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Academic papers

Orozco: Civilization and Violence

Lecture at the Autonomous University of Chiapas, Mexico. November 2013

Dr. Eduardo Subirats

About the autor

Research Professor at the New York University
eduardosubirats@msn.com

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The frescoes by José Clemente Orozco unfold within the epic and symbolic tradition of the ancient Mesoamerican murals, frescoes of the church of the colonial era and the European Renaissance frescoes: those "immense fresh, incredible things, as mysterious as the pyramids ... "- how significantly the summary describes in his autobiography. But from his first grotesque caricatures for the magazine El Machete, and from his earliest watercolors of prostitutes and brothels, easel paintings, drawings and especially the murals of Orozco are distinguished by expressionism; radical expressionism.

The concept of Expressionism, which throughout the first half of the twentieth century had assumed a vast program of formal and civilizing time in artistic communities as Die Brücke, Der blaue Reiter or Cobra, has been losing its edge as its forms and formats have been commercialized, trivialized, muesealized. They have finally succumbed to the gestures of a degraded everyday life and a manipulated market.

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Here, I will confine myself to one aspect however this Latin American and European Expressionism: its mythological roots. No one has shown this poetic openness to knowledge and mythological recognition of people as Thomas Mann and Karl Kerenyi in his correspondence during the years of the European war. A dialogue that was also present in Carl Gustav Jung and his theory of symbolic and mythological unconscious repressed in modern humans. Aesthetic theory, this correspondence outlines, is based on the ontological, historical and existential reality of myth. To this is added their psychological dimensions, and their shapes and Narrative Language. This was the poetry that Thomas Mann defined programmatically. And that was one of the most profound tendencies of twentieth-century Expressionism, as in Kafka, in Wifredo Lam, in Beckmann and in that of Roa Bastos.

Literary and artistic experience of a mythological reality is not exactly alien to the cultures of Latin America, immersed in the language and the memories of their ancient cultures, both Amerindian and African and Eastern despite five centuries of violent Christianization. They can be found in the work of Mario de Andrade, who restored the cultural rights of Amerindian trickster par excellence, Makunaima. We also have them in Tlalocán goddesses that populate the basement of Comala, the novel

Pedro Páramo by Juan Rulfo. The myth as reality, at the same time religious and aesthetic, is located in the center of the prose of José María Arguedas. It is also an illuminating means and expression of a psychological, historical and cosmic consciousness that is also an essential feature of the expressionism of Orozco. The myth of Zapata, the murderous power of Hernan Cortes and Carlos V, the myth of dictators and demagogues, or savior Franciscan souls come together extensively in his frescoes. But Orozco particularly addresses three myths that deserve special attention: Quetzalcoatl, Prometheus and Christ.

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On three occasions Orozco used the myth of Christ in his murals and oil paintings. The first, at the National Preparatory School. It was destroyed. It was represented the second time in Dartmouth College. The iconographic theme was always the same. A desperate Jesus, stripped of all human or even divine dignity. Lost in a narrow and desolate space. The emaciated Jesus that , in his last luminous gesture, destroys by ax blows the cross on which he was nailed against an ecclesiastical institution of global power. In *Epics of the American Civilization*, this enlightening rejection of sacrifice is silhouetted against a dark pyramid of guns and swords. It is the human sacrifice imposed by conquest, wars and modern demagoguery. This theme was reiterated later in 1943, in a painting titled *Christ destroying his cross*. It is a humanized but consumed Jesus. This time with the aura of his holiness. But it is not a crucified Christ. It is an un heroic and un divine Jesus. Jesus against Christ. The human humanized that rebels against sacrifice and the divineness of the Cross.

The second myth, that of Prometheus, runs a more complex story. In *The House of Tiles* in Mexico City, where Orozco could paint after *Omniscience* after the Mexican state closed off access to all public spaces, Prometheus is just an allegorical symbol. It is a flame that divine hands deposit on a human hand on the top strip of the mural. In this representation, the Oriental myth of Prometheus may also be associated with its main theme: the birth of the first man and the first woman, also with attributes of the Titan and god. This theme now has a current and specific connotation: the Promethean creation of the new man, under the principle of "omniscience" as ultimate goal of the Mexican Revolution.

Prometheus was the myth that Orozco also elected at Pomona College. There it served as the architectural pointed arch to fit its figure

in such as way so that it accentuates its triangular structure. The figure of Prometheus occupies the central axis of the Gothic pointed arch. The visual impression that the arch would collapse if his Prometheus was not holding the Atlas increases its symbolic role as *axis mundi*. This Prometheus is unmistakably a god. In his environment a human mass exalts him in an upward rhythm. But in an adjoining scene, another mass sinks into despair. The body power of the god directed strongly upward, against the angle of the arch. A powerful oblique line force goes through the composition dramatically dividing the fans of the god, from the sunken mass and desperate under the civilizing power that it represents. All around, a firmament in flames.

The vision of Prometheus of Pomona is, to some extent, affirmative. It could even be called exalted. Its centrality and its corporeality leaves no doubt: he is a hero, a titan. And, I repeat, a god. Everything seems promising and positive in the composition. At least at first glance. Undoubtedly the sky in flames immediately awakes apocalyptic associations, illuminated with a hellish group of convicts to the left of the Titan.

In the dome of the *Hospicio Cabañas,* Prometheus reappears for the third time. In the Corona dome in which the drum is represented the *techani* that Esquilo attributed to the cultural Greek hero: agriculture, architecture, sculpture and theater, navigation, blacksmithing and engineering ... to those that Orozco added some of the Contemporary arts, like typography, aeronautics, and even a "arts integration", in addition to representing painting in general and in particular murals as one more of these promethean artworks-but now it was no longer called Prometheus. It is The Fire Man, or simply, The Man. And it isn't, in effect, a titan. Much less a god. This "man" burning in the flames of its own civilizing fire that one day Prometheus snatched from Zeus is not really Prometheus, but a descendant of the civilizing principle he represents. It is us.

The inherent philosophical reflection of this treatment of the myth of Prometheus by Orozco is transparent- A negative view of industrial civilization, that same civilization whose political leaders, including Benjamin Franklin, were defined precisely as Promethean. It is the representation of such Promethean civilization in flames and its mythological principle, the Titan or their human descendants, burning in them. Nor is there a need for any further explanation.

