2, as well as the variance of the level of student who was 76.62 fell to 69.71.

Laros and Marcian (2008b) explained that the reduction of variance at the level of the school can be understood by the fact that the proportion of each of the variables entered have been distributed unequally among the schools. For instance, if you have schools with many boys and little girls or otherwise. This decrease in the variances of the levels resulted in a conditional intra-class correlation of 0.09. The *deviance* of M2 (153,941) was reduced in comparison to the M1 (156,965), what was to be expected with the input of explanatory variables of control. The test χ^2, given by the difference of the *deviances* divided by the difference between the estimated parameters, 756 (much higher than the cutoff point of 1.96) shows that the M2 is better than the first model. The explained variance of levels was calculated according to the formula for the Hox (2002), resulting in a much higher percentage at the level of the school (75%) in comparison to the level of the student (9%).

The M3 added the variables on level 1: ethnicity, homework and sex (see Table 3). What has resulted in an improvement of the *deviance* (152.589) in relation to the previous model? The model shows that students of Asian ethnicity or white (categorized as 1), with more hours dedicated to homework in the week and males have better performance in Mathematics. Test χ^2 was 450.67, corroborating that this model has a better fit than the M2. In addition, all variables showed a statistically significant effect ($p > 1.96$). Draws attention, particularly the effect of the variable ethnicity (3.34). Another variable that deserves consideration concerns the control variable socio-economical level of the student (2.72). The variance of the level 1 in comparison with the previous model decreases and the level 2 resulted in an intra-class correlation of 0.07. Finally, even with the entry of the variables at the level of the student verifies that the highest percentage of explained variance is at the level of the school (25%). This certainly also justifies the use of multilevel analysis.

In M4, we found higher effect of aggregate ethnic group (3.35) but also a strong impact of ethnicity (2.97) to explain the scores of students in mathematical proof (see Table 3), showing that Asians and whites predict better performance. This model once more also draws the attention of the socio-economical level of the student (2.76), showing that the highest level was associated with higher scores on the test of mathematics. On the other hand, based on the M2, found 29% of explained variance at the level of the school and a percentage of 5% of explained variance at the level of the student. The *deviance* of this model was a little smaller (152,552) than the previous (152,589) and the Test $\chi^2 = 12.33$ shows that the M4 is better than the M3.

As can be observed in Table 4, the results for the model with the inclusion of variables in the level of the student, fixing random coefficients at the level of the school (M5) show that the coefficients are statistically significant (in this case all >1). These random coefficients are coefficients that vary between the groups (Tabachnick & Fidell, 2007). This means that the variables of ethnicity, gender, homework, socio-economical level of the student and parental schooling has a different effect on schools.

Table 3. Multilevel regression results for the models at the level of the student (Model 3) and the school (Model 4).

EXPLANATORY VARIABLES	MODEL 3 (M3)		
Fixed effect	**Effect**	**EP**	**Reason t**
Intercepto	45,85	0.18	_
Socioeconomic level of School (Control)	1.83	0.73	2.50
Socioeconomic level of student (Control)	2.72	0.15	18.13
Level of parents' schooling (Control)	0.62	0.09	6.89
Level of education of parents aggregated (Control)	1.22	0.49	2.49
Ethnicity (Level 1)	3.34	0.16	20.88
Homework (Level 1)	1.20	0.04	30
Gender (Level 1)	0.51	0.11	4.64
Random effect - Level 2 - σ^2_{u0}			
Variance - Intercepto	5.06	0.37	13.68
Random effect - Level 1 - σ^2_{and}			
Variance of R_{ij}	65,94	0.65	101.45
Intra-Class Correlation 0.07			
Deviance M3 152.589			
No of parameters estimated 10			
Difference *Deviance* M2 - M3 1,352			
Difference of parameters- M2 - M3 3			
Test χ^2 450.67			
Explained variance of level 1 5%			
Explained variance of level 2 25%			
EXPLANATORY VARIABLES	**MODEL 4 (M4)**		
Fixed effect	**Effect**	**EP**	**Reason t**
Intercepto	45,21	0.33	_
Socioeconomic level of school	0.58	0.77	0.75
Socioeconomic level of student	2.76	0.15	18.4
Parent's schooling	0.62	0.09	6.89
Aggregated Parent's schooling	1.69	0.50	3.38
Ethnicity	2.97	0.18	16.5
Homework	1.20	0.04	30
Gender	0,51	0.11	4.64
Aggregate ethnic	3.35	0.66	5.08
Region	0.50	0.19	2.63
Percentage of minority	0.24	0.08	3
Random effect - Level 2 - σ^2_{u0}			
Variance - Intercepto	4.82	0.36	13.39
Random effect - Level 1 - σ^2_{and}			
Variance (Rij)	65.91	0.65	101.4
Intra-Class Correlation 0.07			
Deviance M4 152.552			
No. estimated parameters 13			
Difference *Deviance* M3– *Deviance* M4 37			
Difference of parameters M4 - M3 3			
Test χ^2 12.33			
Explained variance of level 1 5%			
Explained variance of level 2 29%			

For example, the ethnicity variable with greater effect on proof of mathematics, may have presented a very large effect at a school and median in another.

With respect to the contribution of individual variables, it appears that the fixed effect socio-economical level of the school was not statistically significant, but there are recommendations to consider the model as a whole (Kreft & Leeuw, 1998). In this sense, it appears that the *deviance* of M5 was 152,444, which is smaller than that presented by the M4 and the Test χ^2 of 5.4 allows to conclude that the M5 shows a statistically better adjustment. If you have opted for not interpret the coefficients of explained variance, since it is a template (complex) of random coefficients.

Table 4. Results of the multilevel regression model with random coefficients in the student's level (model 5).

EXPLANATORY VARIABLES	**MODEL 5 (M5)**		
Fixed effect	**Effect**	**EP**	**Reason t**
Intercepto	45,23	0.33	_
Socioeconomic level of School (Control)	0.52	0.77	0.68
Socioeconomic level of student (Control)	2.72	0.15	18.13
Level of parents' schooling (Control)	0.62	0.09	6.89
Level of education of parents aggregated (Control)	1.80	0.50	3.6
Ethnicity (Level 1)	2.94	0.20	14.70
Homework (Level 1)	1.19	0.04	29.75
Gender (Level 1)	0.52	0.13	4
Aggregate ethnic	3.39	0.67	5.06
Geographical Region	0.55	0.19	2.89
Percentage of minority	0.23	0.08	2.88
Random effect - Level 2 - σ^2_{u0}			
Variance- Intercepto	5.06	0.37	13.68
Variance - Socioeconomic Tendency Level of Students	0.96	0.92	1.04
Variance - Socioeconomic Tendency Level of Parents	0.37	0.32	1.16
Variance - Ethnicity tendency	5.23	1.24	4.22
Variance - Homework tendency	0.33	0.08	4.13
Variance - Gender tendency	3.75	0.08	46.88
Random effect - Level 1 - σ^2 and			
Variance of R_{ij}	63.37	0.68	101.45
Deviance M5	152.444		
No of parameters estimated	33		
Difference *Deviance* M4 - M5	108		
Difference of parameters- M5 - M4	20		
Test χ^2	5.4		

In short, through these analyzes we found strong effects mainly from socioeconomic level and ethnicity at the level of the school and student. In accordance with the formula for the Hox (2002) the level of the school explained more variance in comparison to the level of the student. The model with fixed and random coefficients presented the best adjustment. The model with fixed and random coefficients showed a better adjustment and the variable ethnicity had more strong random effect, followed by gender, showing that men and whites and Asians had a better performance in mathematics, but that this performance was different between the schools.

These results may be important to subsidize public policies, directing educational programs for specific groups e.g. in order to mitigate the discrepancies currently observed.

Conclusions

It is estimated that this work with multilevel analysis, by means of the multilevel regression technique, the database of the NELS: 88 exemplified it satisfactorily if the use of the technique in the educational context. In this way, it is believed that the objective of this work has been fully achieved. The usefulness of multilevel statistical analysis has already been emphasized for the humanities and social sciences. In the specific case of Brazil, it appears that this technique has been much more applied in the educational area. However, the theoretical review carried out this work allows you to envision that its use may be of great importance also for the social psychology. Even though studies have already been undertaken in this direction it is important to establish *guidelines* for the researchers (Dedrick et al., 2009).

This statistical technique, therefore, it is of great value to the social psychology when you want to check the influence of groups for example. It should be noted, on the other hand, who often do not have the necessary apparatus for performing studies of large sizes as the educational study exemplified with the database of NELS: 88. Can actually be a hindrance to the application of the technique of data collection to compose large samples? In this sense, explains that if the sample of the level 2 is small, considered of 50 or less, the analysis would have been harmed, because it would lead to biased estimates of standard errors of the level 2 (Maas & Hox, 2005). In fact this is a difficulty when you want to measure the level of influence the type of schools, universities or cities, because not all the research account with financial resources to do so.

As regards the improvement of public policies of educational assessments allows himself to reflect on the importance and consolidation of educational conditions. Allows you to reflect on the use of this resource statistics and the improvements in targets and indicators in the Brazilian Context: pointing out possibilities of creating measures that configure a more solid planning and, consequently, a better use of policies and programs. This implies, among many other issues, face impasses and historical gaps on the conditions of educational measurement and possible adaptations of a model more assertive, capable of identifying specific foci and punctual in process of formation.

Even in the field of social psychology and public policies, specifically in the work dedicated to the Brazilian educational knowledge in the field, this makes us cogitate an opening of work demand for psychology. The participation of research evaluation and/or monitoring of political programs, educational, or in support of other teams of work developed in institutions that governs and prioritize improvement in this sector. It is like emphasizes Sampaio (2011) is from the statistics, translated by good indicators, explanatory models, predictive models, which managers can build bases for public policies based on diagnoses. The design of a policy based on finding does not solve the education, but emphasizes the ongoing need for monitoring and evaluation. What once more configures the essential role of statistical models.

References

Amaral, V. (1997). Níveis de análise de ancoragem das representações sociais da inteligência e do seu desenvolvimento: The objective social positions to social identities. *Psychological Analysis, 15*(2), 305-317.

Andrade, J.M., & Laros, J. A. (2007). Factors associated with School Performance: a multilevel study with data of the SAEB/2001. *Psychology. Teoria e Pesquisa, 23,* 33-42.

Berg, A.E. V. D., Vleck, C.A.R., & Coeterier, J.F. (1998). Group differences in the aesthetic evaluation of nature development plans: A multilevel approach. *Journal of Environmental Psychology, 18,* 141–157.

Brown, B., Perkins, D.D., & Brown, G. (2003). Place attachment in a revitalizing neighborhood: Individual and block levels of analysis. *Journal of Environmental Psychology, 23,* 259–271.

Dedrick, R. F., Ferron, J.M., Hess, M.R., Hogarty, K.Y., Kromrey, J.D., Lang, T. R., Niles, J.D., & Lee, R.S. (2009). Multilevel modeling: A review of methodological issues and applications. *Review of Educational Research, 79,* 69-102.

Doise, W. (2002). Da psicologia social à psicologia societal. *Psychology. Teoria e Pesquisa, 18,* 1, 027-035.

Elfenbein, H.A., & Ambady, N. (2002). On the universality and cultural specificity of emotion recognition: The meta-analysis. *Psychological Bulletin, 128,* 2, 203-235.

Fischer, R., Vauclair, C.-M., Fontaine, J.R.J. & Schwartz, S.H. (2010). Are individual-level and country-level value structures different? Testing Hofstede's legacy with the Schwartz Value Survey. *Journal of Cross-Cultural Psychology, 41*(2), 135-151.

Gouveia, V.V. (2003). A natureza motivacional dos valores humanos: Evidências acerca de uma nova tipologia. *Estudos de Psicologia, 8* (3), 431-443.

Herrenkohl, T.I., Maguin, E., Hill, K.G., Hawkins, J.D., Abbott, R.D. & Catalano, R.F. (2000). Developmental risk factors for youth violence. *Journal of Adolescent Health, 26,* 176-186.

Cobbe, J. (2002). *Multilevel analysis: techniques and applications.* Mahwah, NJ: Lawrence Erlbaum Associates.

Jesus, G. R. de. (2004). *Fatores que afetam o desempenho em português: um estudo multinível com dados do SAEB 2001.* Dissertação de Mestrado, Universidade de Brasília, Brasília.

Kreft, I. G. G.; De Leeuw, J. (1998). Introducing multilevel modeling. Acessado em 23 de dezembro de 2010 de: http://www.stat.ucla.edu/~deleeuw/sagebook

Laros, J. A., & Marciano, J.L.P. (2008a). Análise multinível aplicada a dados do NELS: 88. *Estudos em Avaliação Educacional, 19,* 263-278.

Laros, J. A., & Marciano, J.L.P. (2008b). Índices educacionais associados à proficiência em Língua Portuguesa: um estudo multinível. *Avaliação Psicológica, 7,* 371-389.

Natter, K. (1973). Princípios de Psicologia Topológica. São Paulo: Cultrix. (Trabalho original publicado em 1936).

Maas, C.J.M., & Hox, J.J. (2005). Sufficient sample sizes for multilevel modeling. *Methodology, 1*(3), 86-92.

McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality, 60*(2), 175-215.

Penner, L.A., Dovidio, J.D., Piliavin, J.A. & Schroeder, D.A. (2005). Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology, 56,* 365-392.

Rasbash, J., Steele, F, Browne, W., & Goldstein, H. (2009). *A user's guide to MLwiN Version 2.10.* London Centre for Multilevel Modeling, Institute of Education.

Rasbash, J., Steele, F, Browne, W., & Prosser, B. (2005). *A user's guide to MLwiN Version 2.0.* London Centre for Multilevel Modeling, Institute of Education.

Regoeczi, W.C. (2003). When context matters: A multilevel analysis of household and neighbourhood crowding on aggression and withdrawal. *Journal of Environmental Psychology, 23,* 457-470.

Sampaio, C. E. M. (2011). Monitoramento e avaliação do plano nacional de educação. Em Dourado, L. F. (org.) (2011). Plano Nacional de Educação (2011-2012): avaliação e perspectivas. 2 ed. Goiana: Editora UFG; Belo Horizonte: Autêntica Editora.

Schwartz, S.H., & Bardi, A. (2001). Value hierarchies across cultures: Taking a similarities perspective. *Journal of Cross-Cultural Psychology, 32,* 268-290.

Schwartz. S.H. (1992). Universals in the context and structure of values: Theoretical advances and empirical tests in 20 countries. Em M. Zanna (Ed.). *Advances in experimental social psychology*, vol. 25 (pp. 1-65). Orlando, FL: Academic Press.

Snijders, T.A.B. (2007). *Example session MLwiN.* University of Oxford of Groningen.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics.* Boston: Pearson Education.

INSTITUTIONAL GENDER CULTURE IN STUDENTS OF A PUBLIC HIGHER EDUCATION INSTITUTION

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Abstract

The results of the application of an instrument designed to evaluate the gender organizational culture of students in a public higher education institution (PHEI) in Hermosillo, Sonora, are described and analyzed. The survey, composed of 32 questions, was answered by 1,020 students on an electronic format. In this investigation, we report several dimensions: *school gender policy*, *equal participation of women and men*, *mechanism for sharing information about violence*, *institutional communication*, *university wellness,* and *training and merits*. The students' answers show that in this particular PHEI there is equal access to scholarships, academic events, and promotion of leadership, among other opportunities for both sexes. With regards to laws and programs that promote women's rights, more than half of the students are aware of their existence. The reliability of the instrument was .97 Crombach's alpha coefficient. We conclude that most students consider there is equal access to opportunities and that the instrument is reliable for use in other contexts.

***Keywords**: youth, school environment, education and culture*

Introduction

Institutional gender culture is a relatively new concept and therefore scarcely studied. The debate around this topic has sprung from the changes in the political and social structures of our time, which require the inclusion of gender perspective in public and private contexts. Institutions of higher education are not the exception.

Based on international agreements such as the Convention on the Elimination of All Forms of Violence against Women (UN, 1979); the Inter-American Convention to Prevent, Punish, and Eradicate Violence Against Women, “Convention of Belém do Pará” (OAS, 1994); or the Fourth World Conference on Women in Beijing (UN, 1995), laws have been implemented and reformed at both national and state levels to enforce the objectives that such agreements propose. These laws establish the need to mainstream gender transversal perspective to assess the implications of regulations concerning gender equality between men and women (Rodríguez Gaona, 2009). To achieve this purpose, higher education institutions (HEI), as a result of their formative character, are called to contribute to the eradication of patriarchal discourses that promote stereotyped gender roles associated with inequality, discrimination, and violence (Cubillas et al, 2016).

Based on agreements reached with the United Nations Organization through the Declaration and Beijing Platform for Action (UN, 1995), Mexico has pushed forward an institutional gender culture agenda. The National Institute of Women (INMUJERES, 2002) describes it as the gist system that defines everyday interactions, occurring under written and unwritten rules and characterized by the use of power. Therefore, it implies not only subjective aspects but also objective and specific practices.

With the enactment of the General Act on Equality between Women and Men, which establishes the roles of the three levels of government to face inequalities and non-discrimination issues (Law No. 211, 2015; Román, Domínguez, Saucedo, and Tanori, 2016), and the Law of Women's Access to a Life Free of Violence (Law No. 179, 2015), the regulatory framework was strengthened, making it mandatory for public institutions to mainstream gender transversal perspective. The foregoing is stated in the National Development Plan 2013-2018 (Government of the Republic, 2013), and for this reason, some national public higher education institutions (PHEI) have adhered to the government's agenda on gender equity, including actions to evaluate and transform their institutional culture. According to Buquet (2011), PHEI have the greatest opportunity to produce scientific knowledge regarding gender equity. This is the result of their intent to serve as promoters of citizenship building for a better quality of life. Consequently, to generate substantive changes, it is acknowledged that actions that go beyond public policies are required from within the institutions.

However, despite these initiatives and the inclusion of gender perspective in PHEI, information on how they have permeated the lives of university students is scarce, and there are no instruments to assess this. INMUJERES (2002), as the country's regulator on gender policies, designed and implemented an instrument to evaluate the inclusion of gender perspective within institutional contexts. The aim was to measure the gap between the aspired values from an egalitarian institutional gender culture perspective and what is actually put into practice. Despite its importance, its reliability was not validated, and even though it was applied to a sample of 277,089 public servants, its application in different regions and to different populations is relevant.

Thus, the present study aims to analyze and describe university youth's knowledge on gender perspective at a PHEI, based on an adaptation of the questionnaire designed by INMUJERES (2002). The main purpose is to evaluate institutional gender culture in this population and generate knowledge to implement subsequent actions to prevent violence or gender discrimination in this type of public institutions. To accomplish this, the concepts of institutional culture and gender perspective that theoretically support this research are revised first. Then, the methodology comprising a survey as a quantitative instrument is described. Finally, the results and conclusions are presented, which point to the fact that most students consider there is equal access to opportunities. Additionally, the instrument is found to be reliable for use in other contexts.

