

# Normas dominantes en las decisiones éticas y actitudes de los estudiantes universitarios: teoría y prueba empírica obtenida en México

Dominant Norms in Ethical Decisions and Attitudes among University Students: Theory and Empirical Test in Mexico

Regras dominantes nas decisões e atitudes éticas dos estudantes universitários: teoria e evidência empírica obtidas no México

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## Resumen

Para que la fuerza laboral de un país se comporte de manera ética en el ejercicio profesional es necesario que durante su preparación educativa desarrolle una base ética sólida que le permita resolver dilemas éticos de manera correcta. Estudios previos demuestran que trabajadores no éticos usualmente fueron también estudiantes no éticos. El principal objetivo de este estudio fue conocer la orientación ética de los estudiantes universitarios en México y evaluar las diferencias de orientación entre los alumnos de postgrado y pregrado, y entre los alumnos de las carreras económico-administrativas e ingeniería. También se buscó medir las actitudes de los estudiantes universitarios mexicanos respecto al plagio y la copia ilícita en la vida académica.



Los resultados del estudio mostraron una diferencia significativa entre la orientación ética de los alumnos de postgrado y pregrado. Los resultados también presentaron diferencias menores entre las carreras económico-administrativas e ingeniería. Las actitudes de los estudiantes universitarios mexicanos respecto del plagio y la copia ilícita reflejaron tanto juicios de valor como razones sociales que buscan justificar sus actitudes respecto al plagio y la copia ilícita, los cuales fueron agrupados en cinco factores: *1*) valor del estudio, *2*) administración del tiempo, *3*) imitación, *4*) compañerismo y *5*) presión laboral.

La orientación ética de los estudiantes mexicanos sufre una brecha entre la su juicio ético y su intención de actuar. Los estudiantes mexicanos determinaron su juicio ético solo con base en su evaluación moral (deontológica), al mismo tiempo que tomaron una decisión, en este caso la decisión de premiar o castigar la conducta presentada, con base en su juicio ético o en su evaluación de las consecuencias (teleológico). Esto es: fueron morales en la actitud, pero pueden ser morales o no morales en la decisión de premiar o castigar la conducta. Pueden premiar una conducta inmoral que produce consecuencias positivas o favorables, y pueden castigar una conducta moral que produce consecuencias negativas o desfavorables al actor de la conducta. La mera presencia de dilemas éticos confundió a los estudiantes que probablemente no cuentan con una base moral sólida.

**Palabras clave:** actitudes respecto a la copia ilícita, actitudes respecto al plagio, evaluación deontológica, evaluación teleológica, estudiantes universitarios mexicanos, orientación ética del alumno universitario.

# Abstract

If a country wants to develop a workforce that behaves ethically throughout their professional life, it is necessary to build a solid ethical foundation during its academic life. A solid ethical background that allows it to solve ethical dilemmas. Previous studies have shown that professionals that behave unethically at work have also behaved unethically during their student life. The main goal of this study was to evaluate the ethical orientation of Mexican university students and to assess the differences of orientation between graduate and undergraduate students



and between two majors, business and engineering. The study also measured the attitudes of Mexican students toward cheating and plagiarizing while pursuing their respective degrees.

Results showed a significant difference between the ethical orientation of graduate and that of undergraduate students. Results also showed smaller differences between two majors, business and engineering. The attitudes of Mexican students towards cheating and plagiarizing reflected both value judgments and social reasons that they used to justify their attitudes towards cheating and plagiarizing, which were grouped in five factors: 1) study value, 2) time management, 3) mimic behavior, and 5) future work pressure.

The ethical orientation of Mexican students involved a gap between ethical judgment and intention to act. Mexican students determined their ethical judgments based on a deontological evaluation (deontological) alone, whereas at the same time made decisions, in this case the decisions to reward or punish the act in the scenario, either based on their ethical judgment or their evaluation of its consequences (teleological). That is, they were moral in their ethical judgment, but they can be either moral or immoral in their decision to reward or punish behavior. They can reward an immoral act that brings positive or favorable consequences and can punish a moral act that produces negative or unfavorable consequences to the person acting. The mere presence of ethical dilemmas confused students that lack solid ethical morals.

**Keywords:** attitudes toward cheating and plagiarizing, deontological norms, teleological norms, graduate and undergraduate Mexican students, university student's ethical orientation.

## Resumo

Para que a força de trabalho de um país se comporte de maneira ética em sua prática profissional, é necessário que, durante sua preparação educacional, desenvolvam uma base ética sólida que lhes permita resolver os dilemas éticos de maneira correta. Estudos anteriores mostram que trabalhadores antiéticos geralmente eram também estudantes antiéticos. O objetivo principal deste estudo foi conhecer a orientação ética de estudantes universitários no México e avaliar as diferenças de orientação entre estudantes de graduação e pós-graduação e entre estudantes de carreiras econômico-administrativas e de engenharia. Também procurou medir as atitudes dos estudantes universitários mexicanos em relação ao plágio e à cópia ilícita na vida acadêmica.



Os resultados do estudo mostraram uma diferença significativa entre a orientação ética dos estudantes de pós-graduação e de graduação. Os resultados também apresentaram pequenas diferenças entre carreiras econômico-administrativas e engenharia. As atitudes dos estudantes universitários mexicanos em relação ao plágio e à cópia ilícita refletiam tanto juízos de valor quanto razões sociais que buscam justificar suas atitudes em relação ao plágio e à cópia ilegal, agrupadas em cinco fatores: 1) valor do estudo, 2 ) gestão do tempo, 3) imitação, 4) companheirismo e 5) pressão do trabalho.