A common theme is reiterated in the representation of Prometheus in *Pomona* and the Hospicio Cabañas: in both frescos his figure is confronted expressionistically with the limits of the representation. Limits that in Pomona is a Gothic arch, and in the church of Guadalajara, a Baroque dome. In the first fresco Prometheus looks like he is holding his arms in surrounding architectural arch that circles his figure, and thus the architecture of civilization is founded in the mythological fire. In Guadalajara, the same Prometheus rises in the dynamic and infinite universe in the dome. Only now it is a universe ablaze, in wich the flames consume the limbs and the whole body of the Titan. His own head disappears into the universal fire.

The Cabanas frescos were performed between 1937 and 1939. During the following years, Orozco tried several times to present the myth of Prometheus in sketches and oil paintings. One of them is in the Carrillo Gil Museum. It is an oil on canvas 73 x 92 cm, dated in 1944. His motive:.. Prometheus fleeing amidst a desolate landscape of dark shades. Behind him, two humans, also naked, depart Titan with a look of horror. His head and arms are wrapped in flames, while one leg is bent in his flight from his own fire.

The tragic conflict of Prometheus is no longer proposed by Orozco in terms of redress and vengeance of Zeus raised by the Promethean rejection of sacrifice to the lord of Olympus and their scheme to recover the fire hiding in a cane. Orozco also doesn't criticize the tyrannical and violent punishment imposed by the Olympic corporation to regain the sacred fire. In this respect he departs from the two central features of the myth in versions of Hesiod and Aeschylus. It does not represent the god Prometheus as the founder of human civilization, but as a negative god who presides over the end of the industrial and capitalist revolution. From the beginning, from the celestial fire deposited in the earthly hand in the *The House of Tiles*, through its representation at Pomona College, the Titan possesses divine powers. Moreover, his place is instead mistaken for Zeus, who Orozco removed from his first sketches for the fresco of Pomona. In 1939, during the World War, this Prometheus was elevated to the zenith of the dome of the Basilica of Cabanas burning in the same fire that had risen to the civilizing hero. A prophetic vision called to be realized on the sacrificial ashes of Hiroshima and Nagasaki a few years later.

Other aspects can be highlighted in the Cabana Prometheus . Alma Reed, an admirer, biographer and Orozco dealer, described the climactic scene of his work as an ascension ritual , as a spiritual journey of mystical

transformation "Man enslaved by his fears or fearlessly treading the skies in ethereal release. Man in his solid clinging to the earth; man consumed in the flames of his creative energy. But always… man standing naked and alone, pitted against the immense nature of which he is also a part… He shapes and directs the Forces, his ancient allies, to his will to gain mastery of the planet. In turn, he is molded, mastered, and destroyed by them. The Man of Fire would be associated with the purification and transformation of human existence. His ultimate goal would be individual perfection, no atonement, suffering and self-immolation. The center of this development is the myth of the Promethean fire and light as purifying energies. It is the transcendence of the civilizing subject of mystic exaltation of its subjective spirit , before its irreversible historic end.

This is the ultimate meaning of the immersion of the expressionist art in the world of myth: the myth as archaic and enlightening memory of our being in the world; Mythological fire like a religious experience of our historical and human condition.

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The third great myth that Orozco stated in his frescosis that of Quetzalcoatl, the Mesoamerican feathered serpent god, representing the union of material and fruitful life on earth, and the spiritual cosmos of heaven and light.

Like Prometheus, Quetzalcoatl is linked to the Great Mother, or more specifically to *Coatlicue,* goddess of the underworld which regulates the cycles of preservation of life. Like Prometheus, he is a god, a mediator between the celestial and the earthly world. Like Prometheus he opposes sacrifice. And like Prometheus, it is the creator god of the humans and the arts that gave birth to civilization. Under his reign temples were built, fields were planted, people worked and rested, and civilization arose. Also as Prometheus, Quetzalcoatl is endowed with a prophetic vision of the future, connected to the light and enlightenment.

In the series of thirteen Orozco painted panels on the Baker Library in Dartmouth College in Hannover, entitled *Epics of the American Civilization*, four are dedicated to Quetzalcoatl as a cultural hero and prophet. The fourth of these panels represents his prophecy. This Quetzalcoatl Orozco is a luminous god. The features of his face are severe but kind and glowing. He wears a white robe. These are all attributes that bear a resemblance

to the functions of the Greek Zeus and Renaissance depictions of the Christian God.

It is important to remember in this context the falsification or colonial hybridization of Quetzalcoatl hybridization introduced by the first Franciscan missionaries. A transculturation whose power has been maintained for at least until the same Mexican Labyrinth of Solitude of Octavio Paz. According to these versions, the Aztecs saw in the Spanish conquistador the return of Quetzalcoatl Christianized as messiah, through whose mere contact the cultures of Mesoamerica and the whole American continent would have disappeared as possessed by a mysterious force of self-dissolution. Under this unlikely identification of Quetzalcoatl with the Conqueror and the Crusade the myth has served to represent the genocide under the Spanish crown as a collective suicide or a supernatural disappearance, and be redressed as the process of colonial dispossession, destruction and decay with providential signs of liberation theology.

But in the Baker Library Orozco put this mythological version of Christian monks on their feet. In the third scene, Quetzalcoatl, after creating the splendid civilization of Tolán, has to leave his kingdom which has fallen prey to the forces of darkness and evil, represented in a cool dark mass of people with hostile gestures. In the next panel, the god delivers his prophecy. But that omen is not linked to his own return, but rather to the arrival of foreigners, called to spread destruction and death under the sign of a black sacrificial cross, with the lower end converging on the conqueror's sword next to a pile of corpses . Quetzalcoatl announces the arrival of the new kingdom of the Sword and the Cross. But he not only anticipated this threat. The horizontal line in his arm, hand and finger traces the temporal continuity that begins with the genocidal cross and through the armor of Cortez just to finish in the following pane, in the modern military mega-machine: a futuristic constructivism tubes, gears , plates, wheels and chains of blatant aggression.

