Training in Accounting Information Systems for Users' Satisfaction and Decision Making

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Abstract

The accounting profession is undergoing a period of rapid changes. Its concepts and theories are important. However, changes related to information technology seem to be gaining more relevance. This requires training, which is frequently seen as an expense, rather than an investment, in many organizations. The aim of this study is to examine the relationship between training in the use of accounting information systems, and its impact on their users' satisfaction and decision-making processes. The empirical work was carried out in Small and Medium-Sized Enterprises located in the northeastern region of Mexico. Perhaps the main contribution to knowledge is the fact that training does not seem to be helping employees develop new informatics skills because of different reasons. However, the results suggest that they appear to make use of their own skills to obtain satisfaction and make more and better decisions, which in turn benefit themselves and their organizations.

Keywords: SME, training, satisfaction, decision making, AIS

1. Introduction

Accounting is defined as a service that aims to provide users with quantitative information (Ilias and Abd, 2011) and an accounting information system (AIS) is designed for the accounting function in order to make the job more simple and versatile. It processes data and transactions to provide users with information that can assist them in the processes of planning, controlling, operating and decisionmaking in their companies.In their beginning, the AIS were based on paper worksheets, electronic sheets or very rudimentary software. It was not until the 1970s and 1980s that they started to incorporate technology, which had been exclusively used for payroll functions before.

Today, information systems (IS)in general are unable to function without computers and other technological resources to perform all the administrative process for the overall information management. Therefore, knowledge of how to best exploit the AIS is required, as accounting information plays a vital role in the management of all the business related activities.

It is important to acknowledge that technology is rapidly changing in terms of sophistication and functions. This has resulted in the need for people to develop new informatics skills as technology has changed the way we do business. For this, the community of professionals in the field and organizations expect the graduates to possess the skills for the assessment of the different alternatives available to them. But, the increase in the number of functions and characteristics that technology now includes has resulted in the need to constantly monitor the informatics skills required to secure students' success (McDonald, 2004).

The literature on human resources contains a great deal of proposals that include the desirable professional profiles needed to meet the labor market demands. All of these proposals, and organizations themselves, have recognized the value of training in meeting the labor market demands. After all, training is seen as a necessary investment due to the rapid changes faced by today's enterprises and the increase in the complexity level of all their related activities (Banks, Bures and Champion, 1987).

In this sense, scholars have critiqued organizational models that heavily rely on the measurement of enterprises' financial performance. They argue that an assessment of enterprises' nonfinancial performance can also be a key indicator of enterprises' development and its individual impact on the AIS users. That is why enterprises are required to include nonfinancial variables in their assessment of the enterprises' development such as customer satisfaction and decision-making processes. Zuriekat, Salameh and Alrawashdeh (2011) found evidence that suggests that financial and nonfinancial variables are not replaceable in the analysis of an organization development, with the latter being used as a complement of the former.

Because of the importance of staff training, the objective of this research is to determine the influence of training of AIS users on the development of their personal skills, which enable them to be satisfied and make more and better decisions in their daily activities. The research was carried out in the central region of the state of Tamaulipas, Mexico. To achieve its objective, a literature review was conducted which allowed us to determine the hypothesis and the design of a questionnaire for the quantitative work. An empirical work was carried out in commercial, service and industrial small and medium-sized enterprises (SMEs). This empirical study used SmartPLS statistical tool developed by Ringle, Wendeand Will (2005), which allows the assessment of complex models in a multivariant environment and is adequate for research in information systems (IS) (Roldán and Sánchez-Franco, 2012).

2. Literature Review

2.1. Training

Training has been conceptualized from different perspectives. For example, Gibb (1997) defines it as the acquisition of skills, knowledge, habits and attitudes needed to perform the different tasks involved in the administration of a business. In other words, training prepares employees to better perform their jobs and is an expensive, but needed, issue that will allow organizations to become more effective and to increase their productivity levels (Spears and Parker, 2002). Similarly, employees have also reported that training in the operation of AIS has helped them in raising their levels of self-confidence and in reducing errors (Ferrando, 2001).

