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### The Curricular Practice of a Work-Competency Model for Adult Higher Education

### La práctica curricular de un modelo basado en competencias laborales para la educación superior de adultos

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#### Abstract

The purpose of this research was to get to know the true curriculum of the Northwestern University's *Get Ahead*, a special undergraduate program based on the work competencies model and aimed at adults already in the workforce. The goal was to back up the curricular improvement of an educational alternative unique of its kind in Sonora (Mexico). The methodology of Estevez and Fimbres (1998) was used for the formal curriculum analysis and its comparison with the real curriculum from the perspective of its protagonists: teachers and students. The curriculum's internal and external sources were analyzed in order to define the instruments and variables, and to interpret the results. We concluded that the teachers showed that the teachers were more up to date than the

students in regard to disciplinary topics. However, they lack adequate teaching strategies to make an impact on students' learning process. Moreover, neither teachers nor students are familiar with the competence model, nor do teachers apply a diagnostic examination to determine their students' competency at the beginning of the course. This indicates that the formal curriculum is distant from the real curriculum.

*Keywords:* Curriculum development, competency-based curriculum, curriculum evaluation.

## Resumen

Esta investigación tuvo como objetivo conocer el currículo real del Programa Supérate de la Universidad del Noroeste, diseñado según el modelo de competencias laborales y dirigido a población adulta económicamente activa, con el fin de contribuir a fundamentar el mejoramiento curricular de una alternativa educativa única en su tipo en Sonora (México). Se aplicó la metodología de Estévez y Fimbres (1998) para el análisis del currículo formal y su comparación con el currículo real desde la perspectiva de sus protagonistas: profesores y estudiantes. Se analizaron las fuentes internas y externas del currículo para definir instrumentos y variables, e interpretar los resultados. Se concluye que los profesores mostraron mayor actualización que los estudiantes en tópicos disciplinares; sin embargo, carecen de las estrategias didácticas adecuadas para impactar en el aprendizaje de los estudiantes. Además, docentes y estudiantes desconocen el modelo de competencias y no se aplica un examen diagnóstico para detectar el nivel de competencias al ingreso, lo cual indica que el currículo formal se encuentra alejado del currículo real.

*Palabras clave:* Desarrollo curricular, currículo basado en competencias, evaluación curricular.

## Introduction

This paper presents the results of a research project designed to ascertain the practice of two undergraduate curriculums, which were designed under a model of "standards of work competencies" to serve working adults. Selected as objects of study were curriculums for the degrees in Business Administration (BBA) and Certified Public Accountant (CPA) in the *Get Ahead* program of Northwestern University, located in the state of Sonora (Mexico). Analyzed were both the formal internal aspect and the practical or real curriculum, based on a methodology of curriculum design and evaluation (Estevez and Fimbres, 1998; Estevez, Plancarte, Rovira, Carreon, War, Yeomans and Lopez, 2001) which takes into account the various sources (Casarini, 1999) of curriculum development (Stenhouse, 1991). The result of an analysis of the formal curriculum was compared with the analysis of curriculum practices, the latter outcome based on information provided by students and teachers. We sought to know how students and teachers understand the study plans and programs, and how the formal curriculum is implemented under the model of work competencies.

In the first part of this article the project of the BBA and CPA majors are described and related with some concepts and experience regarding education based on

work competencies. Later on there are reflections about curriculum and curricular-source concepts which support and explain the methodology used in this study.

In the subtitle of the method the way the instruments were produced based on hypotheses is explained, plus variables and indicators were inferred from the analysis of curricular sources related with the curriculums, an object of this investigation. Finally, there is presented an analysis of the results and the conclusions, which are understood as an approach to the description of the curriculums mentioned.

## 1. The *Get Ahead* program and competency-based education

The *Get Ahead* program of Northwestern University (UNO) was established in 1997 as an innovative alternative that offers adults over 25, who for various reasons, never attended college, or did not get a degree, the opportunity to pursue graduate studies. At the time this study was done, the first class had not been graduated.

The program is described as an educational offer to give a segment of the economically-active population, by means of an institutional program, an opportunity to get a certificate that will provide backing for their knowledge, skills and abilities. It should be emphasized that in Sonora there is no other upper-level program offering an alternative designed for adults.

According to the project for the creation of the *get ahead* program for the BBA and CPA degrees, the following characteristics are conspicuous:

- Each UNO degree program contains 41 subjects, in contrast to traditional plans consisting of 58 subjects for the BBA and 61 for the CPA.
- Each provides a total of 300 credits, divided between hours of practice and hours of theory. The practice of students in their job or employment is considered to lie within the framework of competencies, which supports reducing the number of materials as compared with traditional programs.
- The student will endorse or validate the skills and competencies she\* already has, and which are products of her work experience.
- The program establishes a methodology for equivalencies, identification and certification of the skills of students entering BBA and CPA degree programs.
- The program establishes a theoretical framework for education based on work competencies; this framework supports the educational model for *Get Ahead*, as well as the way it should be implemented. Its main hypotheses are: production processes that require people who can adapt to different forms of work organization; the achievement of competencies involves emphasizing the

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\* Translator's note: Before the emergence of the feminist movement, English, like Spanish, used masculine pronouns in situations including both genders. Today, however, such usage is considered sexist, and has been replaced by forms like s/he, his/her, etc. To avoid the awkward repetition of these forms, we shall sometimes use the masculine pronoun, and sometimes the feminine.

importance of learning rather than consumables; flexible curriculums are required to be organized into modules based on the Standardized System of Labor Competency; the link with the productive sector is necessary for the creation of articulated learning environments; the model seeks to develop the capacity for innovation, adaptation and continuous learning.