Theoretical considerations

Education and Gender Perspective

The laws and reforms that have been passed so far at the national level are intended to implement gender perspective to help reduce the gap that exists between men and women. Lagarde (1996) points out that gender perspective is structured from ethics and leads to a post-humanist philosophy because it criticizes the androcentric conception of society that left half of humanity aside, that is, women. On the other hand, Lamas (1996) points out that, in theory, gender is understood as the symbolization or cultural construction that refers to the relationship between the sexes. Likewise, the author alludes that gender, as a concept, affects both men and women and the contrasting relationship between femininity and masculinity. According to Lamas (1996) and Scott (1996), from a psychological perspective, gender is a category in which three basic instances are articulated: gender assignment (labeling, attribution), gender identity, and gender role.

Based upon this, gender perspective aims to configure a new way to perceive the social construction that, thus far, confers power to some and subdues others. To do so, it proposes a new viewpoint for subjects, society, history, and politics, which do not take into account or devalue women. This viewpoint recognizes women and men as such with their diverse generic possibilities of existence, a basic principle for the construction of an egalitarian and democratic society.

From this perspective, school becomes the main instance to promote social change. In addition to providing education with a gender perspective, it can extend such mechanisms through the design of textbooks and the planning of non-sexist programs, as well as the implementation of policies that seek equal opportunities among teachers (Buquet, Cooper, Mingo and Moreno, 2013, Pacheco, 2011). For this reason, educational activities that force women and men to be feminine and masculine attached to stereotyped models also need to be eradicated.

For Lamas (1996), it is important that a gender perspective that introduces a change in citizen’s system of priorities is developed. This perspective requires a communication process that arises from the nucleus where differentiation, and hence discrimination, begins. However, such objectives can only be achieved through the mainstreaming of transversal gender perspective, a process that ensures its inclusion into all social structures with the aim of assessing the implications for women and men of any action that is implemented, including legislation; public policies; and administrative, economic, and cultural activities in public and private institutions (Law No. 211, 2015).

The vision of the authors mentioned above, particularly the use of education as a way to build a society capable of living in equal conditions and with equal access to opportunities, constitutes the gender perspective that sustains this research. Similarly, the emphasis of Lamas (1996) and Lagarde (2001) on the need to eliminate discrimination both in the labor system and in education supports the idea that gender equity must be initiated and strengthened through the mainstreaming of a transversal gender perspective in HEI. In this way, institutional culture is permeated, including the young people who graduate from them.

Institutional Gender Culture in Education

In the educational field, Pérez Gómez (1999) defines institutional gender culture as a set of meanings and behaviors produced by the school as a social institution. In turn, Frigerio, Poggi, and Tiramonti (2006) created a classification of the elements that make up institutional educational culture, such as socialization, monitoring, and control systems; linkage; member grouping; the degree of belonging; relationships dynamics; established values; work criteria; operating styles; and conceptions concerning change.

Regarding the same topic, the authors refer that educational institutions are socio-cultural entities characterized and operated by contextual and organizational factors (Frigerio, Poggi, and Tiramonti, 2006). Therefore, the institutional culture will be shaped by the problems and the historical and social context of institutions. That is to say, institutional culture is dependent on both internal and external mechanisms and processes, as well as the stakeholders that participate in it (INMUJERES, 2002). From this logic, institutional gender culture in the educational sphere would be the sum of actions undertaken to mainstream transversal gender perspective into policies and values of educational institutions. This creates the attention and brings solutions from the root of a historical and current problem, considering the school is the main agent of change within a society (Bourdieu, 2000).

In short, institutional gender culture seeks to eradicate inequality issues through the application of certain lines of action. Munévar and Villaseñor (2005) point out that the political and educational uses of gender transversal mainstreaming require the consolidation of structures that facilitate planning, monitoring, and controlling for the effects of a gender perspective. In addition, they emphasize the need to incorporate equality as a lived reality, beyond the symbolic efficacy or political will there might be. In this way, a hopeful panorama is observed, since domination mechanisms, as social constructs, can be deconstructed to give way to new paradigms that allow gender equality (Stamarski and So Hin, 2015). In what follows, this work on gender culture at a PHEI is described.

Methodology

A cross-sectional survey technique was used for this study. Through this instrument, demographic information regarding the students' knowledge about institutional gender culture in their university of affiliation was obtained. Additionally, questions regarding knowledge about school policies on gender, equal participation between men and women, information mechanisms on violence, institutional communication, university health, as well as training and merits were asked. The PHEI is located in the city of Hermosillo, Sonora, Mexico.

Participants

The sample consisted of 1,020 female and male university students aged 17 to 39 years old and a mean of age 20.1 (2.238 s.d.). They were elected by a non-probabilistic convenience sampling. The students came from anyone of the 23 scholar programs of the PHEI. Table 1 presents the characteristics of the sample by sex and academic area.

Table 1
Sample Distribution

Academic division	**Sex**		**Total**
	mens	Women	
Economic and Administrative Sciences	186	301	487
Biological and Health Sciences	49	66	115
Engineering	177	144	321
English Language Teaching	41	56	97
TOTAL	453	567	1020

Source: Records of the PHEI. August to December 2015

Instrument

A questionnaire designed on an electronic format to evaluate the gender organizational culture of students in the PHEI was the Instrument. It was composed of 32 questions about of age, sex, academic field, school gender policy, equal participation of women and men, mechanism for sharing information about violence, institutional communication, university wellness, and training and merits.

The instrument was based on an adaptation of the questionnaire designed by INMUJERES (2002) that evaluate institutional gender culture of the staff in the Federal Public Administration (FPA) to generate knowledge and to implement subsequent actions to prevent violence or gender discrimination in this type of public institutions. The items were constructed as indicators in each dimensión mentioned above. We worked with the consideration that, the higher the score on the questionnaire, the greater the knowledge towards the indicators.

Process

Data collection was conducted during the school year from August to December 2015. The questionnaires to students who agreed to participate in the classroom computer via email using Google Forms survey form, was sent. The advantages of the survey via Internet are its low cost, flexibility in time for the participant to respond, to avoid influence from the interviewer and automatic tabulation of the data. The average time to answer was 90 minutes.

The participation of the students was voluntary and confidential. The instrument was self-applied and was carried out during class hours supervised by full time teachers from all academic areas and with authorization from teachers and university authorities.

Analysis of the information

The data were analyzed with the statistical software IBM-SPSS (Statistical Package for the Social Sciences, version 21). The significance of the differences by sex and academic degree was established through the Student's t Test for independent samples in the case of scalar data and the x^2 test, for the categorical data related to knowledge questions.

The scale on gender institutional culture had 32 affirmations; all of them with a multiple choice, against which the students expressed their level of agreement or disagreement. The response options were: Strongly disagree (1), mostly disagree (2), neither agree nor disagree (3), mostly agree (4) and totally agree (5).

Results

Regarding the knowledge that students have about laws and programs with a gender perspective, it was observed that most of them indicated having information about them. Women expressed, in a greater proportion than men, having knowledge about the General Law for Equality between men and women (64.4% vs. 57.6% respectively) and the General Law of Women's access to a life free of violence (61.1% vs. 53.1%), with statistically significant differences.

Approximately half of the women indicated having knowledge about a school administrative area, aimed at addressing issues of gender violence in the university. A third of the students show interest about participating in courses, workshops and conferences, with a focus on gender and half of the women in taking a course of a subject about such topic (Table 1).

Table 1
Knowledge and participation of students on gender related issues

Indicators	Women	Men	X^2	p
Awareness about the existence of the General Law for Equality Between Men and Women.	64.4	57.6	3.406	.03*
Awareness about the existence of the General Law of Women's Access to a Life Free of Violence.	61.1	53.1	5.141	.01*
Awareness about the existence of the National Program for the Equality Between Men and Women 2012–2018.	42.0	40.7	.106	.402
Knowledge about the administrative or academic area dealing with gender violence related issues at the university.	49.9	41.6	4.675	.01*
Participation in courses, workshops, conferences or lectures on gender perspective.	29.5	29.1	.008	.500
Interest in enrolling in a school subject on a gender perspective.	51.1	33.8	17.933	.000*

*p ≤ .05 estadísticamente significativo.

Opinion from both Female and Male Students on the Gender Equality Institutional Practices. Differences by Sex.

Table 2 shows a trend of higher mean values for women in all of the analysis dimensions, which indicates that they express greater degrees of agreement with the implementation of institutional actions that promote gender equality in the PHEI studied. The differences between men and women are statistically significant in four areas: *school gender policies, information mechanisms on violence, institutional communication and university health.*

Regarding the *equal participation of men and women* plus *training and merits*, there were no significant differences (Table 2). The values of means are located towards degrees of greater agreement with these indicators. Low mean values are shown by the *university health* dimension, which means that responses close to disagreements predominate.

The greater access of women to higher education allows their access to more information, which sensitizes them about the issues that concern them, a situation that until a couple of decades ago was not even considered in the university scenarios (Palomar, 2011).

Table 2

Opinion of both male and female students about the university gender institutional culture by gender.

Institutional indicators	Global average	Women average	Men average	T Value	P
School gender policies	3.62	3.69	3.48	2.731	.007*
Equal participation between men and women	3.68	3.72	3.59	1.703	.089
Violence information mechanisms	3.70	3.79	3.54	2.382	.01*
Institutional Comunication	3.84	3.91	3.69	2.059	.04*
University health	2.37	2.26	2.58	1.663	.008*
Training and merits	3.53	3.59	3.43	1.725	.08

*p ≤ .05 statistically significant.

Gender Institutional Culture Awareness at the University by Semester

When comparing the responses between new students and students close to graduating from the PHEI concerning their perception of actions with a gender perspective in school and the exercise of women's rights, the students of last semesters are who show higher degrees of agreement with these in the area of university health (Table 3). This could indicate that the gender mainstreaming actions carried out by the PHEI in this area have allowed them to gain greater knowledge about the actions undertaken, allowing them to permeate some of the young people (Sánchez and Villagómez, 2012).

Table 3

Perception of both male and female students on univeristy gender institutional culture by semester.

Institutional indicators	Global Average	Average 1st. Semester	Average 7th. Semester	T Value	P
School gender policies	3.66	3.62	3.75	1.210	.227
Equal participation between men and women	3.78	3.72	3.92	1.835	.06
Violence information mechanisms	3.82	3.79	3.88	.669	.504
Institutional Comunication	3.92	3.90	3.99	.620	.536
University health	2.39	2.50	2.10	2.305	.02*
Training and merits	3.57	3.54	3.65	.657	.380

*p ≤ .05 statistically significant.

Awareness on the Gender Institutional Culture at the University by Level of Participation in Promotion Activities

It is revealed —by means of contrasting the gender institutional actions that promote gender equality among students—, that those who participated in courses, workshops or conferences on gender perspective have higher scores in the scale than those who had not done so (Table 4).

Table 4

Perception of both male and female students about the university gender institutional culture, in accordance with their participation in courses and workshops on such topic

Institutional indicators	Participating Yes Average	Participating No Average	T Value	P
School gender policies	3.78	3.58	2.521	.01*
Equal participation between men and women	3.86	3.64	2.763	.006*
Violence information mechanisms	3.98	3.64	3.147	.002*
Institutional Communication	4.17	3.77	3.821	.000*
University health	2.47	2.34	.959	.338
Training and merits	3.75	3.50	2.578	.01*

*p ≤ .05 statistically significant.

This means that they have more favorable and positive attitudes toward the various institutional indicators. This could indicate that the programs and institutional projects have managed to sensitize the students who manage to identify the actions in favor of equality.

Conclusions

Based on the results obtained in the study hereby, it can be observed that the gender institutional culture in the PHEI under study has permeated in the lives of the students, whose either greater or lesser sensitivity towards gender equality issues became directly related with their academic level. This shows the importance of establishing gender equality policies in PHEIs, in order to generate changes in the perspective of the student body, as proposed by Pacheco (2011), Palomar (2011), plus Sánchez and Villagómez (2012).

Regarding the item intended to investigate the existence of equality in the selection criteria for holding positions, students indicate that such equality is actually met because gender is not an aspect taken into account to evaluate candidates. However, when disaggregated by gender, statistically significant differences are observed between men and women. Thus, it was revealed that the policies implemented in order to mainstream the gender perspective in the institution under study have a greater impact on women. Men seem to be more resistant to change, not because of a biological issue, but because they are summited to greater social pressures to comply with models of hegemonic masculinities (Aguayo and Nascimento, 2016).

Likewise, it is observed that it is women who show a greater interest and knowledge about the gender perspective, as well as in the administrative instances to which they must turn in case of an incident of violence. This confirms the current dissemination of women's rights. The INMUJERES and both the gender state and municipal instances participate actively in programs that promote gender mainstreaming through educational actions.

The application of the instrument in the PHEI under study provided data that describe the level of awareness on behalf of most of the students about the policies and actions to prevent discrimination and gender inequality in the institution. It is shown as well that the students are able to identify the gender violence related issues and recognize the measures applied by their university to eradicate it. However, a percentage is not aware of this particular information. Therefore, it is pertinent to continue studying the gender institutional culture in PHEI, in order to offer a guide for the design of measures that promote gender equality in these sort of institutions. Moreover, it is relevant to reinforce those actions, which could have already been applied, having those that have not been achieved, improved, thus.

References

Aguayo, F. y Nascimento, M. (2016). Dos décadas de estudios de hombres y masculinidades en América Latina. *Sexualidad, Salud y Sociedad.* 22: 207-220. Recuperado de: http://www.scielo.br/pdf/sess/n22/1984-6487-sess-22-00207.pdf

Bourdieu, P. (2000). *La dominación masculina*. Barcelona: Editorial Anagrama.

Buquet A. (2011). Transversalización de la perspectiva de género en la educación superior. Problemas conceptuales y prácticos. *Perfiles Educativos*, *XXXIII*, 211-225. Recuperado de http://www.redalyc.org/articulo.oa?id=13221258018

Buquet, A., Cooper, J. Mingo, A. y Moreno, H. (2013). *Intrusas en la Universidad.* México: IISUE-PUEG-UNAM.

Convención Interamericana para Prevenir, Sancionar y Erradicar la Violencia Contra la Mujer (Convención Belem Do Pará, 1994). Recuperado de: http://www.inmujeres.gub.uy/innovaportal/file/19705/1/3_articulado_belem_do_para.pdf

Convención sobre la Eliminación de Todas las Formas de Discriminación Contra la Mujer (CEDAW, 1979). Recuperado de:

http://www.un.org/womenwatch/daw/cedaw/cedaw25years/content/spanish/Convention-CEDAW-Spanish.pdf

Cuarta Conferencia Mundial sobre la Mujer (Beijing, 1995). Recuperado de: http://www.un.org/womenwatch/daw/beijing/pdf/BDPfA%20S.pdf

Cubillas, M. J. Abril, E., Domínguez, S., Román, R., Hernández, A. y Zapata, J. Creencias sobre estereotipos de género de jóvenes universitarios del norte de México (2016). *Revista Diversitas-Perspectivas en Psicología*. 12(2): 217-230.

Frigerio, G., Poggi, M., y Tiramonti, G. (2006). *Las instituciones educativas. Cara y Ceca. Elementos para su comprensión*. Buenos Aires: FLACSO.

INMUJERES. Instituto Nacional de las Mujeres (2002). *Cultura Institucional y Género en la Administración Pública*. México: INMUJERES. Recuperado de http://cedoc.inmujeres.gob.mx/documentos_download/100432.pdf

Lagarde, M. (1996). *Género y Feminismo. Desarrollo humano y democracia*. España: Editorial Horas y Horas.

Lagarde, M. (2001). *Democracia Genérica.* México: CENDOC-CIDHAL.

Lamas, M. (1996). *La perspectiva de Género. En Hablemos de Sexualidad: lecturas*. México: Consejo Nacional de Población (CONAPO) - MexFam.

Ley Nº 179. *Ley General de Acceso de las Mujeres a una Vida Libre de Violencia*. Diario Oficial de la Federación, Ciudad de México, México, 17 de diciembre de 2015. Recuperado de http://www.ordenjuridico.gob.mx/leyes.php

Ley Nº 211. *Ley General para la Igualdad entre Mujeres y Hombres*. Diario Oficial de la Federación, Ciudad de México, México, 4 de junio de 2015. Recuperado de http://www.ordenjuridico.gob.mx/leyes.php

Munévar, D. I., y Villaseñor, M. L. (2005). Transversalidad de género. Una estrategia para el uso político-educativo de sus saberes. *Revista de Estudios de Género. La Ventana*, *3*(21), 44-68. Recuperado de http://www.revistascientificas.udg.mx/index.php/LV/article/view/740

Organización de las Naciones Unidas (ONU). (1995*). Declaración y plataforma de acción de Beijing*. ONU. Recuperado de http://www.un.org/womenwatch/daw/beijing/pdf/BDPfA%20S.pdf

Pacheco, L. (2011). Cultura institucional con perspectiva de género en instituciones de educación superior. En: P. Tuñón, A. Evangelista, Tinoco, O. (Coords.). *Género y Cultura Institucional.* México: El Colegio de la Frontera Sur.

Palomar, V. C. (2011). *La Cultura Institucional de Género en la Universidad de Guadalajara.* México, D. F.: ANUIES.

Plan Nacional de Desarrollo 2013-2018. Recuperado de: http://pnd.gob.mx/wp-content/uploads/2013/05/PND.pdf

Pérez Gómez, A. (1999). *La cultura escolar en la sociedad neoliberal*. Madrid: Ediciones Morata.

Rodríguez Gaona, R. (2009). *Guía de Transversalización de la perspectiva de género*. México: Universidad Autónoma del Estado de Hidalgo.

Román Pérez, R., Abril, E., Gómez, E., y Cubillas, M. J. (2010). Género y educación: experiencias para transversalizar la perspectiva de género en una institución de educación superior. *Revista Electrónica de Investigación Educativa Sonorense*, *II*(5), 6-21.

Román, R., Domínguez, S., Saucedo, M., y Tánori, J. (2016). Validación de un instrumento sobre cultura de género en instituciones de educación, salud e investigación en el noroeste de México. *Revista de Estudios de Género. La ventana, V* (44) 83-108. Recuperado de http://www.redalyc.org/articulo.oa?id=88446739006

Sánchez, M. C. y Villagómez, G. (2012). Perspectiva de género en instituciones de educación superior en la región sur-sureste de México. *Gen-Eros.* 11(2): 7-36.

Scott, J. W. (1996). El género: Una categoría útil para el análisis histórico. En M. Lamas (Comp.), *El género: la construcción cultural de la diferencia sexual* (265-302). México: PUEG.

Stamarski, C. y So Hin, L. (2015). Gender inequalities in the workplace: The effects or organizational structures, processes, practices, decisions makers'sexism. *Frontiers in Psychology.* 6: 1400 Recuperado de: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4584998/

EDUCATION SPENDING, CONTRIBUTION TO THE EFFECTIVENESS AND QUALITY OF EDUCATIONAL SERVICES

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Abstract.