A orientação ética dos estudantes mexicanos sofre uma lacuna entre seu julgamento ético e sua intenção de agir. Os estudantes mexicanos determinaram seu julgamento ético apenas com base em sua avaliação moral (deontológica), ao mesmo tempo em que tomaram uma decisão, neste caso a decisão de recompensar ou punir o comportamento apresentado, com base em seu julgamento ético ou em sua avaliação as consequências (teleológica). Isto é: eles eram morais na atitude, mas podem ser morais ou não morais na decisão de recompensar ou punir o comportamento. Eles podem recompensar comportamentos imorais que produzam consequências positivas ou favoráveis, e podem punir uma conduta moral que produz consequências negativas ou desfavoráveis ao ator do comportamento. A mera presença de dilemas éticos confundia os estudantes que provavelmente não têm uma base moral sólida.

**Palavras-chave:** atitudes em relação à cópia ilegal, atitudes em relação ao plágio, avaliação deontológica, avaliação teleológica, estudantes universitários mexicanos, orientação ética do estudante universitário.

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## Introduction

Ethics in business starts with ethics in school with a greater emphasis on the university stage because it is the point prior to the beginning of the professional work stage. Previous studies have shown that unethical employees and workers have usually also been unethical students. Therefore, it is essential to promote ethical foundations during the educational preparation stage of Mexican employees and workers. The purpose of this research is to know the ethical orientation of Mexican students in the university stage. Are university students guided by moral criteria or by the consequences of their actions? That is, when university students have to make decisions that involve ethical acts, do they follow moral standards or are they only guided by the consequences of such acts? The difference of criteria in making ethical decisions is undoubtedly of great importance in both contexts, academic and labor.

This study seeks to answer the following research questions:

1) What is the ethical orientation of Mexican university students? Are Mexican university students guided by moral standards or only by the consequences of their actions? That is, when they have to judge actions or make decisions that involve ethical behaviors, do they prefer to follow moral standards or only focus on the ends of their actions? In any case, how is the divergence explained, if there is one, and what are the consequences for the ethical education of the students?

2) Is there a difference between university levels (postgraduate and undergraduate) and between university degrees (undergraduate and engineering)? If so, what are these differences? How do they explain them and what are the consequences for the ethical education of students?

3) What are the attitudes of the Mexican student regarding plagiarism and illicit copying during university academic performance?

Therefore, the objectives of this study were 1) to evaluate the ethical orientation of Mexican university students, 2) to know if there is a difference between university levels (postgraduate and undergraduate) and between university degrees (undergraduate and engineering) with respect to orientation student ethics and 3) know the attitudes of the Mexican student regarding plagiarism and illicit copying during university academic performance.



The first section presents the ethical context of Mexican students, as well as a brief review of theories and practices on moral orientation and the consequences-based approach of university students in other parts of the world. Subsequently, the methodology of the study is detailed, including design, measurements, sampling method and description of the sample. Finally, the results of the study, the discussion they generate, the conclusions reached are presented, as well as the limitations of the research and suggestions for future studies and research.

## Moral development of the individual

When trying to understand the moral of human behavior there are three main theories: 1) the psychoanalytic approach, 2) the theory of social learning and 3) the cognitive-evolutionary approach (O'Connor, 1997).

Within the psychoanalytic approach, morality is seen as a result of the identification of the child with his parents and the transmission of social norms through them. Under the theory of social learning, people direct their actions based on their previous notions and not only on the manifest responses, therefore there can be an observational learning outside the individual (Rosenstock, Strecher & Becker, 1988). The cognitive-evolutionary approach establishes two main factors within moral development: 1) the emphasis on the development of rules and 2) the acquisition of universal moral principles as a product of mature rational judgment (Barra, 1987).

Kohlberg's theory, within the cognitive-evolutionary approach, suggests that the group of people who can be desired to do good is getting bigger and bigger to the point of including those who have never met or known each other , depending on the stage of moral development in which the individual is. From the perspective of Piaget's theory, this meant that in early childhood one tends to think only of what can be perceived directly in real time, and that little by little one learns to reason about abstract elements that can not be experienced. in the first person (Barra, 1987). Therefore, if an individual hears or identifies a solution within the discussion of a moral dilemma coming from a stage of higher moral level, he will be motivated to move towards that stage, since the cognitive structures of his stage of specific moral judgment do not they have been sufficient to resolve this dilemma (Guzmán, 1989). In other words, the individual will appeal to higher moral judgment structures.



The different stages of the development of moral judgment (orientation towards punishment and obedience, orientation towards individualism or hedonism, orientation towards interpersonal relationships, orientation towards social order, orientation towards the social contract and orientation towards universal ethical principle (Barra, 1987)) are considered evolutionary, sequential and universal for all cultures (Guzmán, 1989). Although the development of moral judgment can occur at different ages and terminal points depending on the culture in question (Guzmán, 1989).

## Ethical context of Mexican students

Ethics played a very important role for society in traditional Mexico. There was a strong moral education taught by parents and reinforced by schools. The fundamental values were work, living in peace with everyone, being humble, being restrained, not wasting time and dealing with profitable things. Today it is thought that the practice of ethics in Mexico was forgotten due to triumphant liberalism from the second half of the 19th century (Montes de Oca, 2004).

The current Mexican society is immersed in a world in which particularities have been lost, but where, paradoxically, one struggles for one's own and where differences want to be erased. In it predominates the imitation of the other, and the foreigner is often considered as better and superior to the own (Montes de Oca, 2004). Social advances threaten to transgress ethical values, which is why a regulation of ethical standards is necessary (Guerrero, 2010). Additionally, the traditional Mexican family has apparently been weakened by going from patriarchal authoritarianism to family anarchism. Children are separated from parents more quickly. The moral values of Mexicans seem to be taking place in the field of being and not in being, which has implications for the orientation of Mexico's educational system (Montes de Oca, 2004).