The message cannot be clearer. Orozco draws an expressionist epic history as linear progress of destruction and dehumanization continued over time. It is an epic that reverses the enlightened philosophies of the eighteenth and nineteenth catechisms positivists who announced a progress originated in a wild and violent humanity that would ascend gradually to more elaborate and less destructive ways of civilization. The epic of "American civilization" begins, however, with human sacrifice staged by masked Mesoamerican priests. It ends with the sacrifice of a modern soldier fallen under the fanfare of industrial war. Orozco's

vision is daunting, but truthfully contemporary. In *Epics of the American Civilization* only the visionary and enlightening gesture of Quetzalcoatl pointing in the direction of the ending against the dark mass of humans being dismissed, and only the angry gesture of a Jesus who destroys his cross may suggest hope. The final scene of a dark mass of workers lifting the steel frame of a skyscraper is a squalid citation of industrial development presided by the impressive panel chaired by a lethal science: *Gods of the modern world.* An assembly of professors, in reality robed skeletons, preside over the birth of a child , dead in the womb of its own cadaveric mother, lying sprawled on a bed of books and instruments of modern science.

We do not forget the small panel that crowns one of the doors of the library, which leads to the basement. Clearly a secondary entrance or exit. In this panel we find precisely the representation of a human figure, a half naked body emerging from a pile of mechanical junk under "Liberation of man of the mechanized life to the creative life." A principle of hope taken through the back door. No need for further comment.

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The machine, the power of industrial machines and the destructive force of military machines are another civilizational myths Orozco made in his frescoes. The Dartmouth panel entitled precisely "The Machine" can be cited as examples. It is an industrial press, comparable with the press of Ford industrial complex in Detroit that Rivera painted in the guise of the goddess Coatlicue. Groups of pipes rise like towers and the figures have some poise precisely of archaic gods. But neither the space nor the drawing, or composition, or color speak the same language ornamental of Rivera. We found a rather ascetic gesture, with dark colors and shades, and severe strokes and a civilizational catastrophe.

Those machines acquire their most formidable expression in an emblematic work of Orozco: *Catharsis* at the National Palace of Fine Arts, painted in the same year of 1934 that he ended the Dartmouth College frescoes. The machines are here, without a doubt, the star of a new historical drama, like the machines of the story of Rivera's *Man at the Crossroads* , which now occupies the opposite wall of Catharsis in the same National Palace. Machines also take center of the Orozco mural, between the bodies of the prostitutes of the lower third and the sprawled bodies and human caught between the irons. The historical view of this mural is transparent and does not require further comment:

the machine, or perhaps we should speak here again of the mega-machine, the category that his friend and admirer Lewis Mumford invented, is clearly overwhelming and destructive.

In the murals of the *Hospicio Cabañas,* painted three years later, we can say that this power of steel fills the entire basilica with color and cold textures. Machines and armor of the colonial war and the machines of modern warfare, military parading masses and large machine-masses under the control of tyrants and demagogues, and the industrial blue that covers all of the frescos have an emotional effect and are threatening to the viewer. Moreover, both in Dartmouth as in *Cabañas* Orozco draws attention to the continuity of form and color between the symbols of the Christian Empire machines of yesterday and the industrial imperialism of today. The sword wielding Cortés in his panel is as sharp and cutting as flags flanking the geometrically uniform mass in a march that may be either civil or military. In the frescoes of the other, the ships of the temple. Cool colors and aggressive forms recur in representations of the arts or Promethean *technai* around the drum of the dome. And they give an ambiguous meaning, at the same time creative instruments of civilization, just as in architecture and painting itself, and arms of a civilization of violence.

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The woman and the lost object

Dr. Antonio Ruiz Durán

About the autor

Autonomous University of Chiapas
Study Centre for Art and Culture
duran_ru@hotmail.com

Abstract

La forma actual de medir la concentración de población se basa This article pursues, according to the French psychoanalyst Jacques Lacan, an approach to the impossible place that the woman occupies from the perspective of man, ,in his condition as an Individual in need who wants to fill a void. The impulse of death is insistent in its significance to fill it. Life piles up around death. It accumulates there to impede the void. There is no desire of death; Because the desire emerges from the existence of Death. When the primordial Word emerges, something is lost in reality, if there was not the absence of the Object , That which glows in the fetish or in the loved woman, there wouldn't be deaths impulse. The woman replaces the lost Object; where death displays, the illusion of life appears. The woman is that illusion as well: the creation, the effect of the essential fiction, the image of plenitude. Man can do nothing but stalk her. In her, men also look for the Grail and El Dorado.

To Carmen de la Mora

Jacques Lacan's theory states that the subject emerges as the Word, the subject is born and something is lost in the real. Desire aspires to achieve that escaped object[1], which has left an emptiness in the heart of being. Satisfying this longing is impossible; however, it is supposed that it is necessary for the illusory reality that envisions illusory matrixes. Morelli, the character in Julio Cortázar's novel *Hopscotch* (1985: 72) observes that "you can kill everything but the nostalgia of the kingdom, which we carry it in the color of the eyes, in every love, in every deepness that unfastens, deceives and disappoints. "

The primary word (the meaning) pierces the real and causes the constitutive defense of human beings. In this emptiness, the image of plenitude that is no longer there. The drive of death comes about when the Thing is shown and disappears at the same time. The drive of death borders this hole, surrounds it, what does it have to fill? Deceptively fills with worldly things. It is necessary to sustain a mirage that sustains the desire in the absence of the Thing, of the hole that is not supported. The death drive is the significant insistence to fill that void, that hole.

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[1] The Seminar 4 mainly, Lacan (2004) discusses the issue of object relations and its place in the analytical theory.

The drive of life is after the drive of death; this makes the world fall in love. Life piles up around death. It accumulates there to prevent a vacuum. There is no desire for death; desire emerges from the existence of death. If there were no Object (that absence shining in the fetish or beloved woman), there would not be the drive of death. There is no desire for truth. Desire goes to the Thing. The truth is impossible; the thing is impossible; the woman is impossible.