- It specifies general competencies to be developed while enrolled in *each work competency module*. The following table contains a summary of the competencies established in the curriculum modules (grouping of materials by areas of competency). A great part of these, as we will indicate, are shared by both degree programs, although taught by means of a different number of subjects:

Table I. Summary of BBA and CPA competencies

Module	Competency	
	Generic	Specific
Accounting (BBA and CPA)	Carry out and analyze the accounting situation of any type of person or organization developing an attitude of reflection and constructive criticism.	
Administrative (BBA and CPA)	Management of organizational climate, labor relations and company image, developing an attitude of cooperation in teamwork.	
Law (BBA and CPA)	The law will be applied to concrete situations in exercising the profession, developing the ability for analysis and using reflection to detect illegal situations.	
Finance (BBA and CPA)		Conduct, analyze and interpret financial research information to support decision-making, generating propositional attitudes to define innovative sources of financing.
Auditing (CPA)		Determine the situation shown by financial statements and the appropriate management of a company's economic resources.
Economy (CPA)	Propose viable and sustainable alternatives in the information of the economic context, which would permit companies to overcome financial difficulties.	
Human Recourses (BBA)	Properly handle the organizational climate in support of business productivity.	
Techno-marketing (BBA)		Define technomarketing programs that would help in defining target markets, product characteristics and the mechanism to develop and consolidate the company. Attitudes of auto-initiation, teamwork and high creativity.

The curricular models designed based on the identification of professional competencies and labors, as the case of Get Ahead, have gained their great

relevancy for several reasons. First, because it focuses the efforts of economic and social development on the recovery of resources and the human capacity to build development. Also because this approach seems to respond better than many others to the need to find a point of convergence between education and employment. Not only does it have to do with creating more jobs, but also with the fact that the ability of each person is critical for his employability. Finally, because the competencies approach adapts to the need for change, characteristic of contemporary society since it is a dynamic concept that prints emphasis and value on the human capacity to innovate, to face and manage change, preparing for it instead of waiting passively (Ducci, 1997).

Because of all the above, great emphasis has been given to competency-based educational programs, through which is sought the intersection of “multiple sets of skills, abilities, knowledge and attitudes required for optimal performance in a particular occupation or productive function” (Ibarra, 1997, p. 82). This definition of competency coincides with the concept present in the theoretical foundation for the formal curriculum of the *Get Ahead* program.

According to the specialized literature in this field and with the formal curriculum of *Get Ahead*, competency-based education cannot be limited to a traditional paradigm. That is, education cannot be centered in the classroom; there must be sought a combination of different learning strategies where participants seek the solution of the problem, and the teacher functions as guide or facilitator. Furthermore, these strategies need to be flexible in order to provide the student with a free advancement in knowledge in an individual manner, an aspect also noted in the formal curriculum of *Get Ahead*.

In countries such as Argentina, Brazil, Chile, Uruguay and Mexico there have been set in motion begun training and certification models having the goal of developing mechanisms that will improve the worker’s job skills. In the case of Mexico, there is a training and certification body called the Council for the Standardization of Labor Competencies (CONOCER, its acronym in Spanish). It is composed of representatives from various economic and business sectors in the country. This agency defines labor competency as an individual productive ability, measured in terms of performance in a given employment context, and not simply knowledge, skills and attitudes. The latter elements are considered necessary, but are not sufficient in themselves to ensure effective performance (CONOCER, 1998). The *Get Ahead* program supports the theoretical framework and justification as determined by the CONOCER.

In Mexico, the curricular model based on work competencies is being practiced in the junior high and upper levels (the CONALEP model, for example) of teaching. The latter system is practiced predominantly in institutions belonging to the subsystem and technological education and in some public universities, such as the University of Guadalajara, the country’s second largest (OIT, 1997). Although there are no studies that establish precisely, in quantitative and qualitative terms, a panoramic diagnosis for the use of this model in Mexico’s educational institutions, there are

elements to establish, as an analytical hypothesis, that there is a current tendency to adopt this model in its different variants, in an important part of our country's higher-education institutions.

## **2. Curriculum development and the underlying sources**

While the curriculum is a polysemantic concept, thinking about it in terms of "*curriculum development*" as proposed by Stenhouse (1991), allowed us to support theoretically the design of this research, as well as to orient our reflection on its performance. *Curriculum development* is a concept that unites the three dimensions of curriculum—the formal proposal, its practice and its latent aspects, while explaining the curriculum as a project seeking to communicate the principles and essential features of an educational purpose, essentially characterized by its openness to critical discussion and its possibility of being effectively transferred into practice (Stenhouse, 1991). How, in the practices and ideas of teachers and students, can there be expressed the effect of various external sources underlying a curriculum for adult education based on a work-competency model? In other words, is the curriculum practiced in close relation to the students' socio-professional and labor reality? What are the work practices that impede a rapprochement between the curriculum and its implementation? These are some of the most important questions that motivated this research; we sought an answer supported by the hypothesis that the central problem of curriculum studies, according to Stenhouse, is the gap between our ideas and aspirations and our efforts to make them operational. Curriculum development is understood as a process of constant deliberation, as a form of work and collaboration so as to experience a project in practice, where the teacher is the central figure in the implementation and modification of curricular intentions.

The curriculum therefore has two functions: dynamism and flexibility. Based on these, there is a search for a way to strike a balance between the formal curriculum, the hidden curriculum and the way the curriculum is made real (real curriculum), so as to allow the establishment of a balance between non-formal education policies translated as guidelines, and models of social relationships, as well as the rest of the behaviors and processes involved in the educational task.

This study focuses on the analysis of the internal curriculum's source, which is understood as the information generated from the processes and results of curriculum development, and is part of a more general and inclusive concept called curriculum sources (Casarini, 1999), according to which there are a number of sources both internal and external to the curriculum; these together contribute to its foundation and justification. Therefore, the internal source analysis was performed taking into account external sources, understood as socio-cultural, epistemological, professional-occupational and psychopedagogical reflections; from these are constructed principles to guide both curriculum design and its development and evaluation (Casarini, 1999). According to the proposals of Estevez and Fimbres (1998), curriculum sources require a final integrative reading to establish their

interrelationships, and based on that, to evaluate and establish the general orientation of an educational program.