This article seeks to contribute to the analysis and reflection on the importance of providing financial resources to education. From the context of Education Policy, the proposal that the state is encouraging in the short term to recentralise salaries of teachers in basic education, seeking help to sort this area of education spending, under the expectation of securing the right of revising all citizens to receive a quality education. In higher education, the need for new financing models that include the guidelines of international organizations is expressed; to improve the quality, coverage and equity in education; the importance of creating new distribution schemes, transparency and efficiency and accountability in the use of resources is emphasized.

Keywords: Educational policies, financing of education, public expenditure on education, educational quality and equity.

Introduction

In the global context, knowledge has been established at the base of social and economic development, constituting educational investment as a fundamental factor to achieve it. It seeks to obtain the ability to face the challenges of participating in an increasingly globalized economy, while only with more education; countries can count on more competitive citizens, to consolidate their democracy, and to move towards greater equity and participation. Social. Therefore, the resources allocated to education now constitute a strategic investment for development, because even when it is recognized that education is not the only factor on which development depends, it is an essential element to achieve it.

In Mexico, there are several problems related to the allocation, distribution and use of public resources that are allocated to education, which prevent the State from ensuring the right of its citizens to receive a quality education.

This paper seeks to contribute to the analysis and reflection on the importance of the provision of economic resources to the education system, the need to apply new financing models that include the guidelines of international organizations; To improve the quality, coverage and equity of education, the importance of creating new distribution, transparency, efficiency and accountability schemes in the application of resources is emphasized.

The educational needs of the country are multiple and urgent, so they require a greater investment in education, because not only is it a priority to attend basic education, it is also necessary to expand educational coverage at the upper and upper secondary levels, as well as improve quality of educational services provided at all levels of the system. This article analyzes several problems related to efficiency and lack of clarity in the management of resources that need to be corrected, under the expectation of ensuring the right of all citizens to receive a quality education.

Educational expenditure, contribution to effectiveness and quality

People with more education are more likely to work and, if they are economically active, are less likely to be unemployed and more likely to access mechanisms of social mobility. Higher education is also associated with higher wages for individuals (CEEY, 2008). In all countries, the participation rates of workers increase with the level of education acquired by people. In some countries, the differences in salaries are considerable and reflect a greater variability of wages in the labor market, and possibly higher yields due to the possession of specific labor competencies (UNESCO-UIS / OECD, 2003).

In education there are fundamentally three problems to be solved: the efficiency of spending on education, the quality of the education provided and the degree of equity in the provision of it. One of the big questions about the performance of a government is to know how efficiently state resources are used and in the particular case of spending on education, the question acquires a doubly significant connotation because the investment in human capital in countries in Development is one of the main tools for growth and, consequently, the provision of basic education is one of the most important roles that the State must carry out.

With respect to quality education and with greater social impact, the reforms implemented in recent years, seek to advance the diversification of educational provision, a more determined articulation between education and work, more global educational approaches, a strong emphasis on inputs and in the processes, the diffusion and use of new information and communication technologies, and the participation of new actors; although with little effective participation of teachers in its definition. The challenge is to carry out in the countries a deep revision of the structural factors that limit the quality of the pedagogical offer and to design, with ample participation of the teachers and communities, strategies to improve the cultural pertinence of the learning and the development of the necessary competences to live in an increasingly complex world.

To achieve equity in education, the challenge is to ensure that educational opportunities are distributed fairly to the entire population and at all school levels, and to prevent the expansion of higher levels of education being carried out by sacrificing an education universal primary of good quality. Equity remains an outstanding debt, given that the huge social gap in provision, participation, complementation and pedagogical results persists. The contribution of education to social equity does not only go through improving opportunities to access the system, but also through the development of attitudes of solidarity and responsibility towards others in children, young people and adults.

In this regard, Calcagno (1997) argues that to improve the efficiency of education systems it is necessary to drastically reduce the high rates of failure, lag and school dropout. It is imperative to reduce the rate of lagging students in the first grades, correct the problem of extra-age and speed up the flow of students in various grades. This implies discussing new pedagogical strategies different from automatic promotion, whose effects conceal the real situation of low performance in basic education.

Educational financing in Mexico

In Mexico, during the last decades public spending on education has grown consistently. Between 1990 and 2010, the amount of this item of expenditure almost tripled when passing, in real terms, from 232 thousand 439 million pesos to 696 thousand 119 million (Federal Executive Power, 2011). Although this financial effort allowed for important advances in education, there are still multiple needs in the system. For example, although it was possible to expand coverage in basic education levels, counteracting the increase in demand caused by demographic dynamics, resources have not been sufficient to do something similar at the upper and upper levels, where coverage still It is very low and the costs per student much higher. Likewise, they have not been sufficient to cover the multiple deficiencies that still exist in all the levels and modalities of the education system, which causes that there are great inequalities with respect to the human, physical and pedagogical resources that the different institutions and centers have schools that make up the Mexican educational system (Márquez, 2012).

It is increasingly common in Mexico to point out, with respect to education, that it is no longer necessary to "spend more, but to invest better", highlighting various problems of inefficiency in the management of educational spending (Granados, 2005).

In this regard, our country has distinguished itself by having a low capacity for tax collection (17.4 percent of GDP), remaining below the average for Latin American countries (19.2 percent) and much more distant from the average (33.8 percent). Of the countries of the Organization for Economic Cooperation and Development (OECD, 2012).

In the international context, some agencies have pointed out that the low tax collection presented by Latin American countries (Mexico included) represents a serious problem, since it limits the ability to invest in areas such as education, infrastructure and productive development, such as health and social protection are key to increasing productivity, competitiveness and social inclusion (ECLAC, 2011).

Educational expenditure, change in the administrative model: from FAEB to FONE.

In 1998, the reform of the Fiscal Coordination Law that created the federal contribution funds for the states and municipalities, among others, created the Contribution Fund for Basic and Normal Education (FAEB), which includes federal resources that are transferred annually to the states to support them to cover part of the expenses of the activities that correspond exclusively to them in terms of the General Law of Education (Presidency of the Republic, 2014).

In this reform, the formula was established based on which the amount of federal resources to be transferred annually is calculated to cover the payroll corresponding to the places transferred to the states, within the framework of the National Agreement for the Modernization of Basic Education, published in the Official Gazette of the Federation on May 19, 1992 and the agreements that in accordance with it were formalized with the states (Federal Executive Power, 1992)

In the same vein, currently, in accordance with the provisions of the recent constitutional and legal reforms in education, implemented in the country, the terms and conditions under which, within the framework of joint financing between the governments orders that it establishes, are modified. The Constitution itself, federal resources are transferred to the states and municipalities to support them to cover the attributions that correspond to them in educational matters.

Considering that the Constitution provides joint financing of education between the Federation and the states, the Ministry of Finance and Public Credit proposes the creation of the Educational Payroll and Operating Expense Contribution Fund (FONE), which aims to generate a adequate administrative control of the payroll of teachers transferred to the states within the framework of the National Agreement for the Modernization of Basic Education, published in the Official Gazette of the Federation on May 19, 1992, as well as by the agreements that conform with it they were formalized with the states by the Federation.

The proposed mechanism seeks to make more efficient and transparent payment of the payroll of teachers, by seeking that payments correspond exclusively to staff occupying places registered in the Educational Information and Management System, strengthening the objectives of educational reform. Additionally, said Fund includes resources to support the states to cover operating expenses, other than personal and maintenance services, which will be updated each fiscal year as approved in the Federal Expenditure Budget. The distribution of these operative resources will obey to a formula that will have enrollment criteria and population density for children from 5 to 14 years old who are of age to attend basic education within the national territory.

This substantially modifies the administrative model in the management of positions in the education system, to avoid financial disorder in all States. As a result of a series of reforms carried out in 2013 to the Federal Tax Coordination Law, the application of the Educational Payroll and Operating Expense Contribution Fund (FONE) began in early 2015, with which a new administrative control of the places of the teachers transferred to the states.

In fact, the FONE will contemplate the necessary resources for the financing of educational services in the entities of the country and will replace the FAEB, which had been operating since 1992, implemented in the processes of education reform promoted in the government of Carlos Salinas de Gortari.

Fields of action of the FONE

a).- The payroll of the personnel; Y

b). - Operating expenses of the 240 thousand schools operating in the country.

The mechanics of the payroll system with the FONE

The teacher payroll system that will come into operation in 2015 will be subject to a specific mechanics, in which the following stages stand out:

1). - The SEP and the Ministry of Finance will be responsible for issuing the provisions for payroll registration, including personnel movements.

2). - The SEP will establish the payroll administration system so that the entities load the records that must be the same as those provided by the Educational Information and Management System.

3). - It will then be requested that the states themselves validate, in time and form, their respective teacher lists.

4). - The government of the Republic, through the SEP, will request the Treasury of the Federation to make the corresponding payment of places, with charge to the resources that correspond to each federal entity.

The financing of higher education institutions

The financing of higher education is observed from different angles, such as: the total amount of resources allocated in relation to GDP; the way of distributing the total expenditure among the different modalities of higher education; the way of supervising the application of resources and the origin of public or private resources (Martínez, 2000).

In Mexico, funding for higher education comes mainly from three different sources: from the federal government, from the income of higher education institutions (IES) and from international organizations (OI).

a) The participation of the federal government.

According to Bruner (1996), the financing considered public can be of two forms:

Automatic public financing. It consists of the use of institutional subsidy transfer mechanisms, which allow each institution to decide its internal distribution form. With this type of financing, allocations are applied exclusively based on the amount of resources disbursed in the previous year. Under this financing model, the power of the government to guide the system in accordance with national development objectives decreases, while maximizing the corporate power of the institutions to ensure automatic participation in the fiscal budget for higher education.

Deliberate public financing. The financing models by formulas, contracts and results are guided by the supply of resources, to the extent that for their allocation, procedures are used that consider the cost of the inputs or that allow to fix and evaluate the expected or exclusively produced products. Each time the government uses financing linking mechanisms with formulas, contracts or results, it acts as an acquirer of products for which it is willing to pay. This financing mechanism offers certain advantages: it allows a more rational distribution of funds and corrects important deficiencies in the system and contributes to improving innovations and reducing costs (Johnstone, 1998).

b) Financing via own resources.

This financing relies on private resources, which come mainly from students and their families, from private contracting agents of HEIs or from private philanthropy. (Brunner, 1996). This type of financing has not been very developed in Latin America, except in Chile, due to the principles of free higher education in most countries.

c) The financing of International Organizations.

The OIs are of two types: Those that directly provide financing, through projects and programs, such as the World Bank (WB) and the Inter-American Development Bank (IDB), and those that study, evaluate and recommend how education should be organized. Higher in the different countries with which they are related, such is the case of the Organization for Economic Cooperation and Development (OECD) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

The educational policies recommended by the OECD.

The OECD exerts a determining influence on the educational policies of the countries, especially in the field of higher education. Among its central purposes is the concern for economic growth of member and non-member countries, as well as the expansion of global and multilateral business. The fundamental activities to which the agency is dedicated are the study and formulation of policies in a great variety of economic and social spheres. Like UNESCO, the OECD does not grant financing for the development of any project. The mechanism through which it develops its activities is the combination of the work of its experts with members of governments under a multidisciplinary dimension.

OECD recommendations for higher education in Mexico.

• The transition between higher education and employment. The organization proposes as two fundamental aspects: the social and productive integration of the individuals, and the search of the flexibility of the set of superior education to adapt it better to the productive necessities.

• The solution of the problems concerning upper secondary education, based on real, effective and qualitative knowledge. The organism considers that the success of the programs in higher education depends on the solution of this problem.

• The reduction of economic resources that are used in higher education. For which, the OECD proposes the diversification of funding sources at this level (Sohez, 1998).

Financing and accountability.

The financial problem of higher education and the political interference in its administration, have opened the possibility of generating tools that allow evaluating with indicators the rendering of accounts to society.

In Mexico, university autonomy faces the difficulty of interpretation and in many moments the concept has been distorted when it is used to protect internal feuds of unions, students, political and social groups with particular interests. Often groups with special interests hostage the IES, generating a social impact of discredit in educational institutions. The Law of Superior Control of the Federation and the Law of Transparency and Access to Government Public Information establish a series of new obligations to universities that must now be incorporated into university regulations. It is very important that regulations and their interpretations are not used. By governmental, legislative or judicial instances, to intervene in institutions for political purposes or of any other nature that affects them (Jiménez, 2004).

One way to achieve accountability is that the universities themselves, based on the aforementioned laws, adapt the guidelines related to auditing and transparency and insert them in their regulations. It is necessary that the aspects related to the control are contained in the Autonomy law, because they are federal guidelines, and those related to transparency are included in that law only in its general provisions, while its specifications, derived from the laws local that concern them, are included in internal regulations, such as the organic laws of universities.

Conclusions

The financing of educational institutions is considered as an investment in human capital; therefore, it is assumed that those nations that invest in education, will generate a mass of competitive human resources, capable of influencing economic growth and development. Likewise, human capital has an important role in the labor market, it is the people with the lowest levels of training who are most likely to be unemployed.

In the country, reforms are currently being implemented leading to a higher educational quality. In this branch, the budget is spent mostly on salaries for personnel and infrastructure. However, the current institutional structures indicate that there is a tendency to assume that wage growth is a necessary condition for the best performance of the sector, instead of a structural change that links a higher salary with a better performance.

In this sense, a correct application of educational spending is particularly urgent in the current situation of scarce resources that is why the State, in basic education, proposes a new salary policy: it assumes, in the short term, the control of the payroll. With the proposed mechanism seeks to apply in a more efficient and transparent teacher payments, to ensure that such payments correspond exclusively to staff occupying places registered in the Educational Information and Management System, thereby aims to strengthen the objectives of the reform educational

This, in addition, must be accompanied by an assurance of the educational quality, based on standards of performance, evaluation, rendering of accounts; implementation of policies tending to improve the teaching service, through its professionalization and continuous training; as well as guarantee a safe school climate, inclusive and democratic environment. This implies an adequate level of investment with efficiency and effectiveness, and must include the key variable: motivated teachers, committed, with vocation of service and competent to promote school learning.

With regard to higher and higher secondary education, in Mexico, funding for these levels comes mainly from three different sources: from local government, from the institutions' own income and a few sources from international organizations. In recent years, a budget reform has been applied, known as a performance-based budget, where governors and legislators take into account the results in relation to performance indicators to determine the total financing of public university centers.

The political interference in the administration of higher education as well as the popular demands for better budgetary management have opened the possibility of generating tools that allow the accountability of society to be assessed with indicators. The Law of Superior Control of the Federation and the Law of Transparency and Access to Government Public Information establish a series of new obligations to have that must now be incorporated into university regulations.

One way to achieve accountability is that the universities themselves, based on the previous laws, adapt the guidelines related to auditing and transparency and insert them in their regulations. This seeks to promote the expansion of quality in education systems and the maintenance of equitable access for users of services.

References

Bruner, J. (1996). Educación en América Latina durante la década de 1980: la economía política de los sistemas. En R. Kent, *Los temas críticos de la educación superior en América Latina.* Aguascalientes: FCE, FLACSO, Universidad Autónoma de Aguascalientes.

Calcagno, É. (1997). El financiamiento de la Educación en América Latina. *Revista iberoamericana de educación Núm. 14*, 11-44.

CEEY. (2008). *La movilidad social en México.* México: Fundación Espinosa Rugarcía.

CEPAL. (2011). *Transformación del Estado para el desarrollo.* Santiago: CEPAL.

Granados, O. (2005). *Educación: el dinero no es el problema central*. Recuperado el 19 de noviembre de 2014, de Observatorio.org : http://www.observatorio.org/colaboraciones/granados.html

Jiménez, G. (2004). Autonomía y rendición de cuentas. *Revista de la Educación Superior ANUIES, Núm. 29*, 49-55.

Johnstone, B. (1998). *Financiamiento y gestión de la enseñanza superior: informe sobre los progresos de las reformas en el mundo.* Washington: Banco Mundial.

Márquez, A. (2012). El financiamiento de la educación en México. Problemas y Alternativas. *Perfiles Educativos. vol. XXXIV IISUE-UNAM*, 107-117.

Martínez, R. (7 de junio de 2000). *El financiamiento de la educación superior en América Latina* . Obtenido de Revista ANUIES de la educación superior, volumen XXXIII: http://www.anuies.mx/servicios/p_anuies/publicaciones/revsup/res117/txt3.htm

OCDE. (2012). *Perspectivas económicas de América Latina y el Caribe.* Paris: OCDE.

OCDE. (2012). *Perspectivas OCDE: México. Reformas para el cambio.* México: OCDE.

Poder Ejecutivo Federal. (18 de mayo de 1992). Acuerdo Nacional para la Modernización de la Educación Básica. *Diario Oficial de la Federación*. México, Distrito Federal, México: Presidencia de la República.

Poder Ejecutivo Federal. (2011). *Quinto Informe de Gobierno.* México: Presidencia de la República.

Presidencia de la República. (19 de noviembre de 2014). Decreto por el que se reforman y adicionan diversas disposiciones de la Ley de Coordinación Fiscal y de la Ley de Contabilidad Gubernamental en materia de financiamiento educativo. México, Distrito Federal, México.

Sohez, G. (1998). Tendencias de la educación superior en los países de la Organización para la Cooperación y el Desarrollo Económico. *Conferencia EduFrance 98*, (págs. 5-20). México.

UNESCO. (2014). *Informe regional sobre Educación para todos en América Latina y el Caribe.* Muscat, Omán: UNESCO.

UNESCO-UIS/OCDE. (2003). *Financiamiento de la educación, inversiones y rendimientos. Análisis de los indicadores mundiales de la educación.* Paris: UNESCO-UIS/OCDE.

MINDFULNESS AND EXPERIENTIAL LEARNING IN ADULT EDUCATION

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Abstract

This article presents the results of comparative analysis of mindfulness approach and experiential learning, in order to contribute to a better understanding of mindfulness and its use in the field of adult education. It was found that both methods posit that success in student learning depends on the ability of the teacher to create a classroom environment that allows students to draw on their own experience, calm, de-stress, pacified, forget their aches and pains, adapt to the outside world, develop as a person, knowing oneself and the other. The difference between the two methods is the use of techniques: meditation in the case of mindfulness, and play on experiential learning.

Keywords: adult education; mindfulness approach; experiential learning; comparative analysis

Introduction

Adult education is an educational field that ranges from higher education to training for life and work, education of the elderly, literacy, continuing education, etc. The theoretical constructions on adult education in Latin America belong to Adam, Alcalá, Alonso, Arroyo, Battro, Campero, Canales, Casau, Díaz, Fermín-Gonzáles, Freire, Galicia, Hernández, Ibarrola, Latapí-Sarre, Leys, López-Palma, Ludojoski, Márquez, Piñero, Rodríguez-Conde, Ruiz, Sábato, Tirado-Benedi, Torres-Perdomo, Trilla-Bernet, among others. It´s based on the principles of *horizontality* and *participation* that are ensured by *synergism*.

One of the main conditions of successful adult learning is the generation of positive environments in the classroom, interaction of the teacher/mediator with people in a different way. Each situation, each environment, each person, must become a reason to grow, in an opportunity, in a factor that contributes to the personal development of the student. Modern approaches to teaching contribute to the above: mindfulness and experiential learning.