The woman comes to take the place of the lost object. Where death unfolds the illusion of life appears. She is also the illusion: the creation, the fundamental effect of fiction, the image of plenitud. Man can only pursue it. In it, men also seek the Grail and El Dorado. This illusion of the absolute seen in a popular song: "Thinking I would get to love you / is to believe that death could be avoided," or as Fausto says to the ghost of Helena: "Sweet Helen, make me immortal with a kiss". In the novel *When Nietzsche Wept*, Irvin Yalom (1999:298), the philosopher tells his interlocutor:

> "Josef [...] his relationship with Bertha is unreal, an illusion woven with images and desires that have nothing to do with the real Bertha [...]. Your fantasy about Bertha protects the future of the terrors of old age, death of forgetfullness. Today I realize that his concept of Bertha is also contaminated by ghosts of the past. [...]. Bertha is not real. It's just a ghost that reaches both the future and the past."

What man lies behind the figure of the woman? The dragon and the disturbing question: "what do you want from me?" is the question of Beelzebub. The interpellation potentiates its diabolical dimension in the mother in laws mouth: "What are your intentions with my daughter?" The father does not enter because he knows what it is about.

Alvaro, a character in the novel *The Devil in Love* by Cazotte Jacques (2003: 13 and 78) invokes the devil. It appears to him with the question: *Che vuoi?*[2] Satan will love him with a figure, strategies and female name (Biondeta). Alvaro, when he has fallen into the trap of love, tells his seductress, "Oh my dear Biondetta [...] you are all I need: you satisfy the desires of my heart ," it says, "That is not my name [...] I am the Devil, Álvaro my dear, I'm the devil [...]. Your species avoids the truth, the only way to make them happy is by blinding them. "

[2] "What do I want?" (Translation of Carmen de la Mora).

The woman produces in man taste and shock, horror and rapture, because it confronts him with the truth. The truth produces fear. Friedrich Nietzsche, a character from the novel by Irving D. Djalon, noted that the real question of the thinker is: "How much truth can you tolerate"; This question corresponds to the statement by the philosopher in his *Ecce Homo:*

> "How much truth is supported, how much truth is born in spirit. [...]. Every conquest, every step forward in knowledge is the result of courage, of the toughness of oneself, of the cleaning of oneself. [...] So far the only thing that has ever been banned in principle has been the truth. (1992: 56)."

The woman is a carrier of the hole, the total absence, and represents death with what's so wonderful, sinister and promising (Bliss and more). Many men walk towards the lure, captivated by the image of women. The black hair of Mary The Bandit, character in a popular Mexican song-"reflects death and on her red lips is a lie."

The woman may be an illusory object, and also represent the impossible object. The imaginary statue of the beloved is seen, for example, in Novel like a cloud by Gilberto Owen (1996: 757); here one reads: "Oh, elusive Elena , I have always loved you as an image [...]. Women, especially, we were never delivered, they never give us more than a cloud with her figure. " The narrator of the story "Ulrica" by Jorge Luis Borges (2008: 104-108) also highlights this aspect imaginary "Ulrica was already undressed. He called me by my real name, Javier. [...]. There was not a sword between them. Like sand time flowed. Secular in the shadow flowed love and possessed for the first and last time the image of Ulrica ".

The lover sees the beloved as unwatchable, a mystery beyond what he understands is presented to him, as can be seen in "Cities", the song by Jose Alfredo Jimenez: "I saw you arrive / and felt the presence of an unknown being ; / I saw you coming / and felt what I have never felt. " The lure is overwhelming.

Man wants to reach the truth. Every woman is for him a fragment of truth. You may want to love many at the same time because the whole truth is not in any of them. The woman is no longer a true woman.

For a woman a man is the lieutenant of the symbolic father. All are equivalent. When it states "all men are equal," he says, perhaps without knowing it, a profound truth. They even prefer a sure thing to an unstable love. Youth is true after listening to this song, "Some days ago I lost / in

some cantina / half my life /tip plus fifteen / Not that it is alcohol / the best medicine / but it helps to forget / when you do not see the exit. / Today the good memories / fall down the stairs / and after several tequilas / clouds go but the sun does not return [...] said, "My God, I just pray to forget, not to come back because I have a life,only I ask to forget. "

The woman is a manifestation of truth in two forms: Mother and Virgin. The first is a mother without children, and the primary object of all desire. The second is the untouched, pristine, perfect object, symbol of plenitude, you do not need a man, is Mother and Virgin. The untouched woman is the one which attracts more, which everyone wants, like in brothels because it prefigures the longed for plenitude.

How goes the man behind the woman? As a pervert after the fetish. Feelings arise later, going after a lure that fires his drive and holding his desire. The drive is, as a poem by José Martínez Torres (2005: 3) says, "an arrow in the air looking for an object / a mystery in the forest; / [...] That is brewing new and interweaves; / [...] Greed and lust / asp and honey / [...] happiness and unhappiness / again and again. "

In *The Balcony*, the drama by Jean Genet (2007: 59-60), the prostitute Carmen calls the brothel "a house of illusions" and referring to the owner's relationship with customers, says: "You have your feet on the ground. The best proof is that you charge. For them ... The awakening has to be brutal. It is hardly finished, when it is time to start again. " The drive provoked by hook is plastic: swinging, a repetitive requirement. The pleasure experienced in the body as an emotion, it turns on and off.

The woman is the subject but also object, subject to both the drive and absolute. Essentially it does not exist, it is created as the truth. Truth and women have a fictional structure as seen in the story "The Parable of Barter" by Juan Jose Arreola (2006: 153-156). The men, deceived by a merchant, exchange their women of flesh and bone for others made of tinsel. There was one who did not, the character-narrator, whose situation of distance from his wife did not improve. It concludes: "We are now in a real island, surrounded by solitude everywhere." There, in that story, the gap between men and women is essential, unbridgeable.

The man gives the woman the signifier (the word) under a form of promise. The task of man is to make promises and then flee. Man, as a representative of the symbolic father, will satisfy women's hopes with the promise, it is at this level where he serves. Like Don Juan, the man does not betray women. The woman, taking the place as the Thing, will enjoy the symbolic father incarnate in man. If women go from frustration

to frustration over what they expect of man, it is because it has a monogamous ideal and, based on that ideal,require exclusivity from the man. Man takes a paradoxical attitude towards the woman: he liesto her so she does not go, he lies to keep her.