Education in Mexico, on the other hand, is affected by the low academic performance of students and the diversity of methodologies used in the evaluation of their performance. According to the students themselves, dropping out of school, not studying or not working, having poor study habits and spending little time on it have a common root in the dissatisfaction produced by low academic performance (López, Villatoro, Medina-Mora & Juárez, nineteen ninety six). It is clear that a low academic performance that is not addressed or remedied at the beginning of the process



becomes a burden during the whole school stage (López et al., 1996). Additionally, education in Mexico is an unfinished virtual reality because not all citizens have access to it despite being a right established in the Political Constitution of the United Mexican States (Rodríguez, Cardoso & Bobadilla, 2015).

One of the objectives of the Mexican educational system is to ensure education for the entire population, which has resulted in the reduction of disparities in academic performance, the increase in permanence rates and the greater probability that students acquire the desired knowledge. (Muñoz, 1982). However, the education system as a whole has not been able to raise the level of academic achievement in the subjects of Education and Civic and Ethical Training (Barrera, 2009). As if this were not enough, the analysis of critical incidents regarding how the ethical code is transgressed in reality leads to questioning the effectiveness of these subjects in professional ethical training (Díaz, Pérez & Lara, 2016). The values that are inculcated to the students from their entrance to the university are clouded by the own unethical behavior of some teachers and the negative example that it generates (Beltrán, Torres, Beltrán & García, 2005). Hence, some pedagogues recommend that, as part of the ethical training of the professional, educators seek the growth of the person in its ethical and moral dimensions so that in this way the professional not only knows what is ethically correct or not in the exercise of his profession, but also manage to behave ethically as a professional and as a citizen (Martínez, Buxarais & Bara, 2002). Ethics is not just saying or thinking about it, but above all doing it and living it.

Although many higher education institutions in both Mexico and Latin America state that their educational model is based on competencies, educational practices continue to be contentbased (Martínez, Tobón & Romero, 2017). Therefore, the student's performance in Mexico is mostly evaluated based on exams (Martínez et al., 2017; Portellano, 1989), which favors the idea that students will do everything possible to master this method and obtain an good note, regardless of having to adopt unethical behavior during the process.



#### Ethical orientation of university students

The orientation of people has been studied from two central theories in the ethical literature, deontological theory and teleological theory. According to deontological theory, there are intrinsic characteristics to human behavior that make it right or wrong regardless of its consequences. In contrast, teleological theory focuses on the goodness or badness of the consequences of human behavior regardless of whether the action is right or wrong (Hunt & Vásquez, 1993).

Therefore, the evaluation of human behavior in an individual must involve both principles, the moral or deontological principle and the consequences or teleological (Hunt & Vitell, 1986). Behavior analysis shows that some individuals have radically different views on how to evaluate the ethics involved. Those that focus on the deontological nature of behavior focus on the evaluation of the correct or incorrect behavior, the consistency or inconsistency of the human act with deontological norms. The deontological vision emphasizes compliance with the mandatory standards in the conduct of each person (Hunt & Vitell, 1986).

In contrast, those who focus on the teleological nature of behavior focus on the evaluation of consequences for the individuals involved and not involved. These individuals estimate the probability of occurrence of such consequences, consider the desire or not desire that the consequences occur and weigh the importance of these for individuals or groups. Therefore, the teleological vision establishes the good or bad of a human act depending on whether it produces positive or negative consequences for both the actor and the other individuals (Hunt & Vitell, 1986). Within the teleological theory there are two main aspects, ethical egoism and ethical altruism. Ethical selfishness establishes that the act is good if its consequences are more favorable for the individual who performed the action. While ethical altruism states that the act is good if its consequences are more favorable to others than to the individual who performed the action.

Hunt and Vitell (1986) propose that generally individuals, when facing situations involving ethical judgments, use a combination of deontological and teleological considerations, without determining what kind of consideration prevails. Hunt and Vásquez (1993), to mention an example, found that the managers of the companies preferably use the deontological criterion over the teleological criterion. In other words, the moral or deontological orientation of the managers prevails over the orientation based on the consequences or teleological of the same. This finding



opened the doors for research on the ethical orientation of other groups, such as, in this case, that of university students.

In this specific field, in a previous investigation about the ethical orientation of university students, Flores and Vásquez (2009) found that Hispanic students in the United States of America at the undergraduate level in administrative careers issue ethical judgments based on deontological evaluations only. . However, these same students are divided as to their ethical decisions. Some use the criterion of ethical judgment to decide, while others do not use any ethical judgment and rather are guided by the consequences that their decisions will bring. The study by Flores and Vásquez (2009) concludes that the ethical orientation of students is guided by moral criteria when making ethical judgments, but not necessarily in decision-making.

As previously mentioned, one of the objectives of this research was to evaluate the ethical orientation of Mexican university students. And another one of them was to know if the ethical orientation of the students differs between the university levels (postgraduate and undergraduate) and between university careers (business and engineering). In this regard, previous studies gave an account of the difference between undergraduate and postgraduate levels and among some undergraduate degrees within the scope of business (Flores & Vásquez, 2009). The idea is, of course, to replicate with other careers, particularly those that are not from the business area.

University students in administrative and business areas are often warned that their profession is guided by an ethics questioned due to frequent frauds in the business sector in recent years. However, recent research shows that there are no reasons to prove that students in administrative areas commit deceptive activities to a greater or lesser extent than other university students (Klein, Levenburg, McKendall & Mothersell, 2007). Along the same lines, there are studies that show that the highest levels of cheating in school (student behavior) correspond to the lowest levels of honesty, but that this applies to any level or career (West, Ravenscroft & Shrader, 2004).