The theory and philosophy of mindfulness develop in their works Bishop, Brown, Fulton, Gallard, Germer, Gunaratana, Hanh, Kabat-Zinn, Olendzki, Ryan, Siegel, Simon, Tobin, among others. The practical strategies of mindfulness for teachers and educators approach Arguís, Bolsas, Franco, Gil, Goleman, Hartzell, Hernández, Langer, Lantieri, Mañas, Salvador, Schoeberlein, Sheth, Siegel, Snel, among others. Experiential learning argue Boyatzi, Dewey, Fray, Kolb, Lewin, Mainemelis, Rogers, Saunders, Schon, Smalley, Sternberg, Zhang, among others.

The goal of this work is to contribute to the understanding of mindfulness in the field of adult education through its comparative analysis with experiential learning.

Development and arguments

The three pillars of adult education are horizontality, participation and synergism. The first refers to a relationship between equals, a shared relationship of attitudes, responsibilities and commitments towards achievements and successful results, characterized qualitatively and quantitatively.

The qualitative characteristics of horizontality allude to the fact of being, both the facilitator and the participant, equal in conditions, having both *adulthood* and *experience*, which are determining conditions for organizing the corresponding educational processes considering maturity, aspirations, needs, experiences and the interests of adults. The quantitative ones are related to the physical changes experienced in adults, in general, after forty years, such as the decline of vision and hearing and the decrease in the speed of response of the central nervous system.

However, these factors are compensated when the environment is suitable for adults in a learning situation. There are other characteristics, psychological in nature that also influence horizontality: self-concept and emotional factors. Horizontality allows the participants and the facilitator to interact with their adult status, learning from each other, respecting each other and valuing each other´s experiences in an educational process of permanent enrichment and feedback (Adam, 1971).

What concerns participation, is the action of making decisions together or taking part with others in the execution of a specific task. To achieve effective results, participation requires maturity, reflection, critical and constructive activity, interaction, confrontation of ideas and experiences, creativity, communication and feedback, all this, in a constant and permanent way. If the participant feels that there is a situation of acceptance by the other partners, then the educational praxis will unfold in a pleasant, sincere and harmonious way, establishing direct, authentic communications, oriented to a shared leadership attitude where the link becomes effective interaction between the participants and the facilitator (Adam, 1987).

In adult education, the exchange of information translates into the benefit of the whole group, enriching their experience and increasing the source of productivity in the learning situation. Both principles of the praxis of adult education are ensured by the synergistic or *synergetic theory* of a psychobiological nature based on the idea that the whole or globality is superior to the sum of the parts that comprise it. Adult education approaches include the emphasis on mindfulness and experiential learning.

The *mindfulness* (or conscious attention) refers to the practice, in which the person becomes aware of different facets of experience in the present moment, learns to be aware of how he/she moves, feels (both physical and emotionally), responds or reacts to each moment of his/her life. It consists in learning to observe and accept (without trying to eliminate, suppress, reduce, control or alter) the thoughts, sensations and emotions that are experienced; generate perspective and transcend them, free himself/herself from the content of them.

It has its origin in Buddhism with *sati* (Pali language): *meditation, consciousness, attention, memory*, the method for the cessation of suffering through meditation, a tool to observe how the mind generates suffering and develop wisdom and introspection that alleviate suffering (Brown and Ryan, 2003; Kabat-Zinn, 2003; 2007; Germer, Siegel and Fulton, 2005; Siegel, Germer and Olendzki, 2009).

Mindfulness is based on positive psychology[6] (Adserá, Avia, Hervás, Kahneman, Peterson, Seligman, and Vázquez, among others) and the theory of resilience (the ability of living beings to overcome periods of emotional pain and adverse situations). According to the theory of resilience, the human being is able to resist frustration and the hostile environment without losing emotional health, even being strengthened by them, rediscovering trust, goodness and basic health, regardless of the precarious conditions in which it can be found. It is also composed of some aspects of the so-called *Behavior Therapy*, which objective is to increase awareness and respond more effectively to mental processes that contribute to the development of psychopathological disorders and other types of behavioral problems; promote a permanent attitude of awareness and calm in the person, to unmask automatisms and promote personal development (Bishop *et al.*, 2004).

It is important to note that this educational method is relatively new, however, it is observed in a series of similarities with the approach of experiential learning practiced in adult education and founded since the early twentieth century.

The *experiential learning* (Dewey, Fray, Kolb, Lewin, Rogers, Schon, among others) starts from the conception of learning as an adaptive change to the inputs of the environment. It is based on cognitive learning that refers to the interpretation and processing (selection, interpretation, framing, etc.) of information, development of cognitive maps of its environment, recognition of events that don´t fit with one´s experience, its internalization and coding based on the frame of reference itself (Saunders, Smalley, 2000).

Experiential learning means construction, acquisition and discovery of new knowledge, skills and values, through experiences reflected in a systemic way. In other words, it means that learning is the result of direct exposure to situations that allow the person to be involved, to live, to put all their senses to work, and to generate spaces for reflection on his/her doing.

[6] It focuses on the capabilities, values and positive attributes of human beings, and not on their weaknesses and pathologies, as traditional psychology does.

Hence, in experiential learning, activities of a motor, artistic, playful nature, riddles, games of wit and intelligence and other strategies that lead to highly meaningful and lasting learning, become important.

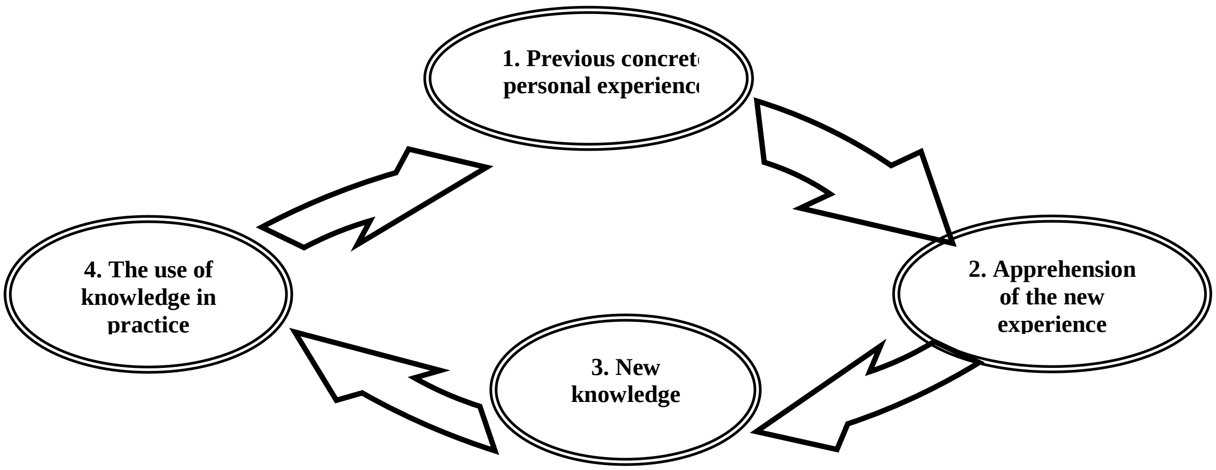
The mindfulness, as well as experiential learning, can be considered as a way of adapting to the outside world, since it seeks to constitute a new way of conceiving life and living it by developing the skills to be calmed, de-stressed and pacified. Makes it possible to reduce factors associated with the development of discomfort and suffering; it is a path for personal development and self-knowledge. It consists in adopting an active role in the recovery, development and maintenance of one´s own health, well-being and quality of life. The above is achieved through the development of a certain type of awareness, wisdom and feelings of love and respect towards oneself and others, which allow stopping fighting or controlling what can´t be controlled and to de-automatize the behavior by not reacting compulsively and aggressively before what happens inside and outside (Mañas, Franco, Gil, 2014).

The mindfulness make up three vital factors for its realization: the *consciousness* that is understanding of what is happening inside the subject (thoughts, emotions, bodily sensations, etc.) and/or outside (smells, sounds, people, objects)); the *attention*, which refers to the consciousness centered on a stimulus (the breath, the body, the sound of the rain or a person speaking); the *memory* that refers to the fact of remembering to be aware and paying attention, highlighting the importance of intention in the practice of mindfulness (and not the memory of past events) (Mañas, Franco, Gil, 2014).

In turn, experiential learning is based on the assumption that knowledge is created through the transformation brought about by experience. The concrete experience is transferred to an abstract conceptualization, which is actively tested through new experiences. In 1975, Kolb and Fray developed the learning model that consists of four stages of knowledge acquisition, which starts from the student´s previous concrete experience, through the reflection and assimilation of the new experience, appropriation of new knowledge, its use in practice and its incorporation into concrete experience (see figure 1).

The experiential learning cycle of Kolb and Fray focuses on the idea that this type of learning exists as a particular form of learning distinguished by the central role that experience plays in it. It consists of generating a theory of action based on one´s own experience, continuously modified to improve its effectiveness (Kolb, Fry, 1975).

Figure 1. The Kolb and Fray learning cycle



Source: own elaboration based on Kolb, D. (1999). *Learning Style Inventory. Technical specifications*. Boston: TRG Hay/McBer, Training Resources Group

So, according to the experiential model, learning begins with a concrete experience; the individual thinks about that experience and collects information, reflects on it and generalizes it, internalizes what happened in the experience, establishing meaningful connections with what he/she already knows; acts from that internalized experience (Kolb, 1984). In other words, we learn from the immediate concrete experience (experiencing); reflection and observation (reflecting); the thought (thinking), the action (acting). This learning process requires:

- Define an action based on a cause-effect theory.
- Evaluate or judge the result or consequence of said action.
- Reflect on the degree of effectiveness of the actions and reformulate the cause-effect theory.
- Implement actions based on the reformulation.

The experiential learning cycle consists of two phases or learning skills: *abstract-concrete* and *reflection-action*. In the first phase is the ability of abstract conceptualization, in which learning involves the use of logic and ideas over feelings or affects. In this phase, when trying to understand certain situations or problems, the subject develops theories, generalizes, formulates conclusions and creates hypotheses about a specific experiential activity, trying to find answers to the questions or problems raised. That is, it is understood that people in this phase act based on an intellectual understanding of learning situations. On the opposite side is the phase of *concrete experience*, in which subjects learn from specific situations, within the framework of a given stimulatory situation, giving in this case a greater affective involvement of the subject in interaction with others (Kolb, 1999).

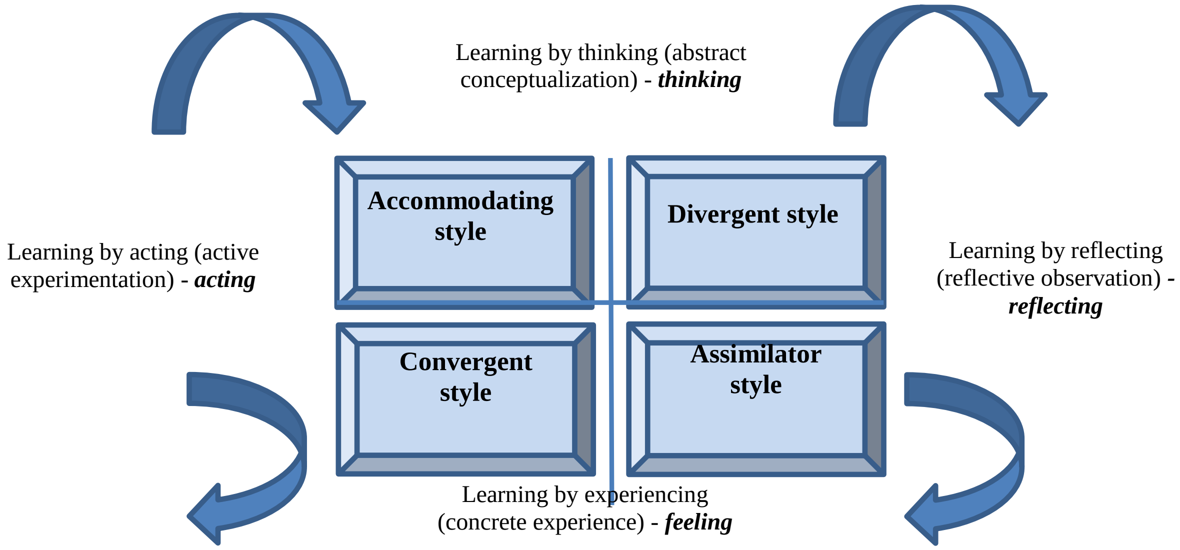
In the other dimension is, on the one hand, the *reflective observation phase*, in which the individual carefully observes before making judgments, analyzes the issues from different perspectives, looks for the meaning of things and raises questions about a reality or determined content. Then, through *active experimentation*, the subject realizes a practical application of the acquired knowledge, assuming an active attitude, experimenting with new and changing situations regarding the original situation. This is the phase, in which the individual makes visible, externalizes, through action, the hypotheses previously formulated (Kolb, 1999).

When the four phases are given, the experiential learning cycle is configured, which follows the sequence of *concrete experience, reflexive observation, abstract conceptualization, active experimentation*, in a learning spiral of increasing complexity (see figure 2).

Adults use four styles of learning: *divergent, accommodating, convergent,* and *assimilator* (see figure 2). However, there are differences between the subjects depending on the preference of some of the styles generating certain learning styles:

1. *Divergent*: when the subject prefers the mode of concrete experience versus abstract conceptualization and the mode of reflexive observation to active experimentation;
2. *Accommodating* (adapter): when the subject prefers the mode of abstract conceptualization versus concrete experience and the mode of active experimentation to reflective observation;
3. *Convergent*: when the subject prefers the mode of abstract conceptualization versus concrete experience and active experimentation to reflective observation;
4. *Assimilator* (discriminating): when the subject prefers the abstract conceptualization mode in front of the concrete experience and the reflexive observation to the active experimentation) (Martín-García, 2003).

Figure 2. The cycle of experiential learning and learning styles



Source: Martín-García, A. (2003).

Learning styles are characteristic ways of perceiving and processing information, of reflecting, feeling and acting in certain learning situations. Learning is effective if it articulates and combines these four different skills or ways of perceiving and processing information. Each method of perceiving and processing has its own value, and its drawbacks. Thus, people with a preference for divergent learning style prefer to observe rather than act. In formal learning situations they prefer to work in groups to gather information and listen, while they like to analyze what they hear and receive personalized feedback.

On the other hand, the assimilative learning style defines a type of people with facility to understand a wide variety of information and order it in a concise and logical way. They pay less attention to personal aspects and greater interest in abstract ideas and concepts. In situations of formal learning, they are subjects, who prefer methodologies supported in conferences, exhibitions and like to spend some time analyzing deeply things.

The people, who use the convergent style with greater preference, usually have remarkable abilities to discover the practical application of ideas and theories. They have a good ability to solve problems and to make decisions, based on the search for solutions to questions or problems. In general, they choose to focus on solving technical problems instead of addressing social and interpersonal issues. In formal learning situations, they prefer to experiment with new ideas, simulations, laboratory tasks or practical applications.

Finally, the individuals, who present the style of accommodating learning, show a good capacity to learn mainly from the concrete experience. They enjoy participating in new experiences, especially if they present challenges. They tend to act on their feelings instead of logically analyzing situations, so they prefer to rely on the analysis made by other people when solving problems, even before their own technical analysis. In formal learning situations, they prefer to work together with other people to achieve the objectives, do field work and check different approaches to complete a project.

What unites mindfulness and experiential learning, are the components involved in them: self-regulation of attention and orientation towards experience.

In mindfulness, the function of self-regulation of attention is the maintenance and redirection of attention, in addition to the selection of specific stimuli. In this way, the recognition of mental events in the present moment is increased. The processes included are sustained attention, switching of attention, inhibition of the elaboration of thoughts feelings, sensations and emotions. In turn, the orientation towards experience implies adopting a particular relationship towards one´s experience in the present moment. This type of relationship is characterized by an attitude of curiosity, openness, and acceptance. In this way, we learn not to react automatically to the stimulation we perceived or experienced.

On the other hand, mindfulness has three main elements that are interdependent: consciousness, present moment, and acceptance. The first of these, consciousness, is divided into three different components: stop, observe, and return. In turn, acceptance refers to seeing things as they are at the moment, accepting the pleasurable and painful experiences as they appear.

This "mindfulness moment" can be *non-conceptual* (without being absorbed in thought processes); *focused on the present* (not wandering on issues related to the past or the future); *not condemnatory* (to experience something radical without elaborating judgments of criticism and evaluations such as good or bad, positive or negative, right or wrong, etc.); *intentional* (directing attention to something and redirecting it towards that something when attention has dispersed to another place); *participant observation* (experiencing the mind and body in a very intimate way); *non-verbal* (mindfulness experience can not be captured in words because consciousness occurs before words appear in the mind); *exploratory* (the mindfulness consciousness is always investigating in a very subtle way the different levels of perception); *liberating* (every moment of mindfulness brings about a state of liberation from conditioned suffering) (Germer, 2005). The attitude toward the practice of mindfulness must relate to the following elements:

1) Don´t judge. Mindfulness is cultivated by assuming the position of impartial witnesses of one´s experience, being aware of the constant flow of judgments and reactions to both internal and external experiences in order to get out of them. It is important to limit ourselves to observe the coming and going of thoughts and judgments. We must not act on them, nor block them, nor cling, they are simply observed and let go.

2) Be patient. Patience shows that you understand and accept the fact that, sometimes, things have to unfold when it is their turn. Having patience consists of being totally open at every moment, accepting it as such.

3) To have a beginner´s mind, which is the mental attitude of being willing to see things as if it were the first time and staying open to new potentialities.

4) Have confidence, develop confidence in yourself and your feelings, and trust in your intuition and in your own authority, even if you can make some “mistakes” at the moment.

5) Not to strive, that is, to meditate, not to do, since any effort to achieve that the meditation has a purpose, is not more than the action that is hindering the mindfulness.

6) Accept, see things as they are in the present, be receptive and open to what you feel, think and see yourself, accepting it because it is there and in that moment.

7) Give in, let go; not to become attached, to set aside the tendency to elevate certain aspects of the experience and to reject others; the attitude towards the practice of mindfulness leave the experience as it is (Kabat-Zinn, 2003).

The basis of mindfulness is meditation, a technique, which main components are the concentration and attention of the mind. Its regular practice allows reaching a state, in which the body is relaxed, the mind is calm and concentrated, and in which the sensations of the present moment can be perceived. Meditation is focused attention, concentrate on a stimulus (breathing, image, sound) and make it the object of getting away from thoughts, obsessions and concerns (Thera, 2008).

Unlike the main technique of mindfulness, which is meditation (*introversion*), experiential learning uses playful strategies, artistic activities, outdoor work that have the potential to “enlarge the borders” (*extroversion*) and involve a reasonable degree of uncertainty and novelty. These strategies allow people to not only laugh, play and explore new ways of interacting, but at the same time, they are developing their thought processes without needing to explain it. Pleasant activities are considered the best catalysts to increase the motivation and participation of students.