In the story "*History of Rosendo Juárez*" by Jorge Luis Borges (2005: 36), Luis Irala Rosendo confesses to his friend who has decided to challenge to the death the man with whom his wife left him for; he replies: "No one takes nothing from nobody. If Casilda has left you, it's because she wants Rufino and you do not matter. " This phrase fits the female structure that, unlike Don Juan, usually loves only one. For the man every woman is unique, embodies the difference, is a fragment of truth, and for this reason is needed one or another.

For the woman one man is enough. His position is different because it can only she can be in the place of the Thing and in the place of the hook. This is what causes the man's gaze and when he comes, he says, "You're wrong". The woman plays hide and seek, to be and not to be the object.

Hysterical, however, to be unable to be symbolized as an object of symbolic exchange, she is considered an imaginary and real object, object of sale and consumption, she feels used. When symptoms are increased, the hysterical makes the law with her body. The symptom appears in her own body. It is subject that does not take the place of women- much less that she is a woman (what she only knows in the plane of consciousness).

She also assumes her wholeness. One day, a girl was talking to her friend:

-I have separated from my husband. The fool did not appreciate what I gave him.

- What did you give?

- Everything.

-It can't be.

- What can't it be?

-That you have given everything.
'Well, I gave everything.

- What is everything?

-Everything is everything.

-You only say nonsense.

-And you do not understand a fuck.

The woman believes she gives everything because it is the symbolized phallus; she is everything and every man is the same.

She emphasizes the sound image of the signifier. It is feminine because it is related to the word. The word, linking the truth, can reveal it. Every subject has to confront the truth. The woman on the one hand is confronted with the truth. On the other hand, it is. The woman is not to be understood but to be heard. In daily life, women talk more than men, sometimes at the level of burden.

The woman is not what completes the man. Man and woman are different paths. Everyone carries their own loneliness. No splicing concurs, there is no better half. There is only the uniting of the hysterical and obsessional, They could say with Heinrich Heine: "When we are in the mud / we immediately understood." Love is powerless, even if it is reciprocal, because it ignores that is is no more than the desire to be One with the absolute Object, the Thing, with the impossible, or as Jacques Lacan said (2008: 61): "Love, if it is true that it is related to the One, never takes anyone for itself. "

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Alternatives and Reasons for using free software acquisition in the teaching practice of engineering

Aquino Robles, José Antonio[1][2][3], Corona R., Leonel G.[2]
Trujillo Caballero Juan Carlos[4]

About the Autors

1 .Departament d 'Engenyeria Elèctrica, Universitat
Politècnica de Catalunya, jaquinor@ipn.mx

2. Academia Mechatronics, Interdisciplinary Professional
Unit of Engineering and Advanced Technology

3. Fellow of the Carolina Foundation, Research Institute of
Electrical COTEBAL IIE and IPN

4. Department of Electrical Engineering, Instituto
Tecnológico de Orizaba, Mexico

Abstract

We are currently living during an educational modernization, which is reflected in the Vanguard Educational Models. Higher Education Institutions (HEI) propose a massive incorporation of Information Technology and Communication (ICT). They are intended to be used in all degree programs and especially in the classroom teaching. For this reason this proposal outlines and describes alternatives and reasons for using freely distributed and acquired software available for use in teaching and promotion of learning engineering in Mexico.

Based on the requirement of not only encouraging the widespread use of ICT, but also do so ethically and honestly in the teaching practice. It has been decided to promote the use of such tools. Considering the cost factor of proprietary software, if you do not have the financial resources it becomes difficult to legally acquire and thus motivates practices that contradict the ethical codes of professional performance.

Keywords: Free Software, Open Source Software, Teaching, Learning, Engineering.

Introduction

There exists within institutional initiatives an educational model of the National Polytechnic Institute which incorporates Informatics and Communication Technologies (ICT) in academic work in all levels of the institution's technologies, promoting the use of software in the classroom and teaching support, resulting in significant learning in students. With respect to the proposed educational model (ME) of the National Polytechnic Institute, it is noted that the IPN should be distinguished because their services are of the highest quality and meet the challenge of creating more educational opportunities for young people, focusing in six key objectives:

1. Centered Learning.
2. Flexibility and focus on the student
3. Integration of scientific, technological and humanistic
4. Internationalization and Multiculturalism
5. Autonomy of learning
6. Renewed conception of the link between the theoretical and the practical

Development

Focusing on ICT in the field of teaching, the use of software is becoming increasingly widespread. In the universities, and in particular in the subjects of engineering science and applied technology taught in the engineering curriculum, programs are frequently used that perform various calculations and represent functions. However, prices for licenses to use these these tools may limit its use in institutions and more so in the pupils. (A New Educational Model for IPN 2003)

Free software acquisition has claimed great importance at this time and more and more people using it. A few years ago perhaps this type of software was limited to computer fans. Today many have heard of or even used programs like *Firefox* or *Opera* web browsers etc. According to the definition presented by Rodriguez RM 2011.; a program is free software if the user has the following freedoms or rights:

1. The freedom to run the program, for any purpose.
2. The freedom to study the way the program works, and adapt it to your needs
3. The freedom to redistribute copies.
4. The freedom to improve the program and release the improvements to others, so that all the user community benefits.

There are several licenses that ensure the distribution of free software programs are maintained as such, the most common being the GPL. A program which licenses restrict the right to study, modify or redistribute the program are called proprietary software, the latter being by definition one in which a user has limited their ability to use, modify or redistribute it, and most of the time the license has a cost (RM Stallman. 2004).

As the ME of the IPN already mentioned, there is a call for new tools to achieve the six objectives listed above and for the use of different free software packages which allow the realization of these objectives in a simple, ethical and economical way for students and institutions. In this context the use of Free Software Applications, Software acquisition and free open source programs can decisively assist the pedagogical renewal that is included in the adaptation to the six key objectives listed above. Students will have available (for free and from home) the same tools as the teacher. This will make it much easier to engage in an active and creative (which is nothing little) teaching-learning subject process. And if at the same time we consider within a holistic focus, and thus integral in every respect, that as teachers not only convey scientific knowledge, technological skills and

knowledge, but also take care to carry out ethical and honesty-teaching practices. In this respect we would not only teach the students to work ethically in theory, but also in practice.