### **3. Methodology**

With the purpose of exploring curriculum more deeply, the proposal of Estevez and Fimbres (1998) was used for this study, since, because it is general and flexible, it could be adapted to different curriculum models. In the case of the competency model, the outflow profiles were expressed by integrating knowledge (theoretical knowledge), skills (practical knowledge) and attitudes.

The methodology employed proposes as a first step in the evaluation of a curriculum, the systematization of information pertaining to what are known as external and internal sources; later, from the information obtained, there are inferred the type of knowledge, skills and attitudes (or in an integrated way in terms of general skills) which students must developed, as well as those educational contents they should *discard* because of obsolescence and social irrelevance. Furthermore, the analysis of curriculum sources can be inferred in the psychopedagogical approach and appropriate teaching methods to encourage the practice of a particular curriculum (Estevez and Fimbres, 1998).

In the present case, the curriculum evaluation methodology was adapted and applied in the following manner:

- First, the general competencies it was desired to promote were identified in the formal curriculum.
- Later, outside sources were analyzed by documentary research, so that the research team could have an updated framework of reference to study: a) the linkage of the curriculum with the labor/professional world; b) the degree of update concerning the disciplinary content in the real curriculum; and c) the appropriateness of the teaching methods used in the context of a competency model.
- Based on the above, the variables and indicators were established, and instruments were designed for obtaining information about the practice of the curriculums under study.

#### **3.1. Analysis of the sources**

To study the sources, the research team was organized into four groups as follows: socio-professional source, psychopedagogical source, epistemological source, and internal source (real and formal curriculum). In the case of the first three, each group conducted an investigation, basically documentary, on the current requirements for the BBA and CPA training related with their source. From this emerged the hypotheses, variables and indicators (see Annexes 1, 2 and 3.)

The documentary study of the internal source was treated differently, and was conducted in two areas: 1) contextual aspects of the real curriculum, which

consisted in gathering statistical data on the populations studied, class schedules and locations of groups; 2) formal curriculum, for which was used the methodological guide proposed by Estevez and Fimbres (1998), obtaining as a result an analysis of the documents containing the above curriculums (see a summarized version in the first paragraph of this article.)

### **3.2. Study population and instruments**

To achieve an empirical approach to the real curriculums, there was established as the study population all students (173) and teachers (22) of the CPA and Business Administration degree programs who were participating in the Get Ahead program during the 2002 January-March quarter. Because of the size of the population, it was decided to apply a census in both cases.

The questionnaire was administered to 22 teachers and 150 students (nearly 90% of the population was considered a census). The students were enrolled in various quarters, and the 22 teachers surveyed work part-time.

According to the curriculum evaluation methodology adopted, questions were formulated for students' and teachers' questionnaires (see Annexes 4 and 5). Most of these were based on the hypotheses, variables and indicators established for each curricular source (see Annexes 1, 2 and 3); in some points there were established questions common to both questionnaires, in order to make a comparative analysis.

The questions designed were mostly of a closed type, with some open. The closed questions were of a dichotomous type and others with several possible answers. For the teachers' questionnaire (questions 2, 16 and 17) and that of the students (question 5) there was taken as a reference the Standard Questionnaire for the Study of Graduates (National Association of Universities and Institutions of Higher Education [ANUIES], 1998). Once the questionnaires had been developed, they were validated by experts in the disciplines and professions. Also applied was a pilot examination for teachers who were not teaching courses this quarter, and students who were temporarily out of the program. The questionnaires were applied without misgivings.

The statistical processing of the results was carried out with the Statistical Package for Social Sciences, version 8.0 (SPSS).

## **4. Results**

The following are the results and reflections on some of the most relevant findings of this study about the practice of two BA programs of the *Get Ahead* program. The discussion also includes the curriculums of both degree programs, while representing their formal curriculums. The following subtitle refers mainly to "General Information" on the questionnaire (an item not included in the Annex hypotheses). Its purpose was to provide some characteristics of the population



studied, as an initial frame of reference. Under the subsequent subtitles are analyzed the results supported by the concept of curriculum sources, understood as interlinked and juxtaposed aspects of the same reality (Estevez and Fimbres, 1998). The second subtitle refers to the epistemological/disciplinary source (Annex 1), the third refers primarily to the psychopedagogical source (Annex 2), and the last emphasizes the professional/ labor source (Annex 3).

#### **4.1. Socio-demographic profile and academic background**

The study population was mainly composed (72.7%) of students of the Bachelor's Degree in Business Administration; the rest (27.3%) were studying accounting. More than half the students surveyed (51%) are women, 50 of whom study in the BBA program. Of the 68 men surveyed, 15 are studying accounting, and 53 are in the BBA.

More than half the students (53.7%) were married, 42% said they were single, while about 4% described themselves as divorced or widowed.

In applying the questionnaires it was found that, except for 4.7% of the those who were unemployed at the time of the study, most work in different industries. There were employees of private businesses and the government, commissioners, assistants, technicians, sales executives, secretaries, administrative assistants and accountants. About 11% of those surveyed work as officials, administrators, coordinators, directors, managers or owners of public or private companies.

The fact that most of the program's students are economically active supports its character, since it offers an option for those adults who, for various reasons, did not get their Bachelor's degree (52% of the cases) or never went to college (48 %).

It is important to note that 36% of those who did not finish college reported having completed between 25% and 50% of the courses needed to graduate before entering the *Get Ahead* program, while 23% had complete 76% to 100% of such courses in previous studies. As for the year of high school graduation, 21% of the students finished between 1980 and 1989, compared with the 60% who were graduated during the nineties.

One of the requirements for admission to the program is that the student be more than 25 years of age. However, we found that 16 students (11%) did not comply with this requisite. Regarding the students' average age, 55% were between 26 and 35, 31% were between 36 and 45, and only 4% were over 45 years old.