According to the theory of experiential learning, learning is more effective when the active participation of the person is used. Experiential learning, instead of teaching concepts, skills and values, offers individual opportunities to internalize ideas that come from experience. The concepts involved in the activity as well as values, such as teamwork, communication or effective leadership acquire a new dimension, given that the effort instead of addressing the understanding of abstract ideas turns to the so-called “intrinsic belief”, which is how humans generate experience.

Discussion

In summary, we can affirm that experiential learning consists of generating spaces that make possible the experience, which can be followed by moments of reflection, so that this involvement becomes experience. In it, the phases of the learning situations are experience, practice, processing and reflection, transfer, generalization and application to other situations. The four phases actively engage the participant and stimulate learning: after facing a specific situation (experience), students establish ways of approaching action strategies or processes that have to be developed. These factors are put into play through the implementation of strategic procedures (intelligent practice), both in the times of completion and in the subsequent stage, the teacher/mediator generates processes of systemic reflection, so that the concepts, the principles and procedures can be integrated with the experience to generate knowledge. The resulting thoughts and intuitions transform into generalizations, which can be applied to other situations to be tested and restart the cycle.

Cultivating the student´s mindfulness, we taught him/her to pay full attention to the activities of the moment, to be more sensitive to the reaction process that he/she experiences in response to everything that affects him/her in his/her life. We made him/her aware of the opposite tensions that create his/her impulses, of avoiding the things him/her doesn´t like. The mindfulness allows stopping living in the “automatic pilot”, to take care of pending matters with conscience of the details of the experience of the moment, of the intentions that motivate the actions of the person.

The analysis showed that both methods used in adult education (mindfulness and experiential learning), postulate that the student´s success in learning depends on the pedagogue´s ability to create an environment in the classroom that allows students lean on their own experience, calm down, de-stress, pacify themselves, forget their discomforts and sufferings, adapt to the outside world, develop as a person, know themselves and the others.

Both approaches studied distinguish by the actions of *thinking, reflecting, feeling* and *acting* that are present in them. They unite by the components involved in them: self-regulation of attention and orientation towards experience. However, they differentiate by the means, through which they achieve their objectives: meditation (introversion technique) of mindfulness, and playful strategies (extroversion) of experiential learning.

References

Adam F. (1987). La teoría sinérgica y el aprendizaje adulto, en *PLANIUC*, № 3/6, 1987, pp. 195-219.

Adam F. (1971). *Metodología Andragógica*. Caracas: Anea Fidea.

Bishop, S., Lau, M., Shapiro, S., Carlson, L., Anderson, N., Cardomy, J., Segal, Z., Abbey, S., Speca, M., Velting, D., Devins, G. (2004). “Mindfulness: A proposed operational definition”, en *Clinical Psychology: Science and Practice*, Vol. 10, pp. 230-241.

Brown, K., Ryan, R. (2003). “The benefits of being present: The role of mindfulness in psychological well-being”, en *Journal of Personality and Social Psychology*, vol. 84, pp. 822-848.

Brown, K., Ryan, R., Creswell, J. (2007). “Mindfulness: Theoretical foundations and evidence for its salutary effects”, en *Psychological Inquiry*, vol. 4, pp. 211-237.

Germer, C. (2005). “Mindfulness. What is it? What does it matter?” en C. Germer, R. Siegel, P. Fulton (eds.) *Mindfulness and Psychotherapy*. New York: Guilford Press, pp. 3-27.

Germer, C., Siegel, R., Fulton, P. (2005). *Mindfulness and psychotherapy*. New York: Guilford Press.

Gunaratana, B. (2012). *El libro del mindfulness*. Barcelona, Kairós.

Kabat-Zinn, J. (2003). *Vivir con plenitud las crisis. Cómo utilizar la sabiduría del cuerpo y la mente para afrontar el estrés, el dolor y la enfermedad*. Barcelona: Kairós.

Kabat-Zinn, J. (2007). *La práctica de la atención plena*. Barcelona: Kairós.

Knowles, M., Holton, E., Swanson, R. (2005). *The Adult Learner*. N.Y.: Association Press, 233 p.

Kolb, D., Fry, R. (1975). “Towards an Applied Theory of Experiential Learning”, en Cooper, C. (Eds) *Theories of Group Processes*. London: John Wiley and Sons, 277 p.

Kolb, D. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs: New Jersey, Prentice Hall, 360 p.

Kolb, D. (1999). *Learning Style Inventory. Technical specifications*. Boston: TRG Hay/McBer, Training Resources Group, 180 p.

Kolb, D., Boyatzi, R, Mainemelis, C. (2001). “Experiential learning theory: previous research and new directions”, en Sternberg, R., Zhang, L. (eds.) *Perspectives on cognitive learning, and thinking styles*. Mahwah, NJ: Lawrence Erlbaum Associates, pp. 73-95.

Mañas Mañas, I., Franco Justo, C., Gil Montoya, M., Gil Montoya, C. (2014). “Educación consciente: mindfulness (atención plena) en el ámbito educativo. Educadores conscientes formando a seres humanos conscientes”, en *Alianza de civilizaciones, políticas migratorias y educación.*

Sevilla: Aconcagua Libros-Departamento de Psicología, Universidad de Almería.

Martín-García, A. (2003). "Estilos de aprendizaje en la vejez. Un estudio a la luz de la teoría del aprendizaje experiencial", en *Revista Española de Geriatría y Gerontología,* No. 38(5), pp. 258-265.

Saunders, D., Smalley, N. (2000). *The international simulation and gaming research*. N.Y.: Abington, Oxon, Saxon Graphics Ltd.

Siegel, R. (2010). *La solución mindfulness. Prácticas cotidianas para problemas cotidianos*. Desclée: Bilbao.

Siegel, R., Germer, C., Olendzki, A. (2009). "Mindfulness: What Is It? Where did It come from?" en F. Didonna, *Clinical Handbook of Mindfulness*. New York: Springer, pp. 17-35.

Thera, H. (2008). *El cultivo de la atención plena: La práctica de la meditación vipassana*. México.

A PROBLEM-POSING VIEW ON TEACHING PRACTICES

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Abstract

In this work[7] we intend to resort to some of Foucault's contributions which, as spears, will allow us to open up what there remains to be thought on the issue of teacher training.[8] Starting from a brief reference, some of the landmarks that signaled the critique related to an instrumental perspective of training are pointed out. However, we think that different issues – social demands, institutional functioning, non-legibility of discourses, standpoints – lead to give priority to a signification that seems to call for a technical solution of teaching practices. Foucault's contribution allows us to open up an interpretation of the configuration or teaching practices according to power relation and knowledge, which insists on the 'linearity' among discourses, thoughts and actions.

Key words: teaching practices –training – discontinuity

Introduction

To carry out this work calls for the demand of "another way of thinking"[9], resuming some of Foucault's contributions, a claim that considers the distances between production and reception conditions. These conditions differ according to the priority given to the approach –in this case pedagogical– because of the "archive" work and the specificity of the categories, these being inventions that disrupt familiarities and vicinities.

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[7] We take up some of the problematizations to go deeper into them as regards the teacher training in social communication career, one of the topics dealt with in the research project "Las prácticas en los itinerarios de formación y en las experiencias laborales del comunicador social" at the Facultad de Ciencias de la Educación- Universidad Nacional de Entre Ríos.

[8] Its configuration refers back to a particular –didactic-pedagogical– field that runs through teacher training and —we hypothesize— spreads out, as an efficient pragmatic matrix, to other fields of knowledge. The appeal of some of the ridges that particularize the different languages that take part in communication and call for a technical treatment may blur the configuration of senses attached to them and the different receptions, interpretations. As Verón (2004) proposes, this issue is present in the media as well.

[6] In this article we take up some of aspects presented at the 2° Seminario Internacional "Pensar de otro modo: resonancias de Michel Foucault en la educación", held in Bogotá from September 30th to October 2nd, 2014.

Some of the problems are: the ability of reading itself, the personality of the reader (Blanchot,1992) to which we must add the commotion provoked by such texts that make registers of visibility unstable and put acquired knowledge to question. Readings of Foucault crossed with our own set us at the risk involved in problem posing. This commitment finds its support in the Foucault (1999) who says that thought is a way of taking distance with what we do, a fold that encourages us to resort to some of the categories which, by way of “spears”, will allow us to open up what there remains to be thought of about the issue of the relation between teacher-training and teaching practices.

“What would fierceness of knowledge be worth of, if it were to ensure only the acquisition of knowledge, and not, somehow, and up to where possible, going astray from knowledge”. (Foucault, 1966, p.12)

We will place ourselves in contemporary pedagogical-didactic discourses aimed at teaching/education practices, specifically those related to teaching itself, so as to put to question some of the problems that go through their configuration, their limitations.

Development

Techniques of normalization, of disciplining, had vast consequences on the Argentinian educational field and, the present crisis in education and its changes, points to the need to resume the value of the pedagogical and cultural authority. The determination of subjection to an order, as a political-pedagogical concern is not absent, but in a different way and from other viewpoints[10], it seeks to conjure up deviations, straying, and heterogeneity of relations.

[10] An example: it is customary to indicate the need to “generate formation devices in networks of integrated strategies”, [which are] reflective and subordinated to an integral pedagogical logic. Faced with the questions about what way and at what cost the intended harmony/integrality/systematicity would be achieved, the first is answered with a bet on the device, a name usually interpreted as replacement for disciplining, free of the heavy load of “docile bodies”. The second question entails an approach and a closure of the plurality and difference of practices, which we intend to deal with in what follows.

The absence of pedagogic-didactic discourses –related to the issues we have outlined– referring to the historical concerns gathered together in the so called “practical philosophy” becomes symptomatic. The pose may be raised that inasmuch as they belong to historical “discursive formations”, what is visible and capable of being enunciated is related to other conditions of emergency, to other questions, – it is no longer interested in “virtuous life” but in actions that achieve learning. Without ignoring this warning, that oversight would be linked to the normative determination[11], a search for effectiveness that sews up and ties together a political and epistemological “threshold”. A difference that prevails, connected with the benefit of situating truth outside power relations. On the other side, when focusing on practices as “doing”, their acknowledgement remains bound to the expected results and they carry with them the instrumentalization of the teacher’s and/or the student’s practices, the differences among these linkages becoming opaque.

It is a relation (formation- teaching practices) traversed by technologies of government[12] with subjective effects such as vulnerability, disengagement, resistance. We take these features for effects of conditions and discourses and not as a negative aspect, as that which escapes and disturbs a mechanism/device of power[13], of formation/training.

If we take up one of the questions that goes through the “discursive formations”, i.e. what is it that an epoch makes [us] see and say?, it suggests that the “problem” is not outside, neither is it in the inconsistency or unconsciousness of teaching practices, but in their configuration, in the way in which relations are considered, in the questions that it admits and displaces.

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[11] Disciplines are bearers of a discourse based on the “natural rule”, on “the norm” (Foucault, 2001,p. 45)

[12] Against a negative interpretation of power relations and the utopic pose of a “transparent” communication with no limits and coercive effects, it proposes to address the technologies of government. The analysis and critical reflection on techniques would allow to undermine domination practices or to establish another set of strategic relations (Foucault, 2012, p. 168).

[13] The device “of an essentially strategic nature”, entails a certain manipulation of power relations, “to develop them in the correct direction, or to block them, or destabilize them, use them”, bound to terminals of knowledge (Foucault, 1991, p. 130).

Among the most habitual demands to teacher- training are those which point out: “the training I got did not provide [me with resources], I learned through practice, in theories we see some things and in practice other things happen”. A possible interpretation is to note down the claim of predictability, the correlation between theory and practice –which presupposes some stabilization between one and the other-. Another option would be to take them seriously and not as mere vacuous places and difficulties in training, and view established relations as problematical.

The claim of correspondence is reiterated when dealing with “decontextualization of practices “, a distance between training and practices attributed to theoretical cuttings and reduction of contexts of acting, among others. Without denying these issues, it looks as if “in practice” it were possible to learn on condition of diversifying the contexts. We believe this broadening of views calls for the presupposition of the stability of practice, b diversified depending on the contexts, and usually carrying with it a substantialization of the subjects.

[This constitutes] a problem threatened by present political, economic and institutional conditions which emphasize the bet for efficiency and influence the production of discourses that seek to regulate the training and the practices. The concern about “the quality” of teaching, social demands, technological and cultural transformations, question the organization of the curricula[14], their definition and the traditional models of theory and practice, among others. These considerations implicate the relation training - professional practices in careers of social communication, and also involve pedagogy and education practices, when these point to the need to “develop” a subject competent in communicational practice focused on the teaching of competences[15].

It seems that pedagogical devices cannot avoid advancing over “the other”, a way of controlling wanted for what it promises: the instrumentalization of

[14] These conditions belong to a scenario signaled by the so called “industrialization of academic activities” (Musselin, 2007 quoted by Naidorf, 2012, p.37) and the “internalization of knowledge” that have an impact on academic culture.

[15] The priority given to operational competence, the pragmatic know how, oriented to results and the transfer of procedures, above academic competences –cognitive and disciplinary knowledge– seeks to ensure a better practical efficiency.

practices. An ethical, technical and epistemic problem differentiated depending on the languages[16]. We will later resume the readings, a ridge WH

[We shall make] a few references that consider the “turn” in the way of thinking the relation between teacher-training and practices, implicated in the category “discontinuity”.

In the archeological moment, Foucault analyzes the “discursive formations”[17] at a distance from the objects of a science or their truth value, to investigate the non-synchrony between the constitution of objects and the conditions of functioning, without intending to establish any causality.

“History as a discourse about continuity” and “human conscience, the original subject of every knowledge and every practice” form part of the same “system of thought” (Foucault, 1985, p.21). In history, discontinuity becomes a positive operator which allows for a distinction among processes, establishment of periodization, making temporality become part of its object, according to a regulated use. Bridging the differences, this relation is not alien to the pedagogical institution.

Even though at that moment he emphasizes the duality between discursive and non-discursive practices[18], - institutional, political events, economic practices, pedagogical-, by means of the analysis of the control devices he goes through them and reverses the primacy given to discursive practices.

In “Knowledge” (2013), his course about Foucault, Deleuze does expert and creative analyses which indicate the complexity of the categories and the distance in which this work finds its frame. The categories outline other relations, upset

[16] At interviews with students of Tecnicatura, Licenciatura and Profesorado [different degrees at our Faculty], in the frame of the research project mentioned in footnote 1, practical experiences as a means of socialization in working environments with particular requirements appear generally estimated. The labour conditions and applications exceed the orientation of the degree [tecnicatura] —graphics, image, audio, writing–. Because of a labour experience that did not coincide with the specialization chosen, a student observes that “the technical handling of languages” must be incorporated as “formative and not optional”.

[17] As regularities (of order and dispersion) in enunciations, types of objects, concepts and theme choices (Foucault, 1987).

[18] The power devices –heterogeneous to a centralized apparatus– show the articulations and relations among segments, that go through discursive and non-discursive practices and allow to surpass the duality with which Foucault characterized them (Deleuze, 2012, p.181).

familiar and linguistic resonances –like statement, proposition, phrase, corpus- and signal what separates them from structuralism and hermeneutics.

When Foucault reflects on the differences of the "enunciation" [statement] [in relation to] Grammar and Logics, he mentions the different senses of discourse and defines "discourse as the set of enunciations [statements] that depend on the same system of formation" (Foucault, 1987, p.181).

Enunciations are not words, phrases, propositions or speech acts[19], neither has speech have to do with ideas or with "the empirical exercising of language, but with constituting enunciations" (Deleuze, 2013, p.26).

Knowledge, therefore, entails two practices, a discursive practice of the statement and a non-discursive one –about turning visible- which are characterized by their non-relation. The primacy of discursive practices does not entail a reduction of visibility, but captures incisions according to regimes of light and enunciation, of one and the other. They are not hidden, but we need to "know how to remove them", that is why they demand the conformation of a "corpus" according to given rules. Priority is given to enunciations "with no references", the subject of enunciation in Benveniste's sense is no longer available, Deleuze says (2013), because it still remains pinned to a "language mode", to the author-function"[20]. In this anonymous functioning of the "being-language"[21], the modulations, positions of the subject appear. It is not previous to… it occurs in

[19] Dreyfus and Rabinow (2001) take up the similarity the statement {enunciado] may have with "speech acts", observed by Foucault and that generated some exchanges with Searle. Both emphasize the literal meaning, though the statements [enunciados] that interest Foucault are not the daily ones that depend on the local and pragmatic context of production (p.74).

[20] As we know, Foucault (1992) includes in the internal control procedures of discourses the author function, a way to conjure the danger implied in their proliferation. The limitation of that discourse randomness which, in the comment claims to be fitted to "the form of the repetition and of the same", is limited in the author principle by "the identity game that has the form of an individual and the self" (p.27).

[21] Related to the decentralization of the author carried out by Mallarmé: "who speaks is not the author but the language (Barthes, 1987, p. 66), we wish to point out the breakup with the teleological sense, with the closing of writing and the sense that the author implied and the birth of the reader involves.

speaking, in “saying” according to regularities[22] in relation to focuses of power and resistance.

“… The archeological descriptions of discourses unfolds in a dimension of general history, it seeks to discover the whole domain of institutions, of economic processes, of those social relations upon which a discursive formation may be articulated”. (Foucault, 1987, p.276).

From this synthesis which claims to mark out the differences, we may appreciate the missing work of archive which would allow to describe the emergency conditions of objects and the delimitation of statements in relation to the pedagogical-[23]didactic field.

But from the perspective of the turning posed by genealogy[24] – in that it seeks for discontinuities, reveals that the ambition to deal with teacher training and practices – starting from “discontinuity” as conditions of functioning[25], becomes possible. Even when in our case, discontinuities and recurrences are on the surface, we intend to open up the weave of the knowledge and power devices, which tend to register the distance as failure or setback.

As Foucault points out (1980), the proliferation of criticism allows for “the inhibiting effect typical of global, totalitarian theories” (p.127). “Genealogies are then not positivistic returns to a more meticulous or exact form of science; genealogies are precisely anti-sciences. I do not vindicate the lyrical right to ignorance, the lack of knowledge, it is not about rejecting knowledge or bring into play and put into practice the prestige of knowledge or immediate experience not yet imprisoned in knowledge. It is not about this but about the insurrection of

[22] Regularities that Deleuze (2013) distinguishes from compulsory rules and calls “facultative rules”, binds together neighboring singularities, multiplicities in one statement. From the “structure” statement to the “function” statement (p.240).
[23] With the disciplinary procedures, with the exam as a hierarchic and individualizing ritual, pedagogy and human sciences in general find their possibility conditions.
[24] Some analysts distinguish the archaeological from the genealogical instance and from Foucault’s technique of ‘subjectivization’ (Castro 1995). Others disagree with this approach that aims at the substitution of “procedures” and start from Foucault’s note (1983): “Archeology: method for a historical genealogy that takes up discourses as object of analysis…” (Morey, 1995, p.16).
[25] From another perspective related to a political approach which requires the transformation of the “pedagogical apparatus” and its different points of support, but coinciding with our concern, Rancière (2010) specifies that “distance is not an evil to be abolished, it is the normal condition of all communication” (p.17).

knowledge, not so much against contents, methods or concepts of a science, but above all against the effects of centralizing knowledge which has been handed down to institutions and to the functioning of a scientific discourse organized at the core of a society like ours". (Foucault, 1979, p.130).