The social interaction theory has shown that a trainee normally adopts and enacts behaviors from the trainer. That is why it is relevant for employees to enjoy and benefit from training programs provided in their workplaces. Unfortunately, training programs have been isolated from the job's productive activities (Snyder, 1990). In the informatics field, scholars state that organizations should train their employees so that they become specialized and diversified. The argument behind this idea is that properly trained employees are more likely to contribute to minimizing the negative operational and cultural impact during the implementation of information technology (IT) projects(Grossman and Walsh, 2004). Moreover, employees require knowledge of the processes related to the different IS, including AIS, if they are to operate them effectively and solve any problem that may arise with a new system (Salaka, Cheng and Prabhu, 2007).

Training provides the tools needed to apply practical solutions to problems encountered in the workplace. Devins, Johnson and Sutherland (2004) argue that training helps increase staff motivation and organizational profit levels. It also helps reduce the stress and absenteeism levels. In a similar vein,Gibb (1997) points out that training reducescosts and helps develop a positive psychological contract (job satisfaction, commitment with the organization), and facilitates knowledge transfer (Pate,Graeme and McGoldrick, 2000).

In sum, training helps improve the job performance (McDonald, 2004), which positively impacts on an increase in productivity levels, the improvement of users' individual satisfaction and decision-making suitable to the needs of the organization.

On the other hand, despite the fact that training involves high costs for the SMEs, there is little evidence about knowledge of their real needs. On top of that, there is the fact that little attention has been paid to decision-making processes related to training and development (Banks et al., 1987), even when there is evidence that they are vital for the employees' empowerment in their efforts to be effective (Babakus, Yavas, Karatepe and Avci, 2003). For this reason, many employers remain skeptical of the tangible benefits they get out of their investments made in human capital. This skepticism has resulted in little or no investment being made in training in order to minimize the perceived financial loss.Unfortunately, in some cases, the training given by other more experienced employees in the form of initial training is the only training option available to employees. In some other cases, employees are expected to learn while they are working. This, however, results in the learning of only operational aspects, not strategic or management issues (Kitching and Blackburn, 2002).

In this context, computer training is designed to develop users' IT and administration skills. It has shown that it reduces the possibility of employees' resignation intentions (Devins et al., 2004); also, the new technology can present large amounts of information which has revolutionized the industry's instructional methods (Snyder, 1990). Moreover, the arrival of ERP has placed education and training as one of the most recognized factors in its launching (Umble, Haft and Umble, 2003). Grossman and Walsh (2004) go further as to suggest that without an adequate training, an IS runs the risk of never being used appropriately or not getting any benefit from that technology.

Regarding the relationship between training and IT, satisfaction is a prerequisite for the users' acceptance of the new technology (Bradley and Lee, 2007). Nevertheless, IT itself cannot guarantee the business' success. New IT capacities need to be developed through training (Zhang and Tansuhaj, 2007). In the same vein, Snyder (1990) sustains that with a careful design IT/IS can help create environments where training and automated support tools become a part of the employees' performance. Such environment can serve enterprises to provide training to their employees so they can in turn offer a better service to their customers (Babakus et al., 2003). It can also help new managers develop their skills to align the department goals to the strategic organizational goals (Thacker and Holl, 2008). On the other hand, the low levels of satisfaction raise the staff turnover levels (Spears and Parker, 2002). And despite the fact that training normally improves the profit in many organizations, the SMEs lack a systematic procedure in this respect.

Nowadays, training is a growing priority in IT which responds to the political, social, cultural and business changes. This has created the challenge for employees to keep their skills up-to-date. Ferrando (2001) argues that when an organization engages in a process of change as a result of the adoption of new technology, it needs to provide its employees with adequate training. External training providers such as suppliers, consultants, universities, etc. are apparently benefitted from requests to provide training, as they are thought to be more familiarized with technology developments (Gardner and Gundersen, 1995); however, the lack of time, scarce economic resources, and the absence of a culture of continuous learning are the main reasons why enterprises do not offer training, especially training in IT, to their employees.

Undoubtedly, all the staff members in an organization require training in the use of technologies; specifically, public accountants and people involved in accounting require training in the operation of AIS. They also need to engage in continuing education and learning processes in order to be able to adapt themselves to the rapidly changing environment in which we are now living.