#### **4.2. Disciplinary Update**

Vis-à-vis the factor most important for generating wealth in the new economy, 20% of students considered it to be strategic planning; 16%, professional development; and 13%, the development aspect of knowledge and innovation systems. As for the teachers, 18% agreed on strategic planning and professional development,

while 14% said that developing knowledge and cultivating creativity are more important.

We must mention that there are answers considered acceptable in keeping with the established hypothesis (see Annex 1), according to which, the current economy creates a new system by which to generate this, based on information and production of new knowledge (Picazo and Martínez, 1999). In this case, the response options considered successful are: knowledge development, openness and flexibility of thinking, information management, strategic planning, and cultivation of creativity.

Therefore, when reviewing the percentages of the responses, we observed that most students considered some aspects to be of little relevance, not part of the ideal scenario for the present and future economy; the inference is that there is retained an economic outlook tied to the traditional. Teachers showed a broader perspective on the subject by marking three of the five possible options, indicating that they have are more up to date on the subject of wealth creation.

Among the strategic factors that would give competitive advantages in an organization, 22% of the students mentioned personnel training; 16%, the aspect of competency; and 15%, the aspect of products. Teachers agreed with students about personnel training, 24%; while 17% identified competency and products as strategic, and 12% of teachers surveyed were of the opinion that the factor of the client's mind was strategic. In agreement with the hypothesis that says we operate in a macro context that radically modifies the traditional schemes economically, politically and socially, marking significantly the level of competition among firms, the responses considered acceptable are: competency, the client's mind, products, and the environment.

The students were observed to have a vision of the future similar to the trends of the new economy; about half the answers have to do with the new proposed approach, although the other half reflects the traditional practices deeply rooted in these degree programs. The preceding indicates that they know the current situation prevailing in companies, but are not fully convinced that we live transformations that would restructure the policy and the economy of nations and the world. Moreover, teachers once again assume their opening role by showing a management of competency strategies, with 70% of the answers in the range of acceptability, with a well-defined prognosis approach, but above all, by emphasizing the aspects of product, and the mind of the client and competency—issues which currently have repercussions in negotiations and the conducting of business transactions. In the remaining 30%, there is still observed traditional economic thinking, in which the concepts of advertising and personnel training, considered today to be issues of little significance in the economic impact of companies (Picazo and Martínez, 1999).

Regarding current issues which teachers address in their classes, 16% of the students were in favor of fiscal reform, and 14% were in favor of the issue of

globalization of the economy, and of companies in competition. In contrast, 14% of the teachers said that the aspect of information and communication systems and the issues of globalization of the economy and businesses in competition (13%) are those they address with most frequently. Under the hypothesis, the CPA and BBA should bear in mind the current status and future prospects of the new economy and the dynamism of nations, but should also address the demands of the micro context, in this case the organization or company. Responses considered acceptable were economic globalization, free trade, fiscal reforms, information and communication systems, and human capital.

There was little correlation between the responses of teachers and students, since, while the first mentioned that they handled certain information in class, the latter mentioned different points. Students prioritized their responses in two prospective aspects of great importance: fiscal reform and globalization of the economy (40% of the acceptable answers), while teachers were identified with 35% of these responses, mentioning the aspects of globalization, and information and communication systems.

Of the students, 23% rated teamwork as the main element that will identify companies in the future; 19%, the vision factor; 16%, the aspect of capital/innovation; and 15% the factor of advancement. There was a tendency to agree with the teachers' opinions, with 20% also identifying teamwork with companies of the future, and 18% pointing to aspects of vision and anticipation. The answers considered acceptable in this course were looking ahead, intangible assets, teamwork, capital/innovation, vision.

We observed that the students outdid the teachers, by identifying 85% of the answers as acceptable. Of the rest, 15% considered traditional aspects of the organizations. On the other hand, the teachers got 65% of the acceptable answers right, as opposed to 35% having a traditional or obsolete focus.

In attempting to visualize the perspectives the students and teachers have on industries that will be basic in the generation of wealth and competitiveness, the former answered with 25% for telecommunications; 21%, robotics/machine/tool, 17% microelectronics. As for the teachers, they too—23% of them—mentioned telecommunications; 19%, robotics/machine/tool; and 18%, microelectronics. The responses considered acceptable in this course were microelectronics, robotics/machine tools, telecommunications and biotechnology.

In a resounding manner, both teachers and students mentioned the four correct answers, concerning the technological developments related with the information economy and the knowledge that have given birth to new businesses and that are replacing the characteristics of the industrial economy based on oil, steel and automobiles, etc., according to Martinez and Picazo (1999).

### **4.3. Social and labor/ professional relevance**

On the subject of using specialized software, both students and teachers say they have no access to it. However, teachers promote the use of information and communication technologies as an essential integrating tool for the training and development of the BBA and CPA degree programs' future graduate.

As to the future employment of those enrolled in the BBA and CPA , 63% of the students believe there is sufficient employment for graduates of both degree programs, and 63.5% stated that their current employment development is related to the degree they are studying.

Opinions about the way students look at the future of their profession showed a wide diversity of results, but an equal percentage (32% each) regarding concepts: shared with another profession, and broad and inclusive.

With regard to the requirement for performing social service, 56% of the students did *not* consider it necessary. Among the most frequent reasons they gave is the fact that they already have practice experience (31%), and they lack time (8.1%).

Of the 39.3% of the students who felt that social service is indeed necessary, 31% believe that it serves to link theory with practice, and its connection to the development of their work. Only 4.2% of students surveyed believe that social service is a civil responsibility, and a way to repay society through community service.

### **4.4. Educational and didactic focus**

Both teachers and students lack knowledge about the work competency model; 75.2% of the students said they were not aware that the program is based on the pattern of competencies, and only 25% of the teachers and 18.1% of the students clearly identified the characteristics of this schema (attributes, knowledge, skills and abilities). Furthermore, no diagnostic test is applied to students to detect their level of competency at the time of admission.