[We could pose the question about] what kind of an object, of practice the pedagogical discourse constructs to ensure its normative functioning. We become aware of the claim to control the heterogeneity of relations, of interpretations, and temporality[26] -in the sense of differentials that come into being. Together with the emphasis on the stability of knowledge produced, curricular organization, technological support and the "premises" which are used to provide a base to teaching decisions. From this viewpoint, experience is acquired; a skill, a domain that articulates with accumulation of knowledge in which the pretense to suspend singularity and peculiarities of relations - with others, among others and with knowledge- becomes discernible.

In this sense there is a persistence to frame teacher training and practices within a relation of adjustment, although not without variations[27] or nuances. The regulation of formation and "the technologies of the self", as modes of production of subjectivity, subsist as guarantees of practices.

By way of illustration we recover a fragment that shows the focusing which guides the question about "the environments that model practices and thought, those of instrumentation of technical –professional strategies and development of professional interaction" (Davini, 2005, p.79). Among these it degree preparation is usually mentioned, as well as professional socialization and those relate to school biography of students.

Hence the tendency to focus on practices as 'application', 'craft', "habitus" as productions of ways of thinking and doing which record the effectiveness of

[26] Discontinuity disrupts/substitutes the idea of totality and "Hegel's centred timing" of absolute progress and restores the event in discourse, the rhythms of superimposed development in a "seriated" timing (Terán 1982).
[27] For instance, from a critique to a centralized curricular organization and faced with the need to prepare for a creative and critical exercise that would allow to modify the theory (theory-practice relationship), proposes to see to emerging professional practices directed to satisfy the demands of majoritarian groups.

school biography, of socialization, and weakness in formation. It is precisely this observation what suggests the pretense of correspondence which signs the relation and signifies “practice”.

To ensure a way to signify its sense, formation attempts at a linearity thought-action and to that end it needs a conscious subject as guarantee/control of the process.

Regarding the consideration of teaching practices, there is a predominance between hermeneutic and structuralist approaches. The hermeneutic implication would need to disclose the deep meaning lodged in the “subject”[28] and not in the daily interaction of practices, in contradictory, disperse relations with meeting and vanishing points. Even when we would agree that the subject is the “niche” of significations, that pretense does no solve future practice, unless it is believed that “throwing the dice” could control chance, interventions, interpretations and relations.

Without stopping to consider the conditions that modify the notion of teaching practice, we want to make stand out the difference between and instrumental approach –based on training and applying techniques regardless of the context and the subjects- and one reflexive of the presuppositions that shape up theory and action. Improvement of practice focuses on reflecting on presuppositions and knowledge to achieve a rational control of the choice of aims and the means to attain “good teaching”[29].

The pretense to control temporality comes up in notions like “development”, “process” signified as opposed to the perspective focused on learning results. But the vindication of the process in which stages are differentiated supposes its appraisal according to the established path, the goal.   The parameters functioning in the process help distinguish, characterize and place ourselves.

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[28] “The fact of no having been theoretically thought about (the relation subject-truth) led to a positivism, a psichologism in Psichoanalysis”. Or while “transposing the issues about the subject and truth to problems of belonging (group, party, class, school), it had the effect of the oblivion of the relation subject-truth. (Foucault, 2002, p. 43).

[29] In some approaches “good teaching” is formulated starting from moral principles, epistemological criteria and decisions on action –capable of leading to action of principle on the part of students – given that they allow to see to other issues not reduced to “a causal connection between teaching and learning” (Fernstermacher and Soltis,1989, p.158).

We will here refer to the productions encompassed in the denomination “psi pedagogies”, based on constructivism and critical analyses of modes of subjectivization, their normalizing effects and the depolitilization which operates in the pretense of respect for the autonomy of the individual – with the subsequent naturalization of the subject-. Investigations that make us become aware of other “softer” forms of disciplining, or not as soft if we attend to ways of excluding. (Walkerdine 1995, Varela 1995, Da Silva, 1999).

From the standpoint of the education system as “a political form of maintaining or modifying the adaptation of discourses with the knowledge and powers they entail” the weight of control procedures, the games of exclusion, the “ritualization” and dogmatization are indicated. (Foucault, 1992, p. 37).

These features do not enable us to ignore the fact that in formation different perspectives, positions, socio-political, cultural, disciplinary decisions take place. A struggle and conflict of conceptions is present in the curriculums (de Alba, 1991) and captured in contradictory syntheses. The circumscription of contradictions and differences to a given moment turns out to be somewhat utopic, unless we give the institutive moment a power of closure, of effective “disciplining”. On the other hand, a hypostasis of the development or the process into that framework that claims to be regulative would imply ignoring the different senses and bids that involve the participating subjects, the power relations that move according to circumstances and interactions.

At the same time, the selection of disciplinary –inter and trans– knowledge entails “disciplining of knowledge” and pedagogical disciplining: from the simple to the complex, teaching graded and made adequate according to the aptitudes according to the knowledge of the subjects, the place of teaching strategies – which, even when they no longer claim to be transcendental, renew the commitment for an effectiveness that overflies situations, among others.

Varela (1995) aims at a “pedagogization” together with internal disciplining of knowledge, which concurs with the distance/loss produced in the passage – only the echoes of the battle reaching us. A somewhat discrediting suggestion in the expression –pedagogization of knowledge–, making them available, makes evident a history of hierarchical organization of knowledge[30] and the critique of a teaching practice.

It could be thought that dismissing a teleological “ideal” would imply to give up about the “crisis” of education, the trivialization of knowledge and its unequal distribution. On the contrary, we intend to question the claim for closure of the temporal and subjective variations –not subsumable to given moments[31]– that overload the way of signifying the relation (teacher training – practices).

The subject denied in accordance with a higher goal, returns as a pivot of “adequate” practices. On one hand, the claim to disclose the subject’s truth, his/her interests and cognitive processes, to monitor the learning process and secure its effectiveness. On the other hand and next to it, his/her possibilities and competences fall under suspicion, the “pedagogical apparatus” (Rancière, 2003) with its attributions and distributions, makes distinctions: from the role, there is a movement to the euphemism, “subject who teaches”, “subject who learns” –as if the denomination “subject” could ensure a humanitarian education or its acknowledgment– the emphasis in the student’s active role does not touch either the truth of knowledge or the claim for interpreting which persists, the reader’s locus.

An “order of discourse” that becomes productive not so much where it is looked for but in grammatical legibility, in reading protocols, in thematic organizations.

When we allude to “reading protocols”, we refer to a certain mark/impression in teacher training which, according to what we could call a pragmatic claim, sets up partitions based on dichotomies, schemes of knowledge and action in terms or traditional/past and current/present, in correlation with bad/good[32], with a tendency

[30] During a long time the debate has turned around the “scientific status” of the pedagogical discipline, conformed with knowledge coming from the social and human sciences and its difficulty to integrate itself in a “field” (Díaz Barriga, 1990, p.53)

[31] When they fix themselves on identities according to social class or stage of development they may crystalize into stigmatizing forms.

[32] Jackson (2002) disagrees with those dichotomies that do not acknowledge the intertwining, it’s multifaceted character and results in more or less realistic caricatures of practices.

to produce adherences, to provide action schemes, which undermine problematizations and controversies among perspectives.

The functioning of the contrast between the he teacher figure as transmitter of knowledge and that of the student as passive receptionist, opposed to that of the teacher as “facilitator” who organizes environments and learning experiences for the students to construct knowledge usually operates schematically resulting in an undermining of the complexity of relations and may lead to trivialization of knowledge – as continuity with experiences.

The articulation of the significant “construction” with “freedom/ autonomy” would explain the metonymic displacement and caesura from a perspective that points to the subject-object interaction for a better learning according to truth – depending on historical perspectives–. On the other hand, that wing beat of freedom which seems to resonate in “construction” could be the power to come from practices or already at work in the interstices of the diagram.

The adherence to this contructivistic /cognitivistic perspective – which works as replacement of a “truth” for another implies the elision of its constructed character, resulting in an influence on what we could call “naïve empiricism”.

The heaviness of knowledge, it’s biased and inhibitory character changes and indistinctively reaches any issue. ¿Alice in Wonderland? Invention is part of knowledge but, ignoring the game order –of acknowledgements and legitimations– denies the power relations but does not disrupt the order, emphasizes the sequences of unequal distributions and the relation with knowledge – accepted as given– and the result of progress.

Perhaps this set of relations and impasses we have been pointing out might be connected to the techniques that form part of the “practical reason” that aim to produce learning, modify behavior and attitudes. A moral that sets up legalities and legibility. Foucault (1995) distinguishes production technologies, technologies of sign systems, of power, technologies of the self (p.48). We have sketched out some of them in the network of tying and displacements, in the preponderance of psychology especially that of learning –hinted at in working as pivot of learning strategies–.

We shall next stop briefly on another of the displacements at work in the issue related to interpretations which goes through the present work.

The relation with the "texts", the function of the author and the reader and their effects on ways of reading – Barthes (1987), de Certeau (1996), Blanchot (1970)–, and on the valued mode of "appropriation"[33], is particularly relevant concerning teaches practices, communicative practices, and in relation with knowledge.

Interpretations and the function of the reader are the center of the critique form different theoretical approaches and carry a transformation a transformation that questions the practices and the significance of the technical and disciplinary domain.

[The] Gaps[34], distances and controversies that in some theme organizations –of the field– appear to be displaced or eccentric. The passiveness of the subject presumed in behaviorist approaches on learning, so lengthily criticized, seems overshadowed when it comes to interpreting. There is a persistence of the passiveness of the reader, required from the point of view of "sense of the text" or of "the author's intention"[35].

The "literal reading" required by the social institution (de Certeau, 1990), bets for a way of controlling that does not cancel "furtive hunting" the reader puts into practice in relation with a text. We shall not stop over at psychological approaches that try to enclose, "place" readings from the viewpoint of the author's biography or claims based on contexts. An author's and a work´s coordinates of space and time, develop from the viewpoint of the function-author [36](Foucault, 1992) indicate the modes of control.

[33] Forms of control on reading related to a hermeneutics that claims to disclose the true sense of the text.
[34] Verón (1996) points out that the *gap* is always present between "production and acknowledgement", between "author and reader" (p. 23).
[35] "The unity of the text was a basic postulate, that could refer to the 'form', the 'author', the 'history' or the 'culture'" (Sarlo, 1985, pp.7-8).
[36] The author-function does not deny the existence of a "subject-author" in favour of a "pure objectivity", even when it rejected "the philosophical resort to a constituent subject". As Agamben (2005) points out, it is the processes –and experiences– of subjectivization through which an individual is identified and constituted as author of a given corpus of texts.

On the other hand, the emphasis persists in the social functioning of the language according to institutional rules, codes provided by the signifying system to which the speakers, users, resort to produce a message, to communicate. The "technology of the sign system" (Foucault, 1995) supposes an instrumental and transparent approach of language that allows for the ideological functioning of a "social agreement" of sense production. Based in turn, in a reduction of the activity of the subject of enunciation to the combination and choice of semantic contents available in a given syntax[37].

The possibilities of "the readings", the difference among readings, put at stake the claims of adjustment intervening in the domain of the code or in academic conventions as guarantees of communication. The control of communication of the reception/reading, tries to recover the sense posed by the enunciator on the receptor/receiver.

The assumptions that point to "intentions" that provide the sense of the act, or to the institutional and linguistic conventions[38] situate themselves from the viewpoint of the "producer" and not of the reception of the readings. Interdiscursivity, interchange, are characterized by indetermination, which, in Verón´s view (2004) of an analysis of social discourses, signify that "there is no lineal relation between the engendering of discourses and their effects" (p.65). This observation may be extended to any interchange and increases with the sophistication of technological supports of communication.

Conclusion

Here we attempt to restore some of the functioning features of the relation formation – teaching practices that add difficulty to problematization and shape up the readings about practices. The cracking of condition makes possible the

[37] For an analysis of the implications of the different definitions of the "code" we refer to Verón, E (2004) "Fragmentos de un tejido" [Fragments of a fabric], Buenos Aires: Gedisa.

[38] The relation with linguistics, the structuralist readings it leads to and the displacement it supposes from the perspective of discourse analysis is found in: Petrucci, Liliana (2013) "Lecturas sobre Saussure", disponible en http://www.adversus.org/indice/nro-24/notas/X2408.pdf.

question about the relations with knowledge and powering that claim to have an impact on practices.

Problematizing teaching practices leads us to their relation with formation devices and the “games of truth” that claim to regulate them. The stabilization of practices, with variations margins, would be the condition to preserve a normative ideal that affects the reaction either knowledge in the experiences[39].

As long as practices remain reduced to regulation and subjection parameters, relation with knowledge will appear diminished, reduced to an instrumental use[40]. It is not our intention to demonize instrumental relations –necessary in an economy of life–, on the contrary we try to mark the limits that the appeal to “reflection” does not solve. Fear and its moralizing aspect –the ordering claim of something common– which guide the formation devices, lessens the potential of knowledge relations, silent but operating in experiences – of misery, of what actually happens to us– the temporal, subjective and relational that make teaching practices, ways of communication and readings peculiar.

Scientific and local knowledge come together, add strain, burst into and question a movement that outlines itself once and again according to relations with knowledge in practices of freedom, in relations of the movement within itself. As long as the institution bets on control, what is left of practices will be only the stereoptypes of “action schemes” –and the strategies– which are not enough and do not solve the experience to come.

Refrences

Agamben, G. (2001) Infancia e historia. Bs. As. Adriana Hidalgo ed.

Agamben, G. (2005) El autor como gesto. En G. Agamben, Profanaciones. Buenos Aires: Adriana Hidalgo ed.

[39] For reasons of space we do not dwell on the subjective implications of an experience not reduced to the “know how”. For an expansion and its relation with knowledge, see Agamben, G. (2001) Infancia e historia [Childhood and History]. Buenos Aires: Adriana Hidalgo Ed.

[40] A further developed analysis may be found in: Petrucci, L. C. (2007) La insistencia instrumental, Revista El cardo Nº 10, Paraná: FCE -UNER- ISSN 1514-7347.

Barthes, R. (1987) El susurro del lenguaje. Barcelona: Paidós.

Blanchot, M. (1992[1955]) El espacio literario. Barcelona: Paidós.

Castro, E. (1995) Pensar a Foucault. Interrogantes filosóficos de La arqueología del saber. Buenos Aires: Editorial Biblos

De CerteaU, M. (1996 [1980]) La invención de lo cotidiano. I Artes de hacer, Universidad Iberoamericana - Departamento de Historia - Instituto tecnológico y de Estudios Superiores de Occidente - Centro Francés de Estudios Mexicanos y Centroamericanos, México

Deleuze, G. Posdata sobre las sociedades de control. En C. FERRER.- comp.- (2005) El lenguaje libertario, Buenos Aires: Terramar ed.

(2013) El saber. Curso sobre Foucault. Buenos Aires: Cactus

Davini, M. C. ((2005[1995]) La formación docente en cuestión: política y pedagogía. Buenos Aires: Paidós.

Da Silva, T. T. (1999) Las pedagogías Psi y el gobierno del Yo en nuestros regímenes neoliberales. Revista Archipiélago. N°38, Barcelona: Editorial archipiélago, 56-61.

De Alba, A. (1991) Currículo: crisis, mito y perspectivas. México: Universidad Autónoma de México.

Díaz Barriga, A. (1990) Concepción pedagógica y su expresión en los planes de estudio de pedagogía. En Ducoing Watty, P. y Rodriguez Ousset, A. (comp.) Formación de profesionales en educación. México: UNAM, UNESCO, ANUIES.

Dreyfus, H.- Rabinow, P. (2001[1982]) Michel Foucault: más allá del estructuralismo y la hermenéutica. Buenos Aires: Nueva Visión

Fenstermacher, G. Y Soltis, J. (1999 [1998]) Enfoques de la enseñanza. Buenos Aires: Amorrortu ed.

Foucault, M. (1970) La arqueología del saber. México: Siglo XXI ed.

(1979) Microfísica del poder, Madrid: La Piqueta.

Foucault, M. (1985) El discurso del poder. Presentación y selección de Oscar Terán. Buenos Aires: Folios ed.

Foucault, M. (1991) Saber y Verdad. Madrid: La Piqueta

Foucault, M. (1992 [1970]) El orden del discurso. Buenos Aires: Tusquets ed.
Foucault, M. (1999 [1994]) Estética, ética y hermenéutica. Tomo III. Barcelona: Paidós.
Foucault, M. (1995) Tecnologías del yo y otros afines. Introducción de Miguel Morey. Barcelona: Paidós-ICE, UAB
Foucault, M. (1996) El uso de los placeres, México: siglo XXI ed.
Foucault, M. (2001[1997]) Defender la sociedad. Buenos Aires: Fondo de cultura económica
Foucault, M. (2002 [2001]) La hermenéutica del sujeto. México: Fondo de Cultura Económica.
Foucault, M. (2012) El yo minimalista y otras conversaciones. Buenos Aires: la marca ed.
Jackson, P. (2002[1986]) Práctica de la enseñanza. Buenos Aires: Amorrortu ed.
Larrosa, J (2003) Entre las lenguas. Lenguaje y Educación después de Babel. Barcelona: Laertes.
Naidorf, J.- Pérez Mora, R. –coord.- (2012) Las condiciones de producción intelectual de los académicos de Argentina, Brasil y México. Buenos Aires: Miño y Dávila ed.
Petrucci, L. (2007) La insistencia instrumental, Revista El cardo Nº 10, Paraná: FCE -UNER- ISSN 1514-7347.
Petrucci, L. (2013) "Lecturas sobre Saussure", disponible en http://www.adversus.org/indice/nro-24/notas/X2408.pdf
Rancière J. (2003) El maestro ignorante. Barcelona: Laertes.
(2010[2008]) El espectador emancipado. Buenos Aires: Manantial.
Sarlo, B. (1985) Crítica de la lectura: ¿un nuevo canon? En Punto de vista. Revista de cultura, Año VII, N° 24, agosto-octubre. Buenos Aires, 7-11.
Varela, J. (1995) El estatuto del saber pedagógico. Volver a pensar la educación- Vol. II. La Coruña: Morata, 61-69.
Verón, E. (1996) La semiosis social. Fragmentos de una teoría de la discursividad. Barcelona: Gedisa.
(2004) Fragmentos de un tejido. Buenos Aires: Gedisa.

Walkerdine, V. (1995) “Psicología del desarrollo y pedagogía centrada en el niño. La inserción de Piaget en la educación temprana”. En LARROSA, J (comp.) Escuela, Poder y Subjetivación. Barcelona: La Piqueta.