In the study by Flores y Vásquez (2009), on the other hand, undergraduate students showed a lower level in the application of deontological criteria to the issuing of ethical judgments than postgraduate students. Similarly, undergraduate students focused more on the resulting consequences than graduate students when making ethical decisions.



Bringing back the aforementioned, the last objective of this study was to know the attitudes or reasons of the Mexican student regarding plagiarism and illicit copying during university academic performance. As is well known, both involve deception and lies, therefore, are immoral acts no matter what the results obtained with these actions. However, it was necessary to examine the motivations or reasons that seek to justify the use of plagiarism and illegal copying by the student himself.

Although 80% of university students agree that under no circumstances should copy and plagiarism be justified, many of them perform these actions and give the impression that plagiarism and illicit copying prevail in their actions (McCabe & Trevino, 1996). Additionally, apparently very few students who cheat are discovered and when the punishments received by the accused are lax (McCabe & Trevino, 1996).

Other characteristics of the students who plagiarize and copy illicitly have to do with the process by which they learn these behaviors. Normally it is learned at an early age and it is difficult to abandon once learned. Additionally, the determinants for cheating are usually equal to the determinants for cheating only once. These determinants are inversely related to each student's school average and directly to contagion by other students who commit acts of this nature, as well as the personal relationship with these students (Mixon, 1996, Bunn, Caudill & Gropper, 1992).

There is also a relationship between having performed previous deceptions and the degree to which they were neutralized (Kenneth, Davy & Easterling, 2004). There are studies that indicate that having carried out activities in class to prevent students from cheating did not have significant influence to neutralize this type of behavior or future trends (Kenneth et al., 2004). Other authors have found that deception activities are more frequent in classes taught by professors who are not holders of the subject or in large classes, and that the characteristics of students who cheat include having poor performance in class and being working and studying. simultaneously (Kennedy & Lawton, 1996). Also being a member of a fraternity or having alcohol problems have been factors that influence the willingness of students to opt for plagiarism and illegal copy (Kerkvliet, 1994).

Apparently there are more cases of plagiarism and illicit copying outside of class hours because it is more difficult for teachers to control projects that occur without their supervision (Owens & Nonis, 1998). For this reason, some universities seek to reduce this risk by emphasizing



the policies of academic integrity, the communication of such policies to teachers and students, the use of precautionary instructions in examinations and assignments and the strengthening of disciplinary procedures (Payne & Nantz, 1994). The degree of penalty imposed against those who commit this infraction has a significant impact on the decrease of the infraction (Mixon, 1996).

According to Pullen, Ortloff, Casey and Payne (2000), plagiarism or copying illegally poisons the university education system, as it impacts on the center of the values of a culture. The interesting thing is that although the students recognize and accept that these actions are undesirable, after committing them they trust that they will be excused under certain circumstances, which reflects the hegemony of situational ethics in such cases (LaBeff, Clarck, Haines & Diekhoff, 1990).

Finally, in the study by Flores and Vásquez (2009) it was found that the most frequent reasons among students to commit plagiarism and illicit copying are related to family situations and working conditions above the school reasons themselves.

## Method

## **Design of the investigation**

The theory behind this study is the ethical theory applied to human behavior (Hunt & Vitell, 1986, Hunt & Vásquez, 1993). This seeks to explain the ethical conduct of the person based on the moral principles followed and the consequences produced with the act for both individuals and society. According to empirical research, moral or deontological evaluation dominates the consequences or teleological evaluation mainly in the formation of ethical judgments, but also to a certain extent in the decision to reward or punish the author of the action (Hunt & Vásquez, 1993).

Specifically, this study is based on an adaptation of both the design and the measures used by Hunt and Vásquez (1993) to study the ethical orientation of people. Therefore, it seeks to explain the ethical judgment of university students from the deontological and teleological considerations they use when doing so. At the same time, it seeks to explain the student's decision to reward or punish the author of the action based on the ethical judgment made or the teleological considerations used.



It should be specified that the two conditions required by the design of Hunt and Vásquez (1993) are 1) the presence of deontological considerations and 2) the presence of teleological considerations. Under the first consideration, the contemplated act can be moral or immoral; under the second, the act can produce positive or negative consequences. The combination of both criteria generates a 2 x 2 design. These combinations are implemented by proposing two scenarios or short stories whose reading serves as the basis for the respondent to evaluate both the ethical judgment and the decision to reward or punish. Each scenario has four versions according to the deontological and teleological combination that the design requires. Each questionnaire presents two scenarios (Case 1 and Case 2), but only one version, which results in four instruments for its administration.

Therefore, following the design of the research, four instruments were used, each of which is a combination of a condition of deontological character (morally correct or incorrect) with another one of teleological character (reward or punishment), as shows below:

- 1. Version one: it combines an ethical deontological evaluation with results that have positive consequences. This version presents an ethical dilemma.
- 2. Version two: combines an ethical deontological evaluation with results that have negative consequences.
- 3. Version three: combines an ethical deontological evaluation with results that have positive consequences.
- 4. Version four: combines an ethical deontological evaluation with results that have negative consequences. This version presents an ethical dilemma.

## Measurements

In order to know the ethical orientation of the students, the deontological and teleological determination of the student's ethical judgment based on the scenario or brief history was first investigated. To the question of how ethical is the narrated case, the respondent answered using one of the seven points of the Likert scale, where one indicates the position of totally unethical, four indicates a neutral position and seven indicates the position of totally ethical .



Subsequently, it was investigated whether it is the ethical judgment or the consequences that weigh more on the intention to reward or punish the character of the story for the act he committed. The prizes and punishments are distributed on a scale of merit ranging from the most valuable prize to the most severe punishment through a neutral point of no action.