Consistent with the above, the answers to why these people decided to study in the BA *Get Ahead* program were diverse. The following reasons are conspicuous: ease of entry (17.3%); in their present job a college degree is required (11.3%); time to combine study and work (6.7%); the cost of registration and tuition (6.0% ); the program had convincing promotion (6.0%). No answers were given in the section entitled *competency-based curriculum*.

Concerning the teacher's knowledge about individuality in the learning process, most of the students surveyed (50%) answered that this was taken into account only at times, while a minimum percentage (10%) said their learning skills were never recognized. On the other hand, we found that 30% of the time the teacher uses the experiences of their students for learning.

From these results it is clear that teachers rely more on methods centered on teaching, without taking into account the skills and background knowledge which the students can contribute, based on their professional practice, to promote meaningful learning.

Of the teachers, 35% said they shared their work experiences with students, and a low percentage (2.5%) said they never do. From these results it can be inferred that less than half the teachers use their own experiences in the work area to promote their students' learning.

Of the students, 55% said they use the computer, the Internet and the management of another language, as skills in developing their studies.

The values promoted in the *Get Ahead* program coincide with the institutional mission established in official documents. Among the values expressed by students and teachers, conspicuous are honesty, responsibility and integrity—the same ones society requires for better living.

Less than half (32.9%) the teachers mentioned the use of a problem-solving method, while 32.7% of students indicated that most teachers use analogies as a way to induce learning.

As for the means of evaluation most familiar to teachers, and the time setting in which evaluations are applied, both parties (students and teachers), agree that the written examination is the most widely used, and that it is effected continuously during the development of the course. In addition, most teachers say they apply a diagnostic test at the beginning of the semester; this confirms the UNO *Get Ahead* teachers' preference for the traditional models of evaluation when assessing their students' knowledge.

On the subject of teaching techniques used by the instructor in class, 26.8% of those surveyed said the most useful were solving problems in real situations, and group discussion. This can be explained by taking into account the characteristics of the CPA and BBA degree programs, since using their knowledge in real situations allows students to see the problems they face in their work lives.

Finally, teachers were questioned about the last time they had received training in learning strategies; 59.1% of the teachers surveyed said they had taken courses in learning strategies during the past year. Only 31.8% answered in the negative. Remarkably, although more than half the respondents indicate that they have been trained in the use of learning strategies, this is not reflected in the current methods they use to teach their classes. Even now the autocratic prevails as the only method, apart from the few tools employed to validate the students' knowledge. This likewise relies solely on the evaluation of repetition and memorization of data, impeding the development of thought processes. No real consistency is shown between the proposed educational model and that practiced by students and teachers.

## 5. Conclusions

It was confirmed that the *Get Ahead* program complies in practice with the purpose for which it was created, i.e., addressing the need for higher education for working adults, since the vast majority of its students are economically active, and two-thirds work in activities related to what they study. However, in the study of curriculum practice, it was also shown that the minimum age requirement of 25 years is sometimes disregarded. That age is considered necessary for the *Get Ahead* program because it is when the student can enter the work market, and may even be running her own company—which facilitates the validation of work competencies.

Limitations concerning upgrading were found in regard to the prognosis for the current economy, specifically on how to generate wealth and issues that will be part of the new macro context radically altering the traditional patterns of supply, production, distribution and how to do business in general. In reviewing the percentages of the answers, we found that most students considered to be of little relevance aspects not located in the ideal scenario for the future and current economy—which could be considered to have originated in a traditionalist economic view. The teachers showed a wider perspective on the topics, indicating that they do have this knowledge; however, limitations were found in their teaching.

The fact that no specialized software was used in the teaching-learning activities is a limitation for the current and future training of *Get Ahead* graduates, and is a factor that detracts from the social relevance of this educational offer.

The way *Get Ahead* students see their profession in the future—shared with other professions, broad and inclusive—is consistent with the trends that prognosis specialists have identified as characteristics of professionals in the future: multidisciplinary, having an ability to adjust and adapt to changes, having a mastery of several industrial and cultural fields, and so on.

Teachers' and students' lack of knowledge about the work competencies model that supports the formal curriculum of the *Get Ahead* program, shows a separation or distancing between what is planned and what is practiced, and constitutes the principal shortcoming found in this study. It is an obstacle to achieving a sound curriculum development.

The lack of application of diagnostic tests to detect the level of competencies at the beginning of the studies is a major flaw that makes the practice of a real competency-based curriculum difficult; when teachers do not know the student's level when he enters, they are not able to keep track in terms of learning experiences in the educational program.

The predominance of traditional teaching methods, lack of connection between students' experience and their work competencies, as well as ignorance on the subject of the competency-based educational model, allows us to conclude that the real curriculum of the *Get Ahead* program is not practiced in full accordance with

the model planned. By putting an end to these deficiencies, the program in question could become a robust alternative in the northwestern region of Mexico, a pioneer in higher education for adults, based on a model of work competencies.

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**Annex 1**

## Hypotheses: disciplinary-epistemological source

Theoretical hypotheses	Variables	Indicators	Related items	
			Teachers	Students
The teacher gives examples of accounting and fiscal situations to be dealt with by the student.	- Use of information systems	- Use of specialized programs for solving accounting and fiscal problems	8	11
The teacher analyzes existing tax laws by means of current and real examples.	- Application of tax laws	- Knowledge and application of tax laws	13	15
The teacher uses and sets forth the company's real local, national and international situations.	- Updating in professional activity	- Management of current topics related with the new fiscal reform, international business treaties, types of change, etc.	3 4 5 6 7	6 7 8 9 10
The teacher encourages students to use technology to generate accounting and fiscal information reliably, efficiently and effectively.	- Use of software systems and information technologies	- Management of computerized systems for accounting and fiscal subjects - Information management by means of telecommunications networks	11	12
The educational institution provides the student with the necessary infrastructure to develop current issues with clarity and realism.	- Auditorium, overhead projectors, slide projectors, informatics services.	- Management of instruments that facilitate the presentation of contents, infrastructure necessary for conferences and work meetings.	2	5
The teacher displays the CPA and BBA fields of action in a comprehensive, inclusive manner, participating in other functions.	- Management of innovative concepts. - Elucidation of situations they will probably face in dealing with businesses and individuals - Interdisciplinary with other specialties.	- Use of concepts such as strategic planning, change administration, information technology, administration of environmental systems, human capital, etc. - Giving examples of how the CPA and BBA interact with other professionals, as lawyers, engineers, psychologists, etc.		13