2.2.Personal Skills

Modern organizations have attached a high value to IT. Therefore, their employees' IT skills have become very important for the effective use and development of new technologies.

That is why organizations are required to offer their employees the training in IS, especially in AIS, which is needed to make the most of this technological tool in a creative and innovative manner.

Professionals of the accounting community agree on the idea that recent graduates lack the technical skills and knowledge needed to face the demands of the current labor market (Clovey and Olajide, 2008).No doubt, skills vary from person to person, from business to business, and from city to city. That is why scholars suggest that training providers should take into account the context when designing and implementing training programs.

Some others argue that a desirable professional profile for accountants is that which includesknowledge, professional values, ethics, and positive attitudes towards accounting and related tasks (Chaker and Tengku, 2011).Whitefield and Kloot (2006) reviewed the literature and identified three main personal skills needed by the accounting professionals: *i*) thinking and acting ethically, *ii*) being flexible in any situation faced, and*iii*) acting strategically. And the three main interpersonal skills: *i*)listening effectively, *ii*) presenting, discussing and defending their views, and*iii*) transferring and receiving knowledge. However, as have been mentioned before, those previous studies have not given clear definitions. In addition to that, those studies have overlooked those skills related to computers and technology, let alone AIS, which are essential now since we live in the informatics and the knowledge society.

In this context, those employees whose organizations have provided them with proper training are more likely to increase their skills, develop higher levels of motivation, and obtain greater levels of productivity (Pate et al., 2000). On the other hand, those organizations whose employees lack the skills needed to operate the IS function are more likely to fail (Jiang, Klein and Wang, 2007).

Central to this debate is the argument that the IT professionals are required to combine technical skills with a deep understanding of business and interpersonal skills (Zhang and Tansuhaj, 2007), which includes leadership skills. However, Jiang, Klein and Wang (2007) conducted a literature review and found divergent positions regarding the ranking of the IT professionals' skills. Some scholars argued that technical skills are the most important, whereas others sustain that business and interpersonal skills are more important than technical skills. Meanwhile, researchers in the accounting administration have examined different variables in order to explain the ways in which employee participation helps them improve their performance (Burney and Matherly, 2007). This has been found to be a fundamental aspect in the harmonious development of organizations and of persons themselves.
Having reviewed the literature on training, which is the independent variable, and personal skills, the first dependent variable, the working hypotheses are now presented.

Hypothesis 1:

H_1. Training in AIS enables employees to develop more technical and personal skills which help them become more effective in the operation of such systems.

2.3. Satisfaction

Despite the fact that research has experienced a growth in the SMEs over the last 25 years, little attention has been paid to the analysis of the degree of effectiveness of training programs. This is especially true in the AIS. Ilias and Abd (2011) state that the relationship between a business administration and the IS is measured by the level of users' satisfaction. The need to assess the effectiveness of the IS coupled with the difficulty in the operationalization of the finance-based constructs have accelerated the search for those easily measurableconstructs, as is the case of the users' satisfaction (DeLone and McLean, 2003). There have even been efforts to make such measure a substitute for the IS effectiveness. These efforts have been quite successful as employee satisfaction is considered essential in the success of an organization.

Job satisfaction can be used as a tool to prevent employees to leave the organization, to make them work hard and to obtain greater productivity levels (Karimi, Malik and Hussain, 2011), including user satisfaction. This is so because training has shown to have a positive impact on productivity, which in turns results in higher levels of satisfaction (Choo and Bowley, 2007). There is also evidence that suggests that organizations, whose employees are satisfied with their job, are more likely to gain a long-term competitive advantage (Gwinner, Gremler and Bitner, 1998).

In the computing field, user satisfaction has received a great deal of attention from researchers. However, agreements have not been reached regarding the definition of the construct.

This has created the emergence of different definitions referred to as a positive orientation that an individual has towards an IS (Ishman, 1996), Ives, Olson and Baroudi (1983) define satisfaction as the degree that users think the ISs available respond to their information needs. In this context, user satisfaction has been the most widely used measurement of IS success. Such measurement of IS success entails aspects such as relevance, contents, accuracy and opportunity of the information received from the IS.With regards to training, it helps in the improvement of employees' satisfaction (Kitching and Blackburn, 2002).