THE CONSTRUCTION OF RESEARCH QUESTIONS WITHIN THE QUALITATIVE METHODOLOGY WITH INTERPRETATIVE ORIENTATION

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Abstract

In this article, two strategies for the formulation of questions in a qualitative research with an interpretive orientation are addressed. The empirical self-referential strategy and the situational empirical seek to give primacy to reality to continue retaining the inductive and holistic nature that this type of research should have.

Keywords: research, questions, holistic and inductive

Qualitative research with an interpretive orientation.

Qualitative research is currently going through a phase of blurring caused by the emergence of multi-method approaches or mixed methodologies, where the instrumental prevalence causes the researcher to forget the epistemological assumptions, and therefore the ideas force of methodological order, which guide an investigation.

With the firm intention of going against the grain, and agreeing with Berteley (2002), I think it is necessary to recover the great theoretical-methodological orientations present in qualitative research, one of them being interpretive. It should be mentioned that the perspective adopted in this article does not follow the previous traditions literally, but that a reconstruction is made from the experience and personal formation of the author; This leads him to establish five identifying characteristics of this orientation:

1.- Holistic

2.- Inductive

3.- Flexible

4.- Émica

5.- Indexable

The first two characteristics must be taken into account, especially at the time of the construction of the research object. The third characteristic must guide, and be present, in the methodological process; and the last two characteristics must be present as a central guide in the analysis of information (Barraza, 2017).

Under this orientation, the methodological process includes the following stages and moments:

1.- Provisional construction of the research object (work prior to entering the field)

- Construction of the problem (formulation of research questions)
- Methodological pre-design (selection of actors, place, scenarios, techniques and instruments for the collection of information)

2.- On-site methodological design and information collection / analysis (field work)

- Negotiation with the social owners of information or porters, in terms of Taylor & Bogdan (1990) (elaboration of informed consent)
- Selection / application of techniques for the collection of information (progressive targeting through the use, first of all, of unstructured techniques to subsequently move to semi-structured ones).
- Record and analysis of information (progressive targeting: from provisional to definitive categories) (Cofffey & Atkinson, 2005).
- Development of procedures to take care of the methodological rigor: credibility, transferability, dependence and confirmability (triangulation, dense description, low level of inference, permanence in the field, etc.) (Ruiz, 1999).

3.- Presentation of results

- Provisional construction of the interpretive text
- Negotiation with the participants: validation requested (Hammersley & Atkinson, 1994).
- Analysis / reflection of the text with colleagues (Ruiz, 1999)
- Definitive construction of the research text.

The attention of the present writing is centered in the first moment of the first stage: construction of the problem.

Provisional construction of the research object

The first stage, of the qualitative research process under an interpretive orientation, includes the work that is done before entering the field.

It is considered that the construction carried out at this time of the research object is provisional, since the questions asked serve only as provisional indicators, as an initial pretext, to enter the field and begin the empirical investigation.

When collecting the information and advancing in the knowledge of the context, of the actors and of the situation, it is observed that in a natural way they begin to adjust or modify the research questions. Modifications that will continue until the closing of the field work, at that moment it is considered that there is a definitive construction of the research object and therefore the final questions of the investigation.

This stage includes two moments: the construction of the problem and the methodological pre-design. In the case of the construction of the problem, and beyond the discursive context generated regarding the problem, the central point is the formulation of the research questions, or thematic questions for Stake (1998) or questions for Goetz and LeCompte (1988). To formulate the research questions, the methodologists recommend different strategies, forms or procedures to build them; The review made in this regard allows identifying five strategies:

- Empirical self-referential
- Situational empirical
- Based on the state of the art
- Theoretical
- Oriented by the method

Of these five strategies, two are in line with the perspective adopted in this article: the empirical self-referential and the situational empirical. These two estaregias allow to continue conserving the holistic and inductive character of the construction of the object of investigation.

Empirical self-referential strategy

This strategy consists in the formulation of research questions by the researcher, without making any theoretical consultation and from their own experience and prior knowledge. The following process is suggested:

• Select the research topic. Recall that the subject is open, general and imprecise and only indicates the interest of the researcher.

• Once the subject has been written, all the questions that come to the researcher's mind on that subject are written. The idea is to write them as they appear without a process of analysis in between. This is important because when the researcher begins to ask questions, and tries to analyze them at the same time, he puts padlocks and limits that constrain his freedom to problematize the topic. A minimum of 15 questions is recommended.

• Once the questions have been formulated, the researcher should group them by classifying them according to the subtopic they address.

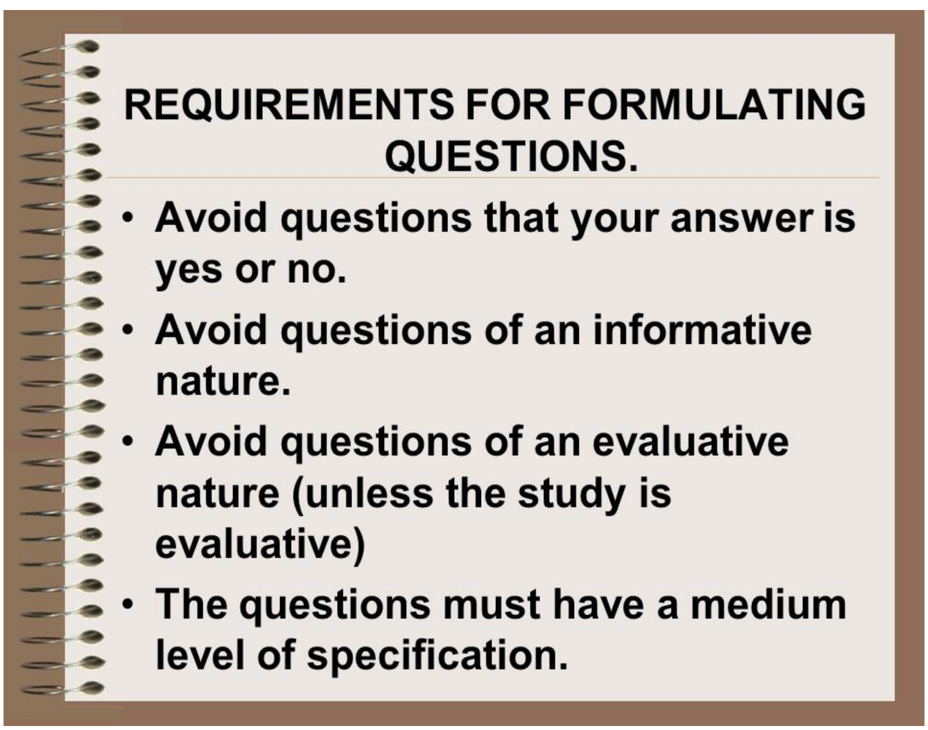

Figure 1. Requirements for formulating questions. Own elaboration.

• Once this classification is done, the researcher will be able to observe the different conceptual dimensions or empirical fields to which each group of questions refers. With that knowledge he is able to choose a single group and therefore those would be his initial or provisional research questions.

• To conclude the researcher should review those questions and verify that they meet the requirements for proper formulation (Figure 1). Otherwise, the required modifications must be made.

Some examples can serve to exemplify the proper formulation of research questions

Wrong way	Correct form
1.- Is the use of teaching resources important?	What importance do teachers give to the use of didactic resources in classroom work?
2.- What is educational integration?	How do teachers conceptualize educational integration?
3.- How relevant is the way teachers evaluate?	How do teachers evaluate mathematical contents?
4.- What is the quality of the psychological care provided to children with special educational need	What types of guidance does the psychologist carry out to help care for children with special educational needs?

In question number one you can see that a question is asked that can be answered with a yes or a no. This is an incorrect way to formulate research questions since it reduces the whole research process to the identification of the presence or absence of something and that is the most coarse and simple level of measurement that exists. To solve it, it is necessary to use the words questions What? Who? How? When? Where? Why? For what?

In question number two an informative question is observed (Stake, 1998). When a question arises in these terms the research does not need to be, since you can resort to any book, or any other text, and there find the answer. To solve this, add a specific context and actor, since this helps to send it to the empirical and away from the exclusively theoretical or conceptual.

In question number three, an evaluative question is shown. When, in formulating a question, qualifying adjectives are used as appropriate, pertinent, effective, efficient, relevant, etc. We are asking an evaluative question for an evaluative investigation and the adjective is the evaluation criterion that will be used. To solve this, avoid this type of adjectives when writing the question.

In the fourth question we observe how a term with a high level of abstraction (quality) is used and another with a medium level of abstraction (psychological attention) which is erroneous since it is appropriate to use concrete terms with an empirical and immediate observational reference. To solve it, refer to processes, procedures, forms of work, character traits, etc. that are susceptible of being observed without requiring further explanations or clarifications in this regard.

In summary: a) if we use the words questions What? Who? How? When? Where? Why? For what?, b) we add a specific context and actor, c) we avoid using qualifying adjectives in its wording, and d) we use terms that refer to processes, procedures, forms of work, character traits, etc. that are susceptible to be observed without requiring further explanations or clarifications, we will be making a good formulation of research questions.

The situational empirical strategy

This strategy consists in the formulation of research questions by the researcher from a first immersion in the field (Ruiz, 1999). For this, the following steps are suggested:

• The collected information is analyzed and units of analysis of thematic nature are constructed, as if they were provisional categories.

• From each of these units of analysis, the researcher formulates a research question taking care of the aforementioned requirements.

Once we have the research questions, they are inserted in a discursive context that contextualizes them, preferably being this context of empirical or situational character.

As a way of closing

In the first sections it was mentioned that the research questions that are formulated at the beginning of the methodological process of a qualitative research, with interpretative orientation, have a provisional character, however, this does not mean that they have no value. These first questions are those that trigger the field work of the researcher and establish the first focus of observation, so its importance lies in being the first boundary made to the object of research in the least possible way and seeking to give primacy to reality.

To the extent that this moment we do it in the best possible way, based on the strategies mentioned for the formulation of research questions, we will be in optimal conditions so that the results can be interpreted from an emic perspective and take into account the indexing of them, with what we would really be doing qualitative research with interpretative guidance.

References

Barraza, A. (2017). Las características de la investigación cualitativa desde una orientación interpretativa. *Revista de Estudios Clínicos e Investigación Psicológica,* 7(13), 78-86.

Berteley, M. (2002). *Conociendo nuestras escuelas.* Barcelona, España: Paidós.

Cofffey, A. y Atkinson, P. (2005). *Encontrar el sentido a los datos cualitativos.* Alicante: Universidad de Alicante:

Goetz J. P. y LeCompte M. D. (1988). *Etnografía y diseño cualitativo en investigación educativa.* Madrid, España: Morata.

Hammersley, M. y Atkinson, P. (1994). *Etnografía: métodos de investigación.* Barcelona: Paidós.

Ruiz, J. I. (1999). *Metodología de la investigación cualitativa.* Bilbao, España: Universidad de Deusto.

Stake, R. E. (1998). *Investigación con estudio de casos.* Madrid, España: Morata.

Taylor, S. y Bogdan, R. (1990). *Introducción a los métodos cualitativos de investigación.* Buenos Aires: Paidós.

METHODOLOGY FOR THE EVALUATION OF THE IMPACT OF POSTGRADUATE COURSES IN THE FACULTIES OF PEDAGOGICAL SCIENCES.

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Abstract:

The impact assessment of postgraduate courses offered by higher education institutions is an ongoing need to measure and assess their relevance and quality. This article presents a methodology to assess the impact of the postgraduate courses of the Faculty of Educational Sciences. The methodology consists of six stages: organization of the evaluation process, implementation and collection of information, preparation of the final report and conclusions of the evaluation, socialization and dissemination of results and perspective projection. Teaching professional performance dimensions and impact on educational institutions with their respective indicators were determined.

Keywords: methodology, impact assessment, postgraduate courses, teaching professional performance, impact on educational institutions

Introduction.

Higher education today faces new social and educational challenges related to complex phenomena such as globalization, the massification of higher education, internationalization, the development of information and communication technologies. These problems eliminate barriers of space and time, as well as the emergence of training modalities, which move away more and more from traditional practices; therefore, they require the development of new teaching, student and professional competences.

This has led Higher Education Institutions to undergo important transformations that have to do with their organizational context, with their substantive processes, with the policies of institutional management, adapting to the new social and productive demands of society where the insertion of current demands require a more open university that allows each person to have the opportunity to study during his life, which implies a new paradigm, not only in terms of university careers but also in the system of postgraduate studies .

In relation to the need for continuous and permanent postgraduate education of professionals, in the document “The Latin American University under discussion”, the following approach is made:

The speed at which changes in knowledge occur today, the rapidity with which new methods, instruments and technologies emerge, as well as the continuous change in the demands of preparation made by the productive sectors, make it difficult to believe that the knowledge acquired five, ten or fifteen years ago remain adequate after this period of time. The only way to respond to this reality is through continuous training, through which all professionals can update their knowledge and adjust them to the demands of the moment (UNESCO-IESALC, 2010, p.269).

The growing development of knowledge is demanding a significant increase in new postgraduate courses that are designed to raise awareness of new changes in knowledge, which develop in the professionals the ability to assimilate new information, generate innovation and continuously update what throughout their career.

The above demand of educational institutions the review of the process of improvement and postgraduate training, because the assessment of the changes or transformations existing as a result of the effect of this process on the human resources of a territory becomes a need to achieve value judgments about the magnitude and depth of these changes, according to the objectives to be reached and the value from which all professionals can update their knowledge and adjust them to the demands of the moment (UNESCO-IESALC, 2010, page 269)
The growing development of knowledge is demanding a significant increase in new postgraduate courses that are designed to raise awareness of new changes in knowledge, which develop in the professional the ability to assimilate new information, generate innovation and continuously update what throughout his career.

The above demand of educational institutions review of the process of improvement and postgraduate training, assess changes or transformations of existing as a result of the effect of this process on the human resources of a territory becomes a need to achieve value judgments on the magnitude and depth of these changes, by virtue of what is foreseen in the objectives to be reached and the assessment of their impact in practice, taking into account the context analyzed. (Pérez, Rodríguez, and García, 2010, p.3)

The increase of the needs of postgraduate education leads to the revision of the system of postgraduate training in the universities, but more importantly, to evaluate its impact. Evaluating the impact of postgraduate studies can measure and assess the relevance of training, in correspondence with the desired model, as well as the transformations that have been made in their professional performance and in their environment, the quality of postgraduate studies, to contribute to their postgraduate studies.

Postgraduate education is aimed at systematically contributing to the increase of productivity, efficiency and quality of work. It is a way to materialize the postgraduate education required by professionals, specifically, those of the education system. These forms of postgraduate studies enable graduates with a high professional competence and advanced skills for scientific, technical and humanistic research, thus providing a solution to the problems that arise in the development of learning and the integral formation of their students for the level where they work.

Designing a research to evaluate the impact of postgraduate education, responds to the need to know what changes have experienced educational institutions that have high concentrations of graduates in these programs, as well as assess their teaching performance as professionals. A look without doubts, that in the last years has taken international notoriety and that judges not only the professional transformation reached by the teachers, its effect in the development of the processes that lead, but also, a revision of its strengths and weaknesses, of their deficiencies and potentialities, of the criteria and visions that society has of them, to deepen and resolve through the investigative way those issues that still prevent a correct advance with quality.

Development.

Impact evaluation of postgraduate courses within the educational evaluation, the impact evaluation stands out. With regard to other types of evaluation, the term impact assessment is recent. It was first addressed in the late 1960s in developed countries, by researchers who studied the environment, as a process of analysis and prevention. Of environmental impacts, under pressure from environmental groups and the population in general.

These studies were extended to the field of science, training and postgraduate studies of human and social resources. In relation to the impact evaluation there is a multiplicity of criteria:

"... Impact evaluation aims to determine more generally if the program produced the desired effects on individuals, households and institutions and if those effects are attributable to program intervention. Impact evaluations also allow examining unintended consequences on beneficiaries, whether positive or negative. "(Baker, 2000, p.1)

The position of this author indicates that the impact evaluation is aimed at verifying the effects that the program had on people and on society in general, whether anticipated or not, positive or negative.

The impact evaluation is the one that is carried out considering the multiple effects of the evaluable object in the most comprising possible way. It is the awareness of the utility, of the prejudice or uselessness that the assessable object may generate, partially or totally, in a mediate manner, as a result of its application. In this case, the author refers that the impact evaluation must measure the multiple result taking into account the most comprising possible way, utility, or uselessness that may be generated as an effect of the application of the evaluable object.

The impact evaluation tries to establish what are the possible effects, consequences of the evaluable object in a broad population (community or country, organizations, people associated with the user, etc.) and not only the immediate and proposed effects, but all the spectrum of consequences that result from the application of the evaluable object. (Añorga & Varcárcel, 2004, p.3)

These authors suggest that the impact evaluation is the effects on a broad population and its consequences, whether predicted or not. That is, all the results obtained with the application of the evaluable object.

Under the name of impact evaluation is understood the evaluation process oriented to measure the results of the interventions, in quantity, quality and extension according to the pre-established rules. The measurement of the results, the main characteristic of the impact evaluation, makes it possible to compare the degree of achievement achieved with the desired degree of achievement. (Abdala, 2004, pp. 28-29)

This author considers that the impact evaluation must make a comparison between the planning and the result of the execution both in quantity and quality. The impact evaluation is an extensive, deep, integral, global process where qualitative and quantitative evaluation techniques are used. It must evaluate both the context, the input, the process and the product to reach the impact.

It measures the multiple and global results, foreseen or not, both positive and negative of the execution of the evaluable object on those involved and at the level of the whole society. It allows to compare the planning with the effect of the execution and the quality achieved with the desired one.

This type of evaluation moves the evaluation process from a facto-perceptive or descriptive stage to a higher stage, considering the multifactorial characteristics of the effects obtained. This means that the impact evaluation can not be supported by a single instrument, on the contrary. In its interactions based on the conditions of the environment where the evaluated object is developed, becomes itself an instrument for the transformation of the environment (Añorga & Varcárcel, 2004, p.4)

According to Abdala (2004, p.29) the impact evaluation is a process of accountability to the whole society that allows:

- Record and analyze all positive and negative experiences, by comparing them in the control group, systematizing them.
- Evaluate the socio-economic and political context in which the experience occurs.
- Identify the actors involved and their specific weight in the results. Study interinstitutional and public / private articulation.
- Offer cost-benefit studies.
- Arrange contributions from management technicians, through the dissemination of information from the evaluation and its subsequent discussion among those responsible for management.
- Clearly and objectively inform those responsible for making decisions about the progress of the programs; this feedback promotes institutional reinforcement.
- Impact evaluation allows to comprehensively know all the effects of a program on the people involved and the effects on society, the experiences that were part of the execution of the program. It allows measuring the relationship that exists between the cost and the benefit achieved, the effectiveness of the planned program and the one not foreseen.

Considering the above approaches, we can summarize that the impact evaluation is characterized by:

- Be comprehensive, global, generalizing.
- Measure the desired effects on the beneficiaries and society.
- Use different forms of qualitative and quantitative evaluation.
- Enable the deepening of the transformations that occurred both expected and unexpected, positive and negative.
- By evaluating the context, the input, the process and the product.