## Annex 2

### Hypotheses: psychopedagogical source

Theoretical hypotheses	Variables	Indicators	Related items	
			Teachers	Students
The adult is considered to be an autonomous person responsible for his/her own actions.	- Respect and comprehension of his/her abilities	- Awareness of his/her abilities and skills. - Self-direction.	24	26
The adult learns on the basis of specific motivations.	- Primary needs Social needs - Need for fulfillment	- Survival - Improvement of economic situation - Acceptance - Autonomy - Human, spiritual, creative aspects		
A suitable environment should be provided for adult learning.	- Design of special educational scenarios - Strategies that stimulate participation and learning	- Promotion of extracurricular learning - Building on experience. - Individual work - Group techniques - Participatory teaching. - Case studies.	14 27	24
The adult participates actively in the design of his/her training and evaluation.	- Promote participation and conflict resolution - Certain habits involved in studying have been developed	- Troubleshooting - Decision-making - Reasoning - Search for information resources	28	
Learning content should be designed according to the stage and interests of adults.	- Work stage - Retirement stage	- Development of specific competencies - Training (skills). - Acquisition of social skills. - Acceptance of reduced capacity. - Training in new skills. - Adaptation to leisure.		12 15 16

**Annex 3**

## Hypotheses: socio-professional source

Theoretical hypotheses	Variables	Indicators	Related items	
			Teachers	Students
CPA and BBA students of the <i>Get Ahead</i> program are trained in values and attitudes that will facilitate their development in the workplace.	- Attitudes and values.	- Values promoted by the teachers	21	14
CPA and BBA students are updated in their knowledge of business software for accounting and administration.	- Knowledge of specialized software	- Types of accounting software	8 11	11 12
Students' perception regarding the future of the CPA and BBA professions: professional scope and future demand for professionals in these areas.	- Job-market trends	- Students' perceptions	12	13 19
There have been no innovations in the curriculums of the BBA and CPA programs.	- Curriculum contents	- Students' perceptions concerning untapped degree-program fields - Teachers' proposals for subjects to be included and those to be removed from the curriculum	18 19	20
The BBA or CPA student knows about economic changes occurring worldwide.	- Economic globalization.	- Current topics - Use of another language	7	9 10 16
A large percentage of students work in the field related to their course of study.	- Students who work	- Types of work		General Data 17 18
The student is familiar with the administration systems of a business.	- Administration systems	- Field practices, company visits. - Exercises and examples based on real-life practice.	10 14	15 24
The student knows the work relationships that exist within a company.	- Work relationships	- Student's work experience. - Examples based on the teacher's work experience	14 9	General Data 24, 25

**Annex 4**

**Questionnaire for students of Northwestern University's *Get Ahead* program**

Objective: To make a study of the curriculums of the degree programs in the Business Administration and Accounting Program *Get Ahead*, as part of the requirements for the subject of Curriculum Development in Northwestern University's Master's Degree Curriculum Development in Education program.

The information you provide will be treated with absolute confidence.

Instructions for filling out the questionnaire: Please read each question carefully, and answer each one in the manner indicated.

**GENERAL DATA**

Mark your answer with an X:

Quarter in which you are currently enrolled \_\_\_\_\_

**AGE**

Under 25     Between 26 and 35     Between 36 and 45  
 Over 45

Course of study:  CPA     BBA    SEX:  M     F

Present occupation: \_\_\_\_\_

Civil status:  Married     Single     Divorced     Widowed

1. - What type of high school did you complete?  
 In-school     Open

2. - Year you were graduated from high school \_\_\_\_\_

3. - Have you taken college courses before?     YES     NO  
 What percentage of the total courses needed to graduate from college have you taken and passed?  
 Less than 25%                       Between 51% and 75%  
 Between 25% and 50%             Between 76% and 100%

4. - Do you know the school regulations?     YES     NO

5. - We are interested in your opinion of the quality of the services listed below.

Mark the rectangle that best expresses your opinion.	Bad	So-so	Good	Very good
Attention to requests for scholastic documentation and paperwork				
Availability of bibliographic, hemerographic and online material				
Attention and service from the library and computer center's personnel				
Access to computer services				
Availability of work material				
Classroom equipment				
Parking and security				
Existence of space for developing your study activities				
Cleanliness of classrooms				
Cleanliness of restrooms				
Cafeteria service				

6. - Identify *four* aspects you consider relevant for facing the new ways of generating economic riches:

- Communications practices
- Knowledge development
- Open and flexible thought
- Information management
- Strategic planning
- Systems innovation
- Professional updating
- Management practices
- Cultivation of creativity

7. - Identify *four* strategic priority factors used to achieve competitive advantages in an organization:

- Competency
- Supplies and service
- Mind of the client
- Advertising
- Products
- Environmental phenomena
- Portfolio recovery
- Personnel training

8. - Mark *four* current topics which the teachers approach in their classes.

- TLC
- Businesses of competencies
- Finances
- Information and communications systems
- Fiscal reforms
- Human capital
- Technology used
- Management practices
- Globalization of the economy
- Human resources

9. - Mark *four* concepts identified with the company's possible future trends.