To measure the student's tendency in relation to plagiarism and illegal copying, 26 items were included that capture the attitudes of Mexican university students about plagiarism and illicit copying, as well as the reasons why students commit acts such as copying in the exams or plagiarize works of others and present them as own works. The questions were written from a projectionist perspective and not a personal perspective, because the latter can create interpretation problems in ethics studies (Hunt & Vásquez, 1993). The responses to each reagent were measured using the Likert scale of seven points, where one corresponds to strongly disagree and seven corresponds to be totally in agreement.

#### Sampling method and sample characteristics

The sampling method used for this study was non-probabilistic stratified. For this, a university was identified in Mexican territory that had a mixture of administrative careers at the undergraduate and engineering level (undergraduate) and that would have a master's degree (postgraduate). Sampling included all the careers and master's degrees (undergraduate and graduate) existing in said educational institution, choosing a representative quota for each one. The four versions of the questionnaire were administered randomly to the participating students.

The sample used consisted of 245 undergraduate and undergraduate university students. The selected educational institution was a private university located in northeastern Mexico. Thus, among the total of students, 89% were undergraduate students (economic-administrative careers and engineering) and 11% graduate students (Masters in Administration). Demographically, 60% of the participants were women, 92% were single, 93% were between 18 and 29 years old, and 7% were 30 years of age or older.



#### **Analytical methods**

To answer the first two research questions, several correlation analyzes were carried out in order to identify the significant relationships between the explanatory variables of the ethical judgment and the intention to reward or punish. Several multiple linear regression analyzes were also performed with the same purpose. To answer the third research question, factor analyzes were carried out in order to find the latent variables that reflect the reasons why students plagiarize and copy illicitly. Likewise, using the factors obtained and through the use of multiple linear regressions, we could know the added effect that these reasons have both the ethical judgment of the university student and their intention to reward or punish for the act committed.

The ethical orientation of the students was examined through descriptive tables that indicate the way in which the students solve both the situations that involve ethical dilemmas and those that do not. Each participant was exposed and answered a questionnaire only. Each version of the instrument generated a quasi-experimental group of very similar size. The data obtained with the application of the instruments designed for this research were analyzed with the statistical package for the social sciences (SPSS, for its acronym in English) in its version 22 and the AMOS package also in its version 22.

## Results

Table 1 compares the four quasi-experimental groups and indicates the determination of the ethical judgment and the intention to reward or punish for each of the groups.

## Ethical judgment

In Case 1 (first scenario in each questionnaire), the groups that received situations that do not involve ethical dilemmas (versions two and three -see the central columns in table 1-) were more assertive in knowing that the situations presented are ethical (77% -version three-) or non-ethical (79% -version two-); those who erred in their evaluation calling ethical to unethical or unethical to ethical were fewer than 23% of the participants. In contrast, the groups that received situations that involve ethical dilemmas (versions one and four - see the extreme columns in table 1) were much less assertive in knowing that the situations presented are ethical (56% -version four-



) or not ethical (85% -version one-); those who misjudged their ethical or unethical (15%) or unethical (44%) did so due to the effect of positive or negative consequences, respectively.

In Case 2 (second scenario in each questionnaire), the trends are similar, although more pronounced. Those who received cases that do not involve ethical dilemmas were much less mistaken in their ethical judgment (16%), while those who were exposed to ethical dilemmas erred in a greater proportion their ethical judgment; they called ethical the unethical (31%) or unethical to the ethical (18%) due to the effect of the positive or negative consequences, respectively.

	Situación Deon No-É		Situación Deontológicamente Ética		
	Consecuencias Positivas VERSIÓN 1	Consecuencias Negativas VERSIÓN 2	Consecuencias Positivas VERSIÓN 3	Consecuencias Negativas VERSIÓN 4	
Juicio Ético: C	Caso <u>1</u>				
No-Ético	84.5%	78.6%	16.1%	21.1%	
Neutral	6.9%	19.6%	7.1%	22.8%	
Ético	8.6%	1.8%	76.8%	56.1%	
(Total)	100%	100%	100%	100%	
N=227	58	56	56	57	
Juicio Ético: C	Caso 2				
No-Ético	69.1%	83.7%	13%	14.8%	
Neutral	18.2%	12.7%	3.7%	3.7%	
Ético	12.7%	3.6%	83.3%	81.5%	
(Total)	100%	100%	100%	100%	
N=218	55	55	54	54	
Intención: Cas	so <u>1</u>				
Castigo	65.6%	91.1%	21.1%	46.4%	
No Acción	17.2%	7.1%	10.5%	26.8%	
Premio	17.2%	1.8%	68.4%	26.8%	
(Total)	100%	100%	100%	100%	
N=227	58	56	57	56	
Intención: Cas	so 2				
Castigo	54.4%	77.7%	8.9%	20.4%	
No Acción	10.5%	9.3%	8.9%	20.4%	
Premio	35.1%	13%	82.2%	59.2%	
(Total)	100%	100%	100%	100%	
N=221	57	54	56	54	
	Fuente: Elaboración propia				

Tabla 1. Orientación del juicio ético y la intención de premiar o castigar

Fuente: Elaboración propia



In short, when the dilemma involves unethical situations, the positive consequences of the act often cloud the student and make him / her see that the situation (unethical on stage) is ethical for him / her due to the good consequences obtained. Similarly, when the dilemma involves ethical situations, the negative consequences of the act often cloud the student and make him / her see that the situation (ethics on stage) is not ethical for him due to the bad consequences obtained.

#### Intent to reward or punish

The tendencies are more pronounced in the orientation of the intention to reward or punish. In Case 1, the groups that received situations that do not involve ethical dilemmas (versions two and three - see the central columns in table 1) were mostly in agreement that students who violated ethics should be punished (9%), while those who are ethical must be rewarded (68%). Although there was no ethical dilemma, however, there was a significant percentage of responses that miscalculated, as they rewarded unethical behavior (9%) or punished ethical behavior (32%) simply because of the negative or positive consequences of the act, respectively.