It is also affected by the work environment, the enterprise's values and the responsibilities in the workplace (Choo and Bowley, 2007). Satisfaction in learning is the kind of feeling obtained from participating in training courses or teaching programs (Chih, Liu and Lee, 2008).

User satisfaction is important for its potential effects on the IS department's goals, quality of life in the workplace and the willingness of using the system (Galleta and Lederer, 1989). However, the ubiquitous tools for its evaluation has not allowed the creation of an accepted systematic method because they use complex metrics, especially in the finance context. It is important to note that if the system does not provide reliable information which can support the users' decisions or the strategic processes for their satisfaction, there will be numerous errors.

User satisfaction is a good alternative for the promotion of the IS and those employees that are satisfied with their training have a positive influence on the workplace environment which makes them feel proud of their position and develop a sense of belonging (Choo and Bowley, 2007). In addition, Ittner, Larcker and Randall (2003) showed that those enterprises that make use of non-financial measures are more likely to obtain higher levels of employee satisfaction and more participation in the market. Similarly, it has been found that support provided by top executives influences to a great extent the use of IT for users' satisfaction, followed by the availability for training and their involvement in it (Rouibah, Hamdy and Al-Enezi, 2009). This is so because a complex IS, training in computers and the user experience are positively related to their satisfaction (Gardner and Gundersen, 1995). Moreover, researchers in the area have examined the relationship between decision-making and satisfaction with positive results (Burney and Matherly, 2007).

Having reviewed the literature on training and personal skills, the working hypothesis for this variable is now presented:

H_2. Having technical personal skills in the management of an AIS helps its users develop higher levels of user satisfaction.

2.4. Decision-Making

Decision-making is one of the most important functions in executives' jobs. This is particularly, true in today's world as medium and operative managers are also AIS users, especially when processes in organizations are multidimensional and are interrelated. Decision-making is also relevant in today's world because it has been found that the importance of any decision made lies in the impact it has on an organization, either on its long-term and short-term performance.

When scholars have analyzed the types of information used by decision makers to make a decision, they have found that decisions require different types of information (Lee and Fisher, 2007). In addition, the quality of the information enables a decision maker to justify the decisions made using the argument that if the information is opportune, accurate and reliable, then such a decision must be good. The reasoning behind this argument is that decision-making is a natural iterative process which requires the continuous recycling of the information. It can even be argued that decisionmaking is a dynamic process which starts from the central problem, continues with the selection of an alternative, and finishes with its implementation. Some studies suggest that enterprises in the northeastern part of Mexico manage little information and exert poor control over it (Medina, Lavin, Mora and De la Garza, 2011). In this sense, the decision-making process within an organization is influenced by many internal and external factors. For the purposes of this research, decision-making is defined as the selection of a course of action from different alternatives in a rational manner and based on information obtained from AIS.

Because the world is moving towards open and global markets, access to opportune, reliable and easy information will be essential for effective decision making (Hamill, Deckro and Kloeber, 2005). Within the systems approach, people need to be sensitive to the policies and programs of other organizational units (especially of those with whom they have a direct relationship) and the enterprise as a whole.

This is particularly important because ISs entail most of the range of operations and decision-making activities. The potential effect of IT on these activities in all the levels has been examined by IS researchers from the beginning of the informatics era. Zuriekat, Salameh and Alrawashdeh (2011) claim that participation in the assessment of systems' performance can provide employees and managers access to relevant information required to complement their tasks, make decisions and increase their levels of satisfaction.

Participation in decisionmaking is associated with an improvement of employees' results, and such relationships are mediated by the relevant information received in their job (Burney and Matherly, 2007). Moreover, this is supported by the argument that a new IS is normally justified by a better information's performance which in turns improves decision-making, with the help of the increase in the technological capabilities (Hamill, Deckro and Kloeber, 2005).

The importance of decision-making not only for organizations, but also for persons is evident. Undoubtedly, informatics abilities coupled with knowledge of the AIS function process enable users to be able to effectively perform their activities which will have a direct impact on their decision-making processes. This means that AIS users will be in a better position to choose from a variety of information sources that will help them make prompt decisions.