- Foresight
- Active intangibles
- Formal planning
- Teamwork
- Active tangibles
- Mass production
- Capital/innovation
- Rejection of change
- Vision
- Hierarchical structure

10. - Identify *four* industries which in the future will be fundamental in generating riches and competitiveness:

- Microelectronic
- Robotic/machine-tool
- Steel and materials
- Telecommunications
- Assembly plant
- Biotechnology
- Oil
- Automotive

11. - Do the teachers teach and explain the accounting and administrative processes using a specialized software?

Yes (specify) \_\_\_\_\_  
No

12. - Do the teachers promote the use of information and communications technology as part of professional training?

Always  Frequently  Sometimes  Never

13. - How do you visualize the field of action of your profession in the future?

- Predominant
- With another focus
- Shared with another profession
- Broad and integrational
- Stagnant
- It will disappear.
- Other (specify)

14. - Mention *three* values which the teachers promote in their classes for ethical-professional training:

15. - How frequently do the teachers present examples based on the reality of the exercise of the profession?

Always  Frequently  Sometimes  Never

16. - Mark the abilities you develop in your studies:

- Typing
- Use of computer
- Use of Internet
- Use of another language
- Other (specify) \_\_\_\_\_

- Graphics recovery
- Troubleshooting
- Double-entry matrix
- Other (specify) \_\_\_\_\_
- Mind maps
- Analogies
- Case studies

17. - Do you consider social service necessary for your training?

- Yes Why? \_\_\_\_\_  
No Why? \_\_\_\_\_

24. - Do the teachers share their work experiences in search of the development of professional competencies?

- Always  Frequently  Sometimes  Never

18. - Is your present work different from the course you are studying?

- Yes  No

25. - Does the teacher draw on your experience to create learning situations?

- Always  Frequently  Sometimes  Never

19. - Do you think there are enough jobs for BBAs and CPAs?

- Yes  No

26. - Did you know that the *Get Ahead* program is based on the competencies plan?  Yes  No

20.- Are there areas of development for degree program professionals that are NOT considered in the current curriculum?

- Yes If so, what are they? \_\_\_\_\_  
 No

27. - With which of these phrases do you identify the competencies plan of your curriculum?

Mark *one* option:

- Innovation, adaptation and learning.
- Attributes, knowledge, abilities and skills.
- Solution of unforeseen problems, use and promotion of creative ability
- I do not know about the competencies plan.

21. - What is your net salary (including bonuses and benefits)?

\$ \_\_\_\_\_

22. - Does the teacher recognize the students' individual learning styles?

- Always  Frequently  Sometimes  Never

28. - By what means are you evaluated by your teachers?

- Written examination
- Individual assignments
- Group assignments
- Presentations
- Projects
- Daily work in class
- Oral examination
- Practices
- Others (specify) \_\_\_\_\_

23. - Mark *three* of the strategies your teachers used with most frequency in giving their classes:

29.- When you enrolled in this program, did you take a competency-based placement examination?  Yes  No

30. - Give *three* main reasons that influenced you to choose the *Get Ahead program*.

- The institution's prestige.
- The curriculum based on work competencies
- The time schedules allowed me to combine work and classes.
- The entry dates.
- The cost of enrollment and tuition.
- Ease of enrollment.
- They require a degree at my job.
- The program publicity convinced me.
- Other (specify) \_\_\_\_\_

THANK YOU FOR YOUR HELP AND COOPERATION.

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**Annex 5**  
**Questionnaire for teachers of Northwest University's**  
***Get Ahead* program.**

Objective: To make a study of the curriculums of the degree programs in the Business Administration and Accounting Program *Get Ahead*, as part of the requirements for the subject of Curriculum Development in Northwestern University's Master's Degree Curriculum Development in Education program.

The information you provide will be treated with absolute confidence.

Instructions for filling out the questionnaire: Please read each question carefully, and answer each one in the manner indicated.

GENERAL DATA  
 Mark your answer with an X:

Age: \_\_\_\_ Sex: \_\_\_ M \_\_\_ F

Last level obtained (degree)  
 \_\_\_BA or BS \_\_\_Master's \_\_\_Specialty \_\_\_Doctorate

Institution from which you were graduated  
 \_\_\_\_\_

Subjects you teach in the *Get Ahead* program: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Degree program in which you teach in the *Get Ahead* program:  
 \_\_\_ BBA \_\_\_ CPA

Year you started work in the *Get Ahead* program: \_\_\_\_\_

How long have you been teaching?  
 \_\_\_ In higher education  
 \_\_\_ In another level (specify) \_\_\_\_\_

1.- Do you know the school's regulations? \_\_\_ Yes \_\_\_ No

2.- We are interested in your opinion of the quality of the services listed below.

Mark the choice that best expresses your opinion.	Bad	So-so	Good	Very good
Attention to the requests for students' documentation and enrollment information				
Availability of bibliographic, hemerographic and online material				
Attention and service from the library and computer center's personnel				
Access to computer services.				
Availability of work material				
Classroom equipment				
Parking and security				
Existence of space for developing your study activities				
Cleanliness of classrooms				
Cleanliness of restrooms				
Cafeteria service				



3.- Identify *four* aspects of training you consider relevant for facing the new ways of generating economic riches:

- Communications practices
- Knowledge development
- Open and flexible thought
- Information management
- Strategic planning
- Systems innovation
- Professional updating
- Management practices
- Cultivation of creativity

4.- Identify *four* strategic priority factors used to achieve competitive advantages in an organization:

- Competency
- Supplies and service
- Mind of the client
- Publicity
- Products
- Portfolio recovery
- Environmental phenomena
- Personnel training

5.- What are the *four* current topics you consider in preparing your classes?

- TLC
- Businesses of competencies
- Finances
- Information and communications systems
- Fiscal reforms
- Human capital
- Technology used
- Management practices
- Globalization of the economy
- Human resources

6.- Mark four concepts identified with future business trends.