Impact assessment, being a process of accountability to society, becomes an important tool for transformation, postgraduate studies and refinement of the evaluated program and evaluation instruments. It facilitates the obtaining of other evaluable objects during the evaluation process.

Once the theoretical study has been carried out, it is defined as the impact evaluation of the postgraduate courses to the integral process, aimed at obtaining, identifying, assessing and reporting the correspondence of the objectives in the concrete social environment, whose effects are manifested in the modes of action of people, institutions, organizations and society, transforming its scope and interpretation of information, into a useful tool for decision-making in constant feedback.

In view of the above, it is vitally important to evaluate the impact of the postgraduate courses offered by the Faculties of Pedagogical Sciences, in order to assess their quality, the impact on the professional performance of their graduates, the growth of educational institutions and their Relevance with the needs for postgraduate studies of educators.

Methodology for the evaluation of the impact of the postgraduate courses

For the evaluation of the impact of the postgraduate courses of the Faculties of Pedagogical Sciences a methodology was elaborated taking into account the analysis of the theoretical revision of different positions against this type of scientific result, to finally define the vision that is assumed. In the systematization about the methodology, as a scientific result, the positions of different authors were analyzed, which have contributed to the deepening of the aspects that define it and its contextualization. From the philosophical point of view, the methodology is defined as: "(...) the theory about the methods of scientific knowledge of the world and its transformation" (Rosental & Ludin, 1973, p.317)

Barreras (2004, p.6) defines it as "a set of methods, procedures and techniques that, regulated by certain requirements, allow us to organize our thinking and our way of acting to obtain and discover new knowledge".

Other authors declare that: "a methodology refers to how to do something, to the establishment of ways, methods and procedures to achieve an end, in them the contents are taken into account to achieve a specific objective." (Valle.A, 2007, p 206).

All the authors cited above coincide in stating that it is made up of methods to complete an objective. In the definitions there is no consensus on the components of a methodology as a scientific result, which has led to the assumption of a variety of structures.

In the elaboration of the methodology, the definition is assumed by the authors De Armas & Valle (2011, page 48), which they consider to be "a logical process made up of stages, links or dependent and dependent steps, which are ordered in a particular way and flexible allow the achievement of the proposed objective ".

General purpose:

Evaluate the impact of the graduate program on the professional performance of the graduated teachers and the transformation of the pedagogical reality of the institutions to which they belong, from the obtaining of valid and reliable information of the variables of context, input, process and product, allowing the conformation of value judgments and decision making based on their postgraduate studies

Objectives of the methodology

- Value the quality and relevance of postgraduate education in the postgraduate studies of teachers.
- Assess the professional performance of graduates of postgraduate education in correspondence with the courses received.
- Evaluate the impact on educational institutions.
- Evaluate the social impact and satisfaction of students, family, community, graduates and employers.
- Prepare the postgraduate studies plan in correspondence with the needs presented by graduates of postgraduate education.

The structure of the methodology is composed of the cognitive, functional and instrumental apparatus. In the cognitive apparatus of the methodology the theoretical platform that supports it is presented (concepts, laws, principles and theories). It is subdivided into a conceptual apparatus and legal apparatus.

The legal apparatus is composed of the set of laws and principles that underlie the methodology.

Principles of the impact assessment methodology of graduate courses.

- The evaluation of the impact of the postgraduate courses is not an end in itself, but rather contributes to the management for the continuous postgraduate studies of the quality of the postgraduate courses.
- The unit of qualitative and quantitative evaluation should measure the transformations that have occurred both in the beneficiaries and in society, whether they are expected, unexpected, positive or negative.
- The impact assessment of postgraduate courses must respond to Quality Standards for Cuban higher education, adjusted to their traditions, level of development, to the cultural and social characteristics of the country, but comparable to international standards.
- Ethical requirement to improve the quality of postgraduate education that must lead to individual actions towards the best possible results.
- The evaluation of the impact of postgraduate education requires procedures ordered in a set of steps, which leads to the postgraduate studies of its quality.

The functional apparatus of the methodology: is that referred to the set of conditioning and dependent steps, that ordered in a particular and flexible way allow to fulfill the proposed objective and reveals more strongly how to proceed.

Steps of the methodology.

- Evaluation design.
- Organization of the evaluation process.
- Execution and collection of information.

- Preparation of the final report and the conclusions of the evaluation.
- Socialization and dissemination of the results obtained.
- Perspective projection.

Actions to be developed in each of the steps sf the methodology design of the evaluation.

- Study of the guiding documents: Resolutions, programs, projects.
- Interviews with the addresses of educational institutions.
- Define evaluation objectives.
- Content.
- Determination of variables, dimensions and indicators.
- Methods, techniques, instruments to apply.
- Preparation of the instruments.
- Determination of the main processes and documentation to influence.
- Preparation of the work schedule.

To design the research, it is necessary to determine which postgraduate program is going to be the object of the impact evaluation. Study the resolutions and normative documents of postgraduate education. Know where the graduates of the courses are located to obtain, through an interview, the opinion of the directors of the educational institutions about the courses received by their educators and to develop the research in the institutions where there is the greatest number of graduates.

Once this study has been carried out, the objectives of the evaluation, contents, variables, dimensions and indicators have to be defined. The methods and instruments to be applied are determined and the elaboration of these instruments is carried out, which will be in correspondence with the determined indicators.

It is important to consider all the sources that can provide information to the research, for which the design of instruments that cover the three possible sources of information must be considered: oral sources (interviews, dialogues), written sources (documentary review), surveys, records of rapporteurships) and visual sources (participant observation).

Before starting the investigation, it is necessary to elaborate a work schedule where the date of completion of each stage of the process is established. For the evaluation of the impact of the postgraduate academic training programs of the Faculties of Pedagogical Sciences, the following variable is defined: Impact evaluation of postgraduate courses.

The following are assumed as dimensions:

- Professional pedagogical performance.
- Impact on educational institutions.

The professional performance of the graduate teacher of postgraduate courses such as:

Set of actions carried out by the graduate teacher, during the development of their pedagogical activity, based on the elevation of their knowledge and professional commitment, the direction of pedagogical strategies and the resolution of problems through educational research, so that these reflect in the learning and comprehensive training of their students.

For its part, it is defined as impact on educational institutions:

The contribution of graduates of postgraduate courses to the transformation of the pedagogical reality of the educational institution and its social context, from the application of knowledge and scientific method, which is expressed in the scientific potential, in the development of investigative activities for the solution of the problems of the institution, social and environmental, in changes of the direction, in the elevation of the quality of the teaching-learning process and in its prestige in the community.

From each dimension, its subdimensions were defined with their respective indicators for their evaluation and the guidelines for measuring each indicator.

Dimension 1: Pedagogical professional performance.

Sub-dimension 1.1: Teaching-learning process.

Indicators.

1.1.1 Planning of the teaching-learning process.

Clarity of the objectives formulated by the teacher for his students and coherence with the national curriculum. Compliance with didactic requirements. There are no inaccuracies or content errors in the planned classes. In the class system, the different levels of performance or assimilation are covered. Structure and conception of each class within the class system. Control forecast in each of the moments of the process.

1.1.2 Execution and control of the teaching-learning process.

In the classes an adequate treatment is given to the different components of the Didactics (Objectives, contents, methods, means, forms of organization and evaluation). No inaccuracies or content errors are observed. Different levels of performance or assimilation are worked on. There is differentiated treatment for students based on the mastery of their particularities. Use of different forms of control within the class.

1.1.3 Linking the subjects of the postgraduate course to the preparation of subjects.

The contents of the postgraduate courses are used in the preparation of the subjects as well as the bibliography oriented during the courses.

1.1.4 Academic performance of students in the subject taught.

Average of correct answers of the students in the verifications of the board of directors. Average of correct answers of the students in the systematic evaluations. Promotion percentage reached in the group.

1.1.5 Level of participation of students in prize exams and knowledge contests.

Percent of students participating in award exams and knowledge contests.
Percent of winning students in prize exams and knowledge contests.

Sub-dimension 1.2: Methodological work.

Indicators.

1.2.1 Level of participation in methodological activities.
Assertiveness of the teachers' participation, related to didactic topics and with the content of teaching in the methodological preparation sessions and in other meetings.

1.2.2 Direction teaching - methodological activities at the level.
Directs methodological activities of the degree. Directs methodological activities in the school. Quality of the methodological activities developed.

1.2.3 Socialization of the topics received in postgraduate education in the methodological work of the school.

The subjects received in postgraduate courses are socialized through subjects taught in methodological activities at school.

Sub-dimension 1.3: Scientific activity.

Indicators.

1.3.1 Participation in tasks of research projects at different instances.
It is part of some research project. Perform the tasks that guide you in the project.

1.3.2 Level in which it applies scientific results for the solution of problems of educational practice.
It uses the path of scientific research in the search for solutions to the training and learning problems presented by its students. Applies the results obtained in their research in educational practice. Applies results of other research in educational practice.

1.3.3 Level of participation in scientific events.

Participate in the events that the school and the municipality call. Participate in national and international provincial events. Awards or recognitions obtained in the presentation of their scientific results in events.

1.3.4 Publication of scientific results.

He has published his scientific results in specialized journals.

Sub-dimension 1.4: Postgraduate studies.

Indicators.

1.4.1 Level of participation in postgraduate education.

Number of postgraduate courses received in the last 3 years.

1.4.2 Level of existing coherence between the needs for postgraduate studies and postgraduate courses that the professionals attend.

The subjects of the postgraduate courses respond to their needs for postgraduate studies. The courses he attends respond to his needs for postgraduate studies.

1.4.3 Degree of satisfaction with the postgraduate studies received.

The postgraduate studies received satisfied their needs for postgraduate studies. They contributed to their update on topics of general, particular didactics and the content of their specialty. They also contributed to raise the quality of the teaching-learning process they lead.

Dimension 2: Impact on educational institutions.

Sub-dimension 2.1 Scientific growth

Indicators.

2.1.1 Number of educators who have taken postgraduate courses.

Percent of educators with postgraduate studies.

2.1.2 Graduates of postgraduate education are linked to research projects.

Educators linked to research projects. Tasks carried out by educators in research projects.

2.1.3 Level of research development for the solution of the problems of the educational institution, the family-school relationship and in the solution of the problems of the community.

Use of the scientific way in the search for solutions to the training and learning problems presented by students. Use of the scientific path in the search for solutions to the problems of the educational, social and environmental institution

2.1.4 Generalization of research in educational practice.

Percent of generalized research in educational practice.

2.1.5 Level of participation of educators in scientific events.

Percent of educators who participate in the events that the school and the municipality call. Percent of educators who participate in provincial, national and international events. Awards or recognitions obtained by educators in the presentation of their scientific results in events.

2.1.6 Publications of the educators' scientific results.

Percent of educators with publications in specialized magazines.

Sub-dimension 2.2: Increasing the quality of methodological work

Indicators.

2.2.1 The methodological work contributes to elevate and update the knowledge about general didactics, particular and the knowledge of the specialty.

The treatment of the different components of didactics is studied in depth (Objectives, contents, methods, means, forms of organization and evaluation). It deepens into the elements of the particular didactics of each subject.

There are no inaccuracies or content errors in the subject preparation.

2.2.2 Adaptation of methodological work to the main difficulties of teachers.

The educational institution has an accurate diagnosis of its teachers. The methodological work responds to the main difficulties of the teachers detected in the diagnosis.

2.2.3 Generalization of research and / or educational experiences through methodological work.

The methodological work generalizes results of research projects, master's thesis or doctorate in order to raise the quality of the teaching-learning process.

2.2.4 Adaptation of the content of the methodological work to the topics received by the educators in the postgraduate studies.

In the methodological work, the topics received by the educators in the postgraduate courses are addressed. The graduates socialize the subjects of the postgraduate courses.

Sub-dimension 2.3: Satisfaction of the educational institution with the postgraduate studies of educators.

Indicators.

2.3.1 Degree of satisfaction of the management of the educational institution with the postgraduate studies received by teachers. Satisfaction of the management of the educational institution with the transformations produced at the institutional level. The update of the academic program. The changes produced in the graduates with the postgraduate studies of the professional and investigative sphere. The effects on students, faculty, institutional direction, community and environment.

2.3.2 Degree of satisfaction of the direction of the educational institution with the coincidence of the postgraduate studies and the needs of its teachers.

Satisfaction of the direction of the educational institution with the relevance of the postgraduate studies received by teachers.

2.3.3 Degree of satisfaction of educators with the postgraduate studies received.

Satisfaction with the update of the academic program. The changes produced in the graduates from the individual and group related to the postgraduate studies of the professional and investigative sphere. Prestige reached in the educational institution and in the community.

Organization of the evaluation process.

- Analysis of the programs to be evaluated.
- Selection of the population and sample.
- Selection of evaluators.
- Preparation of the evaluators.
- Define relations and functions of the evaluators.
- Collection of material resources.
- Coordination with the institutions and groups of the sample.
- Sensitization of those involved in each center.

To start this stage it is necessary to first select the programs that will be evaluated in order to select the population and the sample. Then the selection of the evaluators would proceed. The evaluators are a key point in the development of the research, so they need to know clearly what their functions are and are committed to the task assigned to them. It is essential to be able to start the investigation to have all the necessary resources.

An investigation should never be initiated without prior coordination with the directors of the educational institutions and the groups in the sample. These people must know the objective of the investigation, its characteristics. Sensitizing and engaging managers and members is essential for the development of this process.

Execution and collection of information.

- Application of the instruments and tabulation of the results.
- Triangulation of indicators
- Processing of results and interpretation.

In this research, the analysis categories are closely related to the defined indicators and these in turn to the reagents of the instruments designed. It is therefore very important not to stop accumulating a lot of information around each of the pre-set indicators.

The fundamental basis of the planned records is the preparation of records of rapporteurships. Each interview, the activity observed and the revised document must be recorded in a report of their own. Highlight if the attributes of the research object are highlighted, to which the respective indicators refer, as well as the conditions in which these attributes are totally or partially represented and, in the absence of manifestation, the causes.

Guides will be used to quickly guide the points of interest. They consist of tables by reagents with a dichotomous scale (yes or no).

It is necessary to collect all the effects produced, their causes and consequences in each case, solution of the problems and the conditioning of new diagnoses that exceed the objects evaluated.

The impacts are identified from the theoretical and practical systematization, taking into account that the changes can be short, medium or long term as an effect of knowledge and familiarization and the application and dissemination of the results obtained in the investigations in the different branches of the Sciences of the Education.

The resources to obtain the results that are required by level of impact are: Very high: if the transformations occurred with a high degree of satisfaction, commitment and responsibility before the tasks, a high degree of interaction in the environment, that mobilizes and stimulates others to participate in the program, admit possibilities of being Assistant professor, puts into practice what he has learned, wishes to expand his cultural development and socializes his achievements.

High: if you are willing to change depending on the difficulties that arise. Medium: provision provided there are no major difficulties.

Low: it remains without noticeable effects, the changes are few perceptible.

Very Low: it remains without noticeable effects, the changes are few perceptible and isolated.

Preparation of the final report and the conclusions of the evaluation.

- Qualitative and quantitative analysis of the results.
- Proposal of actions for the postgraduate studies plan.

A triangulation of the data obtained in the different instruments is made, that is, in the oral, visual and written sources. The final report is prepared taking into account the information offered by the different sources, analyzing the dimensions and indicators. From the information obtained, the proposal of actions for the postgraduate studies plan is made.

Socialization and dissemination of the results obtained.

- Exchange with the centers, samples or groups of people.
- Presentation of scientific works in events, derived from the research results.
- Publication in specialized journals of the research results.

Once the final report and the postgraduate studies plan have been prepared, the sample centers are informed of the results of the investigation, for decision making and the postgraduate studies plan. Show these experiences in scientific events and in publications in specialized journals.

Perspective projection.

- Follow-up to the postgraduate studies plan.
- Proposal of new contents to investigate.

The postgraduate studies plan must have a continuous and permanent follow-up in order to raise the quality of postgraduate education and contribute to the transformation of the educational reality.

Conclusions

- The assumed theoretical foundations, referred to the accreditation processes and the institutional evaluation, as well as those related to the evaluation of the impact of postgraduate education, allowed to determine the principles on which the research is based, laying the foundations for directing the elaboration of the methodology for the evaluation of the impact of postgraduate education of the Faculties of Pedagogical Sciences.
- The Faculties of Pedagogical Sciences must evaluate the impact of the postgraduate courses to be able to know the changes and transformations operated in their graduates in professional performance, the impact on educational institutions, as well as to measure and assess their relevance and raise their quality.
- In the process of developing the methodology, the application of the Delphi method allowed a theoretical evaluation of the operationalization of the impact evaluation of postgraduate education, as well as its dimensions and indicators, allowing the development of instruments for investigation.
- The impact evaluation methodology of postgraduate education developed in its functional apparatus is structured by five steps: evaluation design, organization of the evaluation, execution and obtaining of the information, preparation of the final report, socialization of the results. These steps contribute to the contribution of a greater amount of evidence to the self-evaluation process, guaranteeing an adequate postgraduate studies plan, for the external evaluation and accreditation of the Faculties of Pedagogical Sciences and of the careers that are developed in it.

References

Abdala, E. (2004). *Manual de evaluación de impacto de programas de formación.* Recuperado de http://www.feyalegria.org/images/acrobat/man_eva_5369.pdf.

Añorga, J., & Varcárcel, N. (2004). *Modelo de evaluación de impacto de programas educativos.* La Habana: UCP "Enrique José Varona".

Baker, J. (2004). *Evaluación del impacto de los proyectos de desarrollo en la pobreza: manual para profesionales.* Recuperado de http://www.siteresources.worldbank.org/INTISPMA/Resources/Impact-Evaluation-Handbook--Spanish-/manual.pdf.

Barreras, F. (2004). Los resultados de investigación en el área educacional. *Conferencia presentada en el centro de estudios socioeducativos "Manuel Valdés Rodríguez de la UCP "Juan Marinello Vidaurreta"* . Matanzas, Matanzas, Cuba: En soporte digital.

De Armas, N., y Valle, A. (2011). *Resultados Científicos en la investigación Educativa.* La Habana: Pueblo y Educación.

Pérez, M. A., Rodríguez, M., & García, F. (2010). *Dimensiones, indicadores e instrumentos para medir el impacto de la actividad de posgrado ofertada por la Universidad de Camagüey*. La Habana: Memorias del Congreso Internacional Universidad 2010.

Rosental, M., & Ludin, P. (1973). *Dicionario Filosófico.* La Habana: Editora Política.

UNESCO-IESALC (2010). *La Universidad latinoamericana en discusión.* Recuperado de http://unesdoc.unesco.org/images/0019/001917/191724s.pdf.

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In this book, seven articles of the Praxis Investigativa ReDIE journal that were favorably evaluated to be published in English are presented.

In their evaluation, the arbitrators took as criteria: quality of the article, validity of the information provided and potential interest that could awaken in the English-speaking public.