The hypothesis for the decision-making construct is defined as follows:

H_3. Having the technical personal skills in the management of an AIS enables its users to make more and better decisions in their job.

3. Method

SMEs that make use of AIS were selected in order to study their performance in terms of training, impact on personal skills, user satisfaction and decision-making.The procedure followed to achieve the objective of the research, started with the review of the literature on the previously described variables. The definition and operationalization of the variables were carried out as follows:

- Dependent variables: Satisfaction (confidence in the AIS, appropriate information, greater efficiency and effectiveness of the AIS, overall satisfaction), and Decision-making (relevant and useful information, different alternatives, job effectiveness).
- Independent variables: Personal skills (in computers, in business management, use of information), and Training (on the AIS use, continuing training and on new information technologies).

The empirical work was carried out in the central region of the Mexican state of Tamaulipas. A 5 point Likert scale questionnaire was used. Before its application, it was first reviewed by academics and professionals. It was then piloted with 12 enterprises. The results of the pilot test allowed the detection of a few items which did not meet the minimum recommended statistical load. The final version of the instrument was made up of 5 items for the satisfaction section, 4 for decision-making, 4 for personal skills, and 3 for the training section, in addition to the demographic data section.

The most recent census conducted by the Mexico's National Institute of Statistics and Geography (INEGI, 2011) shows that there are 5782 SMEs in the state of Tamaulipas (in Mexico, small enterprises are those which have between 11 and 50 employees and medium- sized enterprises are those with a range of 51 and 250 employees), the region under study has 636 SMEs. The final version of the instrument was administered to 63 enterprises (10% of the total population). Unfortunately, the participation of entrepreneurs and managers in this kind of studies in this region is still low. Two questionnaires were administered to each of the enterprises, generating 126 completed questionnaires for their analysis. The respondents were those people who make use of the AIS such as the finance manager, the top manager, the main accountant, and the accounting staff members. The criterion for the selection of units of analysis was that the organization had a recognized accounting management function through an AIS.

The data analysis was carried out through descriptive statistics, with the help of the multivariate SmartPLS software package. This along with a re-sampling of 500 sub-samples allowed us to obtain the crossing of variables, correlation matrices, factorial loadings, average variance extracted (AVE), t-statistics, explained variance and standardized coefficient paths.

Results

The analysis of the general data indicates that 38% of the respondents were males and 62% were females. They have an average of 2 years and a half experience using some AIS. The distribution of the number of hours (per week) they use the AIS is as follows: 22% use it 10 or fewer hours; 31% use it between 11 and 20 hours; 21% use it between 21 and 30 hours; 18% use it between 31 and 40 hours; and 8% use it 40 hours or more. Finally, as is the case not only at a regional but also at a world level, enterprises belonging to the service sector dominatein this study (84%), followed by a 12% from the commercial sector, and 4% from the industrial sector.

The inferential analysis was carried out through the use of the version 2.0.M3 of the Smart PLS software package. Such analysis served as the basis for the validation of the model in an integral manner. That is to say, the results generated by this statistical tool allowed us to determine whether or not the research model has significant reliability. To do so, the structural and measurement parameters were estimated simultaneously (analyzing and interpreting in two stages): Measurement Model and Structural Model.

a. Measurement Model. The measurement model intends to analyze whether the concepts are measured appropriately through the observed variables:

- Item reliability: It is the assessment of the loadings (λ) or simple correlations. In order for an indicator to be accepted, it needs to have a loading which is equal or greater than 0.707 (λ^2, 50% of the explained variance). Table 1shows that the 16 items have acceptable levels of loading. Their values range between 0.7138 and 0.9401.
- Composite Reliability (construct reliability): It was calculated by the Cronbach's alpha (0.7). In this case, the Fornell and Larcker's (1981) statistical model was used. These authors argue that their model's measure is higher than that of the Cronbach because of the results (0.707) they have obtained in their research projects. Table 1 shows that the internal reliability is high enough, out-passing these two required indicators.
- Discriminant Validity: The square root of AVE is used to obtain the discriminant validation (Fornell and Larcker, 1981), which needs to be higher than the shared variance between the construct and other constructs within the model. The corresponding matrix provides these values (Table 2, in diagonal). The obtained data show that the variables meet the condition.
- Convergent Validity: This measure is calculated by the AVE. Its values need to be higher than 0.50, which establishes that more than 50% of the construct variance is due to its indicators (Fornell and Larcker, 1981). This validation is adequate, as the AVE (Table 1) is higher,in all of them, than 0.50 (their values range from 0.5878to 0.7969) and the items reliability is higher than the recommended *loading* of 0.7. A re-sampling (500 re-samples) was conducted in order to obtain the t-statistic values (Table 3). The results show that two relationships (H_2 and H_3) are significant and only one (H_1)is not significant.