- Foresight
- Active intangibles
- Formal planning
- Teamwork
- Active tangibles
- Mass production
- Capital/innovation
- Rejection of change
- Vision
- Hierarchical structure

7.- In future scenarios, mark four industries considered basic to generate wealth and competitiveness

- Microelectronics
- Robotics/machine-tool
- Steel and materials
- Telecommunications
- Assembly plant
- Biotechnology
- Oil
- Automotive

8.- Do you use specialized software to explain fiscal and accounting issues to students?

- Yes (specify) \_\_\_\_\_  No

9.- How often do you draw on the work experiences of your students to create learning situations?

- Always  Frequently  Sometimes  Never

10.- How often do you present in-class examples based on the real-life practice of the profession?

- Always  Frequently  Sometimes  Never

11.- Do you promote the use of new communication and information technologies to generate knowledge in your students?

- Always  Frequently  Sometimes  Never

12.- What is the role of the manager or accountant in future scenarios? Check *one* box.

- Predominant
- With another focus
- Shared with another profession
- Broad and integrational
- Stagnant
- It will disappear.
- Other (specify)

13.- Do you think that the theoretical basis of the subjects taught in the program is related to professional practice?

Not at all  A little  Partly  Very much

14.- Do you share experiences with your students in their search for skills development?

Always  Frequently  Sometimes  Never

15.- In what type of institution do you work?

Public  Private

16.- Check the branches or sectors of the economy of enterprises or institutions where you work.

<input type="checkbox"/> Agricultural and livestock, forestry, etc.	<input type="checkbox"/> Extractive industry
<input type="checkbox"/> -Processing Industry	<input type="checkbox"/> Construction Industry
<input type="checkbox"/> Trade	<input type="checkbox"/> Tourism
<input type="checkbox"/> Banking, finance and insurance services	<input type="checkbox"/> And Professional Services
<input type="checkbox"/> Education	<input type="checkbox"/> Technical
<input type="checkbox"/> Government services	<input type="checkbox"/> Transport/communications
	<input type="checkbox"/> Other (specify) _____

17.-What type of work activity are you currently doing?

<input type="checkbox"/> Management	<input type="checkbox"/> Financial Analysis
<input type="checkbox"/> Training	<input type="checkbox"/> Teaching
<input type="checkbox"/> Project coordination	<input type="checkbox"/> Marketing
<input type="checkbox"/> Consultancy	<input type="checkbox"/> Planning
<input type="checkbox"/> Advertisement	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Research	<input type="checkbox"/> Diagnostics
<input type="checkbox"/> Organizational activities	<input type="checkbox"/> Administrative activities
<input type="checkbox"/> Sales	<input type="checkbox"/> Own business
<input type="checkbox"/> Evaluation	<input type="checkbox"/> Other _____

18.- Mention three subjects you think should be incorporated into the present curriculum.

19.- Mention three subjects you think should be eliminated from the present curriculum.

20.- In which of these areas do you think the institution offers you possibilities for development?

<input type="checkbox"/> Teacher updating	<input type="checkbox"/> Merit pay
<input type="checkbox"/> Professional advancement	<input type="checkbox"/> Postgraduate studies
<input type="checkbox"/> Scholarships	<input type="checkbox"/> None
<input type="checkbox"/> Academic mobility	<input type="checkbox"/> Others (specify) _____
<input type="checkbox"/> Updating courses	

21.- Name three values you promote for professional and ethical training in your class.

22.- What are the benefits do you find in the competencies plan proposed in the program?

Check one option.

Innovation, adaptation and learning.  
 Attributes, knowledge, abilities and skills.  
 Contingency solution.  
 Use and promotion of creative capacity

23.- Prior knowledge of the students entering the institution, are:

Very adequate  Adequate  Somewhat adequate  
 Inadequate

24.- Do you apply some type of diagnostic evaluation to identify students' skill level?:

Yes (specify) \_\_\_\_\_

No

25. Have you taken a course on learning strategies during the past year? \_\_\_Yes \_\_\_No

26. Point out three of the strategies you use most often to teach your classes.

- |  |                                       |
|--|---------------------------------------|
| <input type="checkbox"/> Graphics recovery     | <input type="checkbox"/> Concept maps |
| <input type="checkbox"/> Troubleshooting       | <input type="checkbox"/> Analogies    |
| <input type="checkbox"/> Double-entry matrix   | <input type="checkbox"/> Case studies |
| <input type="checkbox"/> Other (specify) _____ |                                       |

27.- Point out *two* didactic techniques you use most often.

- |   |  |
|---|--|
| <input type="checkbox"/> Presentation by teacher            | <input type="checkbox"/> Small groups                  |
| <input type="checkbox"/> Problem-solving in real situations | <input type="checkbox"/> Interaction (student-teacher) |
| <input type="checkbox"/> Directed reading                   | <input type="checkbox"/> Symposium                     |
| <input type="checkbox"/> Group discussion                   | <input type="checkbox"/> Panel                         |
| <input type="checkbox"/> Phillips 6-6                       | <input type="checkbox"/> Projects                      |
| <input type="checkbox"/> Seminar                            | <input type="checkbox"/> Debate                        |
|   | <input type="checkbox"/> Other (specify) _____         |

28.- In teaching the course, in what part of it do you apply evaluatory examinations to your students?

- \_\_\_Beginning, middle and end \_\_\_Beginning and end  
\_\_\_Only at the end.

29.- By what means do you evaluate your students?

- |   |   |
|---|---|
| <input type="checkbox"/> Written examination    | <input type="checkbox"/> Oral examination |
| <input type="checkbox"/> Individual assignments | <input type="checkbox"/> Team assignments |
| <input type="checkbox"/> Presentations          | <input type="checkbox"/> Practices        |
| <input type="checkbox"/> Daily work             | <input type="checkbox"/> Projects         |
| <input type="checkbox"/> Others (specify) _____ |   |

THANK YOU FOR YOUR HELP AND COOPERATION.

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