Atributes

With respect to the former considering the use of free software, additional features should also be mentioned:

Economic attributes Proprietary software tools or licenses must be purchased for use. For example, many college teachers use mathematical software for symbolic calculus (CAS) which needless to say are worth mentioning for the purpose of this investigation. These programs have a cost, and it is unlikely that a college or high school student can afford to pay for them if they intend to work with them at home. Recalling the saying that sums up the GNU ethics: "Free software is a matter of liberty, not price" (L. Bayon, JM Grau, JA Otero, MM Ruiz, PM Suárez 2011).

Legal attributes. A prerogative to use free software acquisition in teaching, is that we can legally distribute copies of the program to students. Using free programs aviods having to work with illegal copies. The free program license quintessentially authorizes us free distribution "If you employ software without autonomy to distribute copies, sooner or later you will be faced with a moral bind when a comrade tells you: The program that you have would be helpful to me. Can you give me a copy? "(Ibid).

Scientists attribute. A strong correlation between the use of free software and the Scientific Method is perceived. Indeed, in science the review of results is essential by other scientists thereby giving new results. Essentially the same is true in the world of free software. One can take the program from another user, change it, renew it, improve it, optimize it, and also use it as a basis to expand a new program or other application.

Training Features. When students are trained with specific bases in certain specific programs, there is a downside where the programs with the passage of time become archaic since they are constantly being upgraded. In addition, training students with this type of software is independent of a particular technology. The aim, therefore, is training based on fundamentals and not applications.

Philosophical attributes. If we start with the foundation that engineering education is not only to transfer a series of knowledge and technical skills or practices, but also seek to move positive social values, it is clear that the use of such software contributes to this purpose. Using free software programs in the classroom promotes values such as equality of opportunity, freedom, knowledge sharing, creativity, solidarity, and respect for the law. "A program that is free software may not perhaps be technically superior, but it will always be ethically superior "(Ibid).

It is crucial to understand that the concept of free software is not just talking about free software: free software can be sold if desired (and often there is someone interested in paying for it). In this sense, free software can also become "commercial software" and, in fact, part of the business model of some companies (eg, distribution of GNU / Linux like RedHat or SuSE) focuses on the sale of free software . Although those who purchase software should be aware that (due to the third freedom) they may redistribute it when they want and as they want, for example without asking for money in return without someone's permission.

It is also useful to distinguish free software from other concepts such as freeware (free software, but without freedom of study or modification) or shareware (software that can be evaluated for free but for a while to use or has limited features). On a practical level, we associate the concept of free software to "open source software" or "open source" (open source), since the only distinction is the approach that those who use it want to convey, which is much more pragmatic.

From the point of view of Ethics

In accordance to the dictionary of the Royal Academy of the Spanish language, Ethics is:

- The segment of philosophy concerning morality and the duties of man.

- The set of moral standards that protect human behavior.

It should be considered that ethics is the discipline that deals with the moral assessment of human acts, in addition to a set of moral principles and rules that governing human activities.

Ethics provides the theoretical and practical to use freedom well. According to Quispe-Otazu (2007) "No one can live well with only desire." We need to be clear about what it is to live well and then implement it. Good intentions are not enough.

Ethics is not to tastes, opinions or desires. It is not the same to behave the same in one way or another. It is an important part of the life of a man. Therefore, ethics is involved in the various issues affecting each of the human professions.

Hence, there is great importance to defining rules of behavior that guide correct actions.

Moreover computing is currently one of the areas of greatest cultural influence to such a degree that it has achieved to some extent influence our behaviors and the way we feel a part of society.

In this vein, and in context with the subject we can say that part of the problems linked to information and communication technologies can be due to:

- Internet Fraud.

- The problem of software and intellectual property: illegal copies of software, software failures.

- Data storage and invasion of privacy.

Piracy is best defined in the context as the sale and distribution of illegal copies of software. It is an evil that afflicts the global economy severely. Unfortunately this phenomenon is deeply rooted in developing economies, where there are cultural, legislative and economic factors that prevent this from happening. According to the Business Software Alliance (BSA by its acronym in English), the global average of pirated software installed in 2003 was 36%, representing a loss of $ 29 billion for the information technology industry. This rate is even higher in developing economies (Rodriguez AG, Glass Baron SB 2005).

Normally efforts around combating piracy focused on the formation of robust laws for the protection of intellectual work, as well as the development and implementation of mechanisms to ensure compliance. Additionally the most active agencies in the fight against piracy, such as BSA, have unions that are formed by the same companies that develop commercial software, who do not consider the promotion of free

software as a viable option. Occasionally, some marketing efforts focus on promoting ethical values, but is contrary to the expectations and give opposite results (ibid.)

It can , in a sense, be argued that the main reasons for piracy are those related to socio-economic factors of the regions. The lack of purchasing power, as well as having the need to remain competitive, prompts people to change their moral standards to justify a practice that is incorrect. Piracy campaigns have little effectiveness for its punitive nature, rather it is preventative. Note that for an effective campaign, one must not attack the causes and consequences of the problem. Thus, efforts for a more proactive and appropriate approach should focus on creating an entire organizational culture in schools, which mainly relate to us as engineering teachers. Generating schemes to make applications more accessible to end users, as well as the strengthening of values, are things that our country sorely needs. Among these values we can offer alternatives that during the early years and the first courses free software procurement, distribution, and use is encouraged, seeking indirectly to impact companies that sell proprietary software at lower prices to the general public. This creates fair competition and of course these facts occur in a market that will remain dominated by the law of supply and demand.

Sometimes due to the lack of indications by the coordination of courses in some schools, teachers do not change the tools that have been using since they graduated university. So sometimes they are "married to" or enchanted by a trademark of a particular software and hardly opt for something that is freely distributed unless there is carried out a reform to amend this act- software available to all students. Including the use of free software in plans and curricula would help a lot for this purpose.

In addition, you must provide the means necessary for centers of investigation, but even more to the centers of technological development which within its purposes are the development of free software. In this way to some extent the problem of illegal copies will be resolved and every nation that drives these initiatives will in some way be dependent on others regarding their IT development and at the same time cease to be identified as a country where corruption and impunity prevails in these crimes.