Table 1: Constructs Validity

Construct/Item	Loading	Composite Reliability	AVE	Cronbach's Alpha
Training		0.8549	0.6701	0.8070
Tra1	0.7269			
Tra2	0.7138			
Tra3	0.7826			
Personal Skills		0.8507	0.5878	0.7689
Ps1	0.8322			
Ps2	0.7956			
Ps3	0.7438			
Ps4	0.8230			
Satisfaction		0.9370	0.7499	0.9191
Sat1	0.7673			
Sat2	0.8318			
Sat3	0.9027			
Sat4	0.9401			
Sat5	0.8907			
Decision Making		0.9401	0.7969	0.9162
Dm1	0.9033			
Dm2	0.9275			
Dm3	0.8644			
Dm4	0.8753			

Table 2: Correlation of Variables (Discriminant Validity)

	Decision Making	Personal Skills	Satisfaction	Training
Decision Making	**0.8927**			
Personal Skills	0.4016	**0.7667**		
Satisfaction	0.6305	0.3149	**0.8660**	
Training	0.2912	0.3008	0.3706	**0.8186**

Note: The data in diagonal refer to the AVE's square root. To obtain the discriminant validity, these data need to be higher than those on the same row and column(inter-construct).

b. Structural Model. For this assessment, two basic indexes are used: the standardized path coefficient (R) and the explained variance (R^2):

- R is identified in the monogram (PLS figure) through the *arrows* which link the constructs in the internal model. This coefficient is obtained through the traditional way (as multiple regressions). Chin (1998) proposes that such regressions should achieve at least one value of0.2, and ideally a value higher than 0.3, in order to be considered significant.
- R^2represents a predictive power measure and indicates the variance amount of the construct, which is explained by its antecedent variables in the model (Roldánand Sánchez-Franco, 2012). It should be equal or greater than 0.1, as lower values, even if they are significant, provide little information. Table3shows the results of the three proposed hypotheses.

Table 3: Summary of SmartPLS Results

Hipótesis	R	t-statistics	Remark
H_1. Training→Personal skills	0.129	0.6450	Not Supported
H_2. Personal skills→Satisfaction	0.315	1.9760	Supported
H_3. Personal skills →Decision-making	0.402	2.9443	Supported

Figure1shows a graphical representation of the data in the assessed research model. It also shows the correlation levels between the independent and the dependent variables with their respective hypotheses.

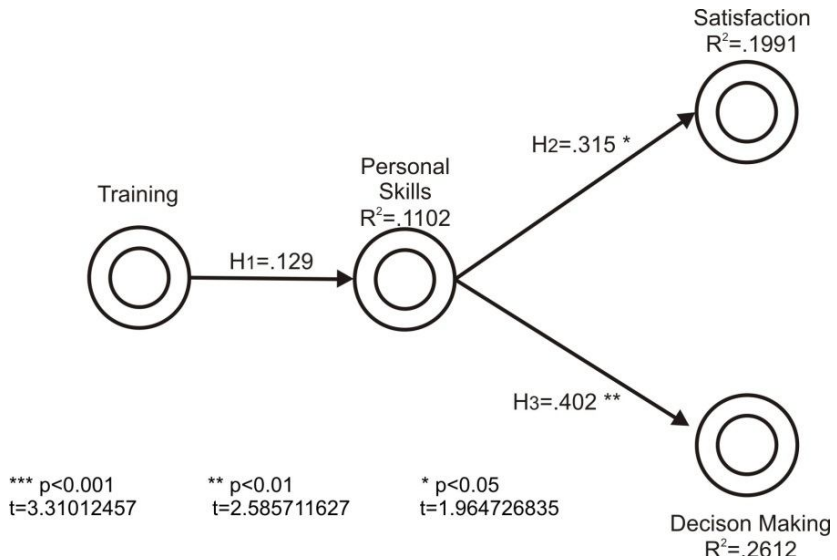

Figure1. Assesses Research Model

Figure 1 also shows that hypothesis 1 (H_1) was rejected because of its low relationship (0.129) and without reliability (0.6450, less than 95% of confidence). In other words, the training received by the employees seems not to be as useful in helping them develop their personal skills such as the AIS use, business management, or information use.