For their part, the groups that received situations that involve ethical dilemmas (versions one and four - see the extreme columns in table 1) were much less assertive in their prize allocation. In this respect, 27% of the participants rightly awarded a correct act and 66% punished an incorrect act; however, 73% miscalculated their assignment by punishing a correct act and 34% miscalculated their assignment by rewarding an incorrect act due, in both cases, to the effect of the consequences.

Case 2 repeats the trends: those who face ethical dilemmas (46% rewards an incorrect act and 41% punish a correct act) are far more wrong than those who do not face ethical dilemmas (11% and 18%, respectively) to the effect of positive or negative consequences, respectively.

In summary, when the dilemma involves unethical situations, the positive consequences of the act often cloud the student and make him see that the act should be rewarded simply for its good consequences. Similarly, when the dilemma involves ethical situations, the negative consequences of the act often cloud the student and make him see that the action must be punished because of its bad consequences. While most of the answers are correct, a good number of students misdialed their response due to the weight of the consequences in the act.



Table 2 shows the correlation coefficients between all the variables and the predominant role of deontological evaluation in the orientation of the ethical judgment (R = .726). In the orientation of the intention to reward or punish, however, both the deontological evaluation (R = .532) and the teleological evaluation (R = .294) are significant, even though the first still dominates the second.

	Evaluación	Evaluación	Juicio Ético	Intención	
	Deontológica	Teleológica	Suicio Etico	mencion	
Todos los Alumnos (postgrado y pregrado)					
E. Deontológica	1				
E. Teleológica	.000	1			
Juicio Ético	.726**	.060	1		
Intención	.532**	.294**	.607**	1	
Alumnos de Postgrado					
E. Deontológica	1				
E. Teleológica	.182	1			
Juicio Ético	.738**	.356*	1		
Intención	.654**	.442**	.751**	1	
Alumnos de Carreras Económico-Administrativas					
E. Deontológica	1				
E. Teleológica	048	1			
Juicio Ético	.739**	017	1		
Intención	.549**	.223*	.572**	1	
Alumnos de Carreras de Ingeniería					
E. Deontológica	1	_			
E. Teleológica	.000	1			
Juicio Ético	.792**	.036	1		
Intención	.490**	.321*	.575**	1	

#### Tabla 2. Correlaciones

\*\* La correlación es significante al nivel 0.01.

\*La correlación es significante al nivel 0.05.

Fuente: Elaboración propia

Table 3 and Figure 1 show the regression coefficients of both dependent variables, ethical judgment (R2 = .531) and intention to reward or punish for the act performed (R2 = .435). According to figure 1, the explanation of the ethical judgment is more solid, although it depends almost exclusively on deontological evaluation (R = .726). The explanation of the intention to



reward or punish is less solid and depends on both evaluations, deontological through ethical judgment (R = .607) and teleological (R = .294).

	Model o 1 Juicio Ético <sup>1</sup>	Model o 2 Juicio Ético <sup>1</sup>	Model o 3 Juicio Ético <sup>1</sup>	Model o 4 Juicio Ético <sup>1</sup>	Modelo 1 Intenció n <sup>2</sup>	Modelo 2 Intenció n <sup>2</sup>	Modelo 3 Intenció n <sup>2</sup>	Modelo 4 Intenció n <sup>2</sup>
Todos los Alumnos	.531	.535	.571	.619	.435	.460	.467	.537
Maestría	.595	.607	.812	.958	.599	.658	.778	.925
Económico Administra tivas	.547	.562	.603	.678	.382	.386	.454	.554
Ingeniería	.629	.658	.729	.779	.421	.473	.598	.723

## **Tabla 3.** Determinación del juicio ético $(R^2)$ y la intención $(R^2)$

<sup>1</sup>Significativamente explicado por la condición deontológica solamente.

<sup>2</sup> Significativamente explicado por el juicio ético y la condición teleológica, excepto para Maestría, donde la condición teleológica no es significativa.

Modelo1: Variables Independientes: evaluación deontológica y evaluación teleológica.

*Modelo2:* Variables Independientes: evaluación deontológica, evaluación teleológica, y factores que reflejan actitudes (valor del estudio, manejo del tiempo, imitación, presión laboral, y compañerismo).

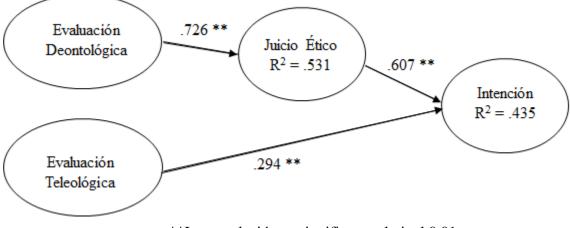
*Modelo3:* Variables Independientes: evaluación deontológica, evaluación teleológica, factores que reflejan actitudes (valor del estudio, manejo del tiempo, imitación, presión laboral, y compañerismo), e interacciones entre evaluación deontológica y evaluación teleológica con los factores que reflejan actitudes.

*Modelo4:* Variables Independientes: evaluación deontológica, evaluación teleológica, factores que reflejan actitudes (valor del estudio, manejo del tiempo, imitación, presión laboral, y compañerismo), interacciones entre evaluación deontológica y evaluación teleológica con los factores que reflejan actitudes, e interacciones entre evaluación deontológica y evaluación teleológica con variables demográficas y socioeconómicas (edad, género, estado civil, ingreso familiar, si profesa o no una religión, si trabaja o no, años que lleva trabajando).