Similarly, in the creation and / or renovation of the plans and programs of study in engineering, the inclusion of subjects made expressly for a particular use of proprietary software should be avoided as far as possible, which happened in the past since the existence of freely

distributed software packages was null and even the variety of proprietary software for a specific topic in engineering practice was very limited. But now, except for some very specific activities, there are various free and commercial programs for teaching different engineering topics.

For these facts and to help find alternatives for engineering education using computer packages within everyone's reach, within the next segment free software will be presented with a short description of its origin and use according to their specific purposes.

Some alternatives

Software for free distribution in engineering education.

wxMaxima

According to Rodríguez Galván (2007), Maxima is a program whose purpose is to carry out both symbolic and numeric mathematical calculations. It is able to manipulate and matrix algebraic expressions, derived and integrated functions, and perform various types of graphics etc.

Its original name was Macsyma (MAC's Symbolic Manipulation System), where MAC, Machine Aided Cognition, was the name of the Laboratory for Computer Science at the Massachusetts Institute of Technology (MIT). During the initial phase of the project, Macsyma was developed in these laboratories in 1969 with funding from several U.S. government agencies (National Aeronautics and Space Administration, Office of Naval Research, U.S. Department of Energy and U.S. Air Force). The concept and the internal organization of the program is based on the thesis that Joel Moses developed at MIT on symbolic integration. According to Marvin Minsky, the director of this thesis aimed to automate Macsyma symbolic mathematical manipulations performed in order to understand the ability of computers to act intelligently. The year 1982 is key. MIT transferred a copy of the program to Symbolics Macsyma Inc. for economic exploitation, making their own code and another for the Department of Energy. This copy came to be known as DOE Macsyma. In 1992 the retail version of Macsyma was acquired by a company called Macsyma Inc, and the program would lose steam gradually before the market presence of other similar programs like Maple or Mathematica, both inspired originally by the Macsyma program. But there were two parallel stories. From 1982 until his death in 2001,

William Schelter of the University of Texas had a version of this program adapted to the standard Common Lisp based on DOE Macsyma, which is already known to differentiate with the name Maxima from the commercial version. Currently, the project is being maintained by a group of developers originating from various countries, assisted and helped by many others interested in Maxima. Since Max will be released under the GNU-GPL, so the source code and manuals are freely available through the project website http://maxima.sourceforge.net

Octave, Python and Ruby

A screenplay or script is a series of commands that are passed to an interpreter to be executed. They do not meet the definition of a program because they are not executable by themselves. A program communicates directly with the operating system while a script is done by an interpreter that in turn sends commands to the operating system. The most popular scripting languages are, in the case of general purpose languages, Java, Python and Ruby. Java's popularity is due to its nature of business and is very easy to manage, while Python and Ruby are free software of equal or better quality but without advertising. Python is a language based on the consistency that offers high productivity and versatility. Ruby is one of the newer languages, its popularity is increasing thanks to the Ruby on Rails application development-oriented websites. There is a wide variety of scripting languages oriented for mathematics. Matlab, Maple, Mathematica, Scilab, Octave, Euler, O-Matrix, R or S are scripting languages. The best known are Matlab, Mathematica and Maple. (Hernandez A. D. A. 2007).

Psim

According to Bargalló P. R.; Morón RJ Sust i Rossello J. (2009) PSIM is a simulation tool for electrical and computer electronics. The programming is simple and intuitive, as is done by means of a graphical interface that lets you draw diagrams of the circuits to be simulated, having a bar that besides elements includes generators and charges, all necessary to control elements (devices for measurement, control and estimation etc.). The company that markets Psim is Powersim, http://www.powersimtech.com/, where you can download a free version, but which is limited in

its capabilities. Powersim is dedicated to the development of tools for simulation and design of products such as power supplies, motor drives, power conversion and control systems. The idea is to increase customer efficiency and productivity, to reduce cost, and the time-to-market of new products.

FEMM

Finite Element Method Magnetics (FEMM) is a very versatile free software tool which can perform the following tasks:

- Analysis 2D (3D axisymmetric systems)

- Analysis magnetostatic, eddy current, electrostatic, DC and AC driving.

- Thermal analysis in permanent and transitional arrangements.

- Includes the effects of saturation and laminate material.

- Working with permanent magnets.

- No limit on the number of items.

- Working in batches. Own programming language (LUA)

- Post-process with powerful calculating quantities of interest (par, equivalent impedance, Joule losses and magnetic, etc..).

- Availability of an Internet discussion forum to solve both problems to propose extensions of the program.

- Link with other programs: MATLAB / OCTAVE, EXCEL, OptiY (ibid.)

OptiY

This software has a free version available, which is limited in the number of variables to optimize and is ideal for science, engineering and economy students and budding researchers. It is a multidisciplinary analysis and

optimization program that incorporates the latest techniques and the most advanced optimization strategies. It has the advantage that optimization models are considered as a black box with inputs and outputs. This allows the binding to simulation packages like MATLAB, FEMM, ANSYS and others. It allows a sensitivity analysis, trace curves and solution maps and data mining. The adaptation to a particular environment simulation is performed by the appropriate interfaces.

It helps automate part of the solution of the problems of engineering and science in the design and development process. The key therefore is to transform a problem into a series of tasks of analysis and optimization. Free versions of OptiY can be obtained from http://www.optiy.de.

PowerWorld Simulator

Its demo version, which is for educational purposes only, is freely distributed on the web. You can perform all the studies available in the original version but in systems of up to 12 buses or nodes. This is sufficient for purposes of learning and understanding in the simulation of power systems in case of power flow studies, short circuit fault and other related studies. It even displays the exchange of power between two areas of an interconnected system. This version can be obtained at the URL PowerWorld Corporation (http://www.powerworld.com).

PSCAD

The PSCAD stands for Power System, CAD means Computer Aided Design. This tool, based on the introduction of a wiring diagram, simulates its behavior and analyzes results, all in a graphical environment for easy and intuitive operation. It consequently integrated variables representing tools, gauges, control elements and models of electrical components. One of the strengths of PSCAD is its library of components that direct use in an electrical diagram of the most common components in power systems. This program is available free of charge on your student version with limited features, as well as manuals and application examples from the website: http: \ \ www.pscad.com.