Also, it shows that two hypotheses (H_2 and H_3)were accepted. They both have good standardized path coefficients(0.315* and 0.402**)and levels of reliability $p<0.05$ and $p<0.01$ respectively.

This indicates that despite the fact that they lack adequate training, the employees believe that they have enough personal skills to feel satisfied with the operation of the AIS. They seem to believe that such skills have enabled them to have information, albeit little, which is needed to perform their tasks, and to effectively operate this IS. Likewise, the employees appear to feel that the fact that having relevant and useful information, along with their computers skills, has allowed them to have a wider range of possibilities for their decision-making processes. They even seem to believe that they are making right decisions as a consequence of their skills and that this has helped them do their job more effectively.

In addition, the applied model appears to have a predictive power for most of the involved variables, with a 23% (on average for the dependent variables) of the explained variance. This seems to suggest that there is still a need to continue improving the research design used, and perhaps, to apply it in other work contexts.

4. Conclusions

The world continues marching on and IT is also advancing, perhaps even faster than human beings. Having technological advancements without proper training on how to use them is almost unfeasible nowadays, as they will not give results if the users are incompetent. In addition, it is now about time to take advantage of the opportunity that the formulation of the business strategy creates through technology and training.

The main focus of this study is training. However, little is known about the people who receive training in IT, especially in the accounting-informatics area. Perhaps, this may be influenced by the diversity of new IT users' backgrounds such as education, culture, availability, etc.

The aim of this research is to look at the relationship between employee training in AIS and its impact on the development of skills to more effectively operate it. It also looks at the ways in which such relationship is reflected in AIS users' satisfaction and decision-making processes.

It is clear that training in AIS is not helping enterprises or employees develop new skills that can allow them to better understand their job, understand business management processes, and make effective use of information. Undoubtedly, all these aspects can negatively affect the harmonious development of any organization that strives for administrative excellence. Among the reasons for that are that they may not be receiving appropriate training, that the training may not be provided by experts, that the training is not continuous, or simply that the employees do not get any training at all even when they first start operating the AIS. This is why there is a need for organizations to re-design their training programs aimed at obtaining competitive advantage that can be translated into higher levels of productivity, more sales, more satisfied customers, gaining market niche, better enterprise-suppliers-customers relationship, among other financial and non-financial factors.

Fortunately, the data analysis shows that despite the lack of adequate training, there are some positive aspects. The employees have managed to make the most of the abilities they have in the operation of an AIS. This has allowed them to feel more satisfied with their jobs, and decisions are made in a more rational way, based on data generated by the system they now operate. This suggests that the employees have the willingness to learn to learn, and the ability to distinguish between useful information and that which is not very relevant. They have been able to do so by selecting the choicesfrom a variety of options that have merged together to obtain more effectiveness in their jobs and higher levels of satisfaction from doing their professional activities.This raises the question of determining the extent to which is good for the employees themselves to perform their tasks using their intuition, without following a systematic or methodological approach, in order to try to meet the needs of operating an AIS.
Several issues are still in need of examination; therefore, future research should endeavor to address them. For example, the role of the evaluation of training can be analyzed by other studies. Similarly, there is a need to examine the role of training providers and its impact on employees' performance. The analysis of the different factors that generate AIS employee satisfaction is also a good subject for future research projects. Insights into these and other related issues can contribute to advancing our knowledge of the role that the AISs play in organizations of today's globalized world.The results of this research should also be taken with caution, as the research model used is derived from a complex theory about the relationship among AIS, user satisfaction, and decision-making, which is an emerging topic in the literature.

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