## Fuente: Elaboración propia



Figura 1. Explicación del juicio ético y la intención de premiar o castigar (todos los alumnos)



\*\*La correlación es significante al nivel 0.01.

Fuente: Elaboración propia

These results reveal an interesting reality in the ethical education of students. They have a clear idea about how to reach ethical judgments, but many are confused when they have to make decisions. On the one hand, the vast majority understands the value of morality, they know it, and on the other, many are trapped in the consideration of consequences and do not decide based on the moral value of the actions, but on the positive consequences that they want to achieve or negative they want to avoid.

## Differences between postgraduate and undergraduate students and careers

Both the correlation results and the regression results do not differ significantly between the comparative university careers, that is, economic-administrative careers and engineering careers. Therefore, the ethical orientation of the undergraduate students does not seem to be influenced by the chosen career. On the other hand, there is an important difference between the undergraduate level and the postgraduate level.

Table 2 shows much higher correlation coefficients for postgraduate students than for undergraduate and engineering students according to the evaluation of the orientation of the intention to reward or punish (R = .654 for postgraduate and R = .549 and R = .490 for administration and engineering, respectively). A more salient difference is the role of teleological



evaluation in the intention to reward or punish. The teleological evaluation is significant at .01 for postgraduate students (R = .442), while it is significant only at .05 for undergraduate students (R = .223 and .321, respectively). Similarly, postgraduate students exhibit much higher regression coefficients (see table 3) (R2 = .599) than undergraduate students (R2 = .382 and .421, respectively) in the explanation of the intention to reward or punish, which denotes a more defined ethical orientation due clearly to a more advanced level of education or the existence of some professional work practice.

## Attitudes of the Mexican student regarding plagiarism and illegal copy

To study the student's attitudes regarding plagiarism and illegal copying, 26 reagents were developed that measure the various reasons or reasons that they express as justification for illegally plagiarizing and copying. These motifs are investigated in the literature and documented in Flores and Vásquez (2009). The factorial analysis of the 26 items yielded five factors, each of which offers a common denominator reflected in the name attributed to it: 1) value of the study, 2) time management, 3) imitation, 4) companionship and 5 ) labor pressure (see table 4). The first two factors reflect individual motivations, while the last three express preferences in students' social behavior, which is why they plagiarize or copy illicitly. The five factors explain 54.2% of the variation in the attitudes of Mexican university students and offer levels of reliability (Cronbach's alphas) above the required criterion of .7 (Hair, Black, Babin & Anderson, 2010).



Constructos y Reactivos	Carga del Factor
Valor del Estudio ( $\alpha$ = .892, AVE = 62.445)	
Anteponer las prioridades familiares o de trabajo sobre las escolares incrementa la probabilidad de copiar en los exámenes	.838
Anteponer las prioridades familiares o laborales sobre las escolares incrementan la probabilidad de engaño en las asignaciones	.820
Anteponer las prioridades familiares o laborales sobre las escolares incrementan la probabilidad de plagio en los trabajos	.784
Circunstancias inesperadas que reducen el tiempo de estudio disponible aumentan la probabilidad de copiar en los exámenes	.779
Circunstancias inesperadas que reducen el tiempo disponible del estudiante incrementan la probabilidad de engaño (plagio, copia o ayuda de un tercero) en las asignaciones	.724
Administración del Tiempo ( $\alpha$ = .828, AVE = 49.656)	
Es más probable que los estudiantes hagan trampa en exámenes que llevan a la casa que en otras asignaciones que llevan a la casa	.794
Los estudiantes que no saben administrar su tiempo usualmente no terminan sus tareas a tiempo	.758
Los estudiantes que no saben administrar su tiempo tienden a plagiar (usar las ideas de otros) al escribir sus trabajos	.684
Los estudiantes no denuncian a los que copian porque si lo hacen generarían conflicto o desacuerdo	.647
Los estudiantes que no saben administrar su tiempo tienden a copiar en los exámenes	.626
Imitación ( $\alpha$ = .842, AVE = 64.935)	
Algunos estudiantes copian en los exámenes SOLO PORQUE creen que muchos otros copian a menudo	.893
Algunos estudiantes plagian o copian trabajos SOLO PORQUE creen que muchos otros lo hacen	.784
Algunos estudiantes plagian SOLO PORQUE creen que muchos otros también plagian	.732
<b>Compañerismo</b> ( $\alpha$ = .704, AVE = 77.222) Los estudiantes dejan copiar a sus amigos para evitar que reprueben Los estudiantes dejan copiar a sus amigos en las asignaciones de fuera de clase para evitar que reprueben	.923 .464

Tabla 4. Análisis factorial de las actitudes (motivaciones) de los estudiantes

# Presión Laboral ( $\alpha$ = .815, AVE = 84.431)

.905



Si un estudiante necesita tener un título universitario para obtener una promoción laboral o un incremento salarial es más probable que copie en los exámenes

Si un estudiante necesita tener un título universitario para obtener una promoción laboral o un incremento salarial es más probable que plagie

 $\alpha = Alpha de Cronbach.$ 

AVE = Promedio de Explicación de Varianza.

Fuente: Elaboración propia

Each of the factors was converted into a latent variable in order to know its influence as moderator in the orientation of the ethical judgment and the decision to reward or punish. Table 3 shows the added effect of these factors (see models two, three and four for more details). Model 1 tests the relationships that are plotted in figure 1. Model 2 adds the effect of attitudes (the 5 factors) to the central effect of the deontological and teleological evaluation and results in an increase in the coefficient of explanation (of R2 = .531 to R2 = .535) for all students. Model 3 includes the coefficients of interaction between attitudes and central evaluations and shows an additional increase in the coefficient of explanation (from R2 = .535 to R2 = .571). Model 4 inserts the interaction of seven demographic variables with the central evaluations and shows an additional increase in the coefficient of explanation (from R2 = .571 to R2 = .619). Despite the notable increases obtained with the inclusion of attitudes and demographic variables, the greatest explanatory weight lies in the deontological and teleological evaluations of both the ethical judgment and the intention to reward or punish.

There were also notable differences in attitudes regarding plagiarism and illicit copying between postgraduate and undergraduate students. Table 3 shows the incremental effect of attitudes and demographic characteristics in the explanation of dependent variables. The coefficients of determination of the ethical judgment of the postgraduate students are increased from R2 = .595 to R2 = .958 in the four models analyzed, while in the determination of the ethical judgment of the undergraduate students, these coefficients are lower: they increase only from R2 = .547 to R2 = .779. Similarly, the coefficients of determination of the intention to reward or punish postgraduate students are higher and increase from R2 = .599 to R2 = .925 in the four models analyzed, while the coefficients of undergraduate students they are smaller: they increase only from R2 = .382 to R2 = .723. Clearly, postgraduate students use better defined criteria in the

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formation of their ethical judgment and in the determination of their intention to reward or punish, which denotes the importance of the educational level in the ethical training of the person.

# Conclusions

In response to the first research question and the first objective (to assess the ethical orientation of Mexican university students), the ethical orientation of Mexican students depends on the deontological evaluation in the determination of the ethical judgment and of both evaluations, deontological and teleological , in the determination of the decision to reward or punish the ethical or non-ethical act. This means that students are right in the way of judging ethical acts by using only their moral or deontological value. In other words, Mexican university students do have clear morally correct behaviors regarding plagiarism and illegal copying, therefore, they are aware that plagiarizing and copying illegally is not ethical and is morally incorrect.

However, they follow two paths when making decisions about what to do with ethical acts, such as rewarding or punishing them. This fun of paths, one deontological and another teleological, is particularly noticeable when the student confronts situations involving ethical dilemmas such as, for example, when a morally correct act is punished or when a morally incorrect act is rewarded. The presence of ethical dilemmas confuses students whose ethical background is weak, which is why many of them choose the consequences of the ethical or non-ethical act regardless of their moral nature.

This conclusion has importance in the educational practice that includes the ethical aspect of the person. For students who choose the deontological route to solve ethical problems, an educational reinforcement would suffice, while for students who take the teleological path ignoring the moral character of the act, it would require an ethical training that includes the competent treatment of ethical dilemmas and its adequate solution using moral considerations and not only with reference to the consequences.

In response to the second research question and the second objective (knowing if the ethical orientation of the students differs between the university levels and between university degrees), there is a notable difference between the postgraduate and undergraduate levels. However, there are no such significant differences between economic-administrative careers and engineering.



Postgraduate students are much more solid in the way they form ethical judgment and decide their intention to reward or punish than undergraduate students. This may be because postgraduate students enjoy a more mature state and are in higher stages of moral development than undergraduates (Guzmán, 1989). These differences are accentuated when examining the added effect of students' attitudes on plagiarism and illicit copying in the explanation of ethical judgment and the intention to reward or punish. This is: when considering the five factors discovered that affect the decision making during the ethical trial.

Consequently, it is recommended for undergraduate students a more methodical and practical training through the analysis of cases that present ethical dilemmas and oblige them to use cognitive structures of higher moral levels for their solution, while for postgraduate students only a reinforcement would be enough.

In response to the third research question and the third objective (to know the attitudes of the Mexican student regarding plagiarism and illicit copying during university academic performance), a set of attitudes was explored that resulted in five factors or constructs that reflect two individual motivations and three preferences in the social behavior of students, which is why they plagiarize or copy illicitly. Analyzing these factors and applying Kohlberg's theory, it is concluded that students decide to copy or plagiarize because they are in lower stages of moral development (Guzmán, 1989). In other words, these students are in the stage of orientation to individualism or hedonism and in the stage of orientation towards interpersonal relationships (Barra, 1987), since two of the motivations found have individual orientation (value of the study and administration of the time) and three have collective orientation (imitation, companionship and work pressure).

Finally, these five factors have an influence on the explanation of ethical judgment and the intention to reward or punish, but this influence is limited because the central effects of deontological and teleological evaluations always prevail. Even the addition of demographic characteristics in the explanation of dependent variables (ethical judgment and intention) does not add anything but a reduced effect, which emphasizes the importance of deontological and teleological evaluations in the definition of ethical judgment and the intention to reward or punish an ethical or unethical act.



The normative conclusion is the need to reinforce the ethical education of undergraduate university students, both for Mexican students and for students from any Latin American country, since the different stages of the development of moral judgment are considered universal for all cultures (Guzmán, 1989), through the study and analysis of cases during their academic preparation. These cases must present ethical dilemmas belonging to higher stages of moral development, such as the stage of orientation towards the social contract and the stage of orientation to the universal ethical principle (Barra, 1987). In this way, students will be forced to solve dilemmas using cognitive structures of higher moral levels and will be motivated to move to these stages (Guzmán, 1989). While for the postgraduate students only one reinforcement would be sufficient. This with a view to influencing the ethical behavior of future professionals and political and social leaders of Mexico and the world.

Unfortunately, this does not guarantee that the future reasoning of the student, once immersed in the productive sector, is consistent with the stages of higher moral level due to the presence or generation of new attitudes, motivations and perspectives not considered during his university stage (Carpendale , 2000). In other words, the movement to these stages of higher moral level can only be temporary or partial.

In sum, this research has allowed, although incipiently: 1) to know the ethical orientation of Mexican students, 2) to determine if this ethical orientation differs between graduate and undergraduate levels, as well as between careers and 3) to identify attitudes regarding the plagiarism and illicit copying that Mexican university students have.



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