Scilab

Scilab is a program that was developed for the solution of control systems, signal processing and other mathematical applications, and the philosophy of free software covered under the GPL license. Scilab was created to make numerical calculations but also offers the possibility to make some symbolic calculations as derivatives of polynomial and rational functions. It has hundreds of mathematical functions and the ability to integrate programs in major languages (Fortran, Java, C and C + +). Integration can be in two ways: for example, a program in Fortran Scilab use or vice versa. Scilab was made to be an open system where the user can define new data types and operations between them. Scilab comes with many tools: 2-D and 3-D animation, linear algebra, sparse matrices, polynomials and rational functions, Simulation: programs for solving systems of differential equations (explicit and implicit), Xcos: simulator diagrams block hybrid dynamical systems, classical control, robust LMI optimization, differentiable and nondifferentiable optimization, signal processing, graphs and networks, parallel Scilab using PVM, Stats, Creating GUIs, Interface with symbolic computation (Maple, MuPAD) Interface with TCL / TK. This program is available in https://www.scilab.org/.

Geogebra

It is a dynamic geometry system. Constructions can be made of points, vectors, segments, lines and conic sections as functions and then can be changed dynamically. It is a mathematical program developed by M. Hohenwarter and an international team of developers at the University of Salzburg and Atlantic University, Florida. The program includes geometry, algebra and calculus and is intended to be used in all levels of education. It is a free program developed under a Creative Commons license; You can copy, distribute and transmit the program for non-commercial purposes. It is a quality program that has won several international awards, such as the European Academic Software Award in 2002, the International Free Software Award in 2005, and the Tech Awards in Silicon Valley in 2009.

Gantt project

It is very complete when planning a project, allowing an absolute display of the same tool. Everything is under control of the program, from the

resources in personnel matters and holidays, to dividing the project into a tree of tasks and assigning each appropriate resources. Gantt project allows for dependencies of interrelated tasks, ie, a task cannot start until you complete the previous one. It exports the task on a JPG, PNG, PDF and HTML image. The program can be installed to be used from Windows, Linux, Mac or other systems, in which a version of the Java runtime environment (language platform on which it is developed) is available. The program is under GNU license which basically indicates that the program can run, copied, modified and distributed free of charge by all users, while maintaining the type of license itself, ie, that their copies or modifications not can be distributed prohibiting reproduction. It can be downloaded http://prdownloads.sourceforge.net/ganttproject/ganttproject-2.0.2.exe?downloadp.

Conclusions

There is little or no knowledge of the existence of free software for some members of the engineering faculty. With the recommendations they make to use commercial software for projects, tasks or duties, this leads students to acquire illegal copies and with it a flood of further problems including the growth of an illegal business for the demand of such products on the black market which can be avoided by offering alternatives such as those detailed in this paper.

Awareness of the how such an unlawful attitude could have on students, teachers cannot be guardians of the interests of a company nor promoters of malpractice, allowing students to conduct illegal activities such as copying software without the authors consent only to deliver homework. At the other extreme is the case of free software par excellence, which allows it to be installed on as many computers as possible and promotes teachers to share with students, with all the support of the law, the tools (perhaps accompanied by teaching materials), to use at home those same used in the working environment of the classroom. Moreover, by using a tool in the classroom that is freely licensed, teachers have additional advantages in the planning and development of the subject, derived from have a guarantee that the programs will be installed and used by students in their own homes and also can be installed and used by the teacher in as many computers as needed.

The free software license allows and indeed encourages the use of several tools at once which are complementary and able to interact with each other. Each have their strengths and weaknesses. Although the teacher will side with one of them, she can always offer students the possibility of enriching experience with others, to solve the same problem from different perspectives and to satiate the curiosity of those that have major concerns. Similarly this way of behaving (attitude) naturally permeates among the students, so it is necessary to promote good practice since the arrival of the new generation so that through the teachers there a veritable moral renewal that is so necessary in everyday life and not just in speeches.

It would also be very helpful, as mentioned in the research, that in the plans and engineering curricula subjects are not made expressly for the use of any specific commercial software , unless it gives competitive advantages to both students and the university because most of the time , rather than benefit the school, a technological dependence might be avoided by developing alternatives that could even come from the same research work in universities seeking therefore better technological development created in nations that do not have it.

Currently in first world economies, such as in Germany, UK, Spain France, there are programs that motivate both research and the development of free software for both the development of their websites, create pages and support teaching at major universities in these nations. In the case of Latin America, both Brazil and Colombia and Venezuela are betting heavily towards the use of free software.

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The teachers strike: the perspective of parents in rural and urban communities of chiapas

Prof. Angelica Arroyo Josefina Bravo
Prof. Fanni Lisset Ralda Zuniga
Mtra. Lizbeth Nayeli Garcia Infanzón

About the Autors

Masters in Psychology from the
University Pablo Guardado Chavez.
E-mail maestraspsicopedagogia@hotmail.com

Abstract

The research analyzes the perceptions that parents of rural and urban communities have about the teachers movement around in 2013 in the city of Tuxtla Guiterrez, Chiapas. The study was conducted from a qualitative, phenomenological approach, using individual interviews and analyzing information in a descriptive and interpretive manner. Four analytical metacategories are constructed: Demands of the teachers, which states that parents have little knowledge of what teachers are demanding during the strike. What they refer to is that teachers are afraid of being fired; response from the authorities, who express dissatisfaction with the way the authorities have handled the situation, giving salaries to teachers who don't give classes; Consequences of the teachers strike in expressing dissatisfaction, because they are affected by the loss of classes, and the economy which was affected in their work by roadblocks; and the proposal of the parents, in which different opinions were given such as supporting their children with homework, changing them to private schools or requesting courses or workshops to sensitize the teachers.

Keywords: Teachers' movement, social representations, Parents, Community, Education Reform.

Introduction

The teachers' movement in Chiapas in 2013 had consequences indefinite establishment of teachers in the main streets of the city of Tuxtla Gutiérrez, affecting students in school performance, as well as businesses that are located around the area where the camps were established. Within three months of work stoppage covering August, September and October at the state level striking against education reform, there are many conflicting opinions by government authorities, politicians, businessmen and representatives of various social movements about this event.

This investigation is seeking to understand the views of parents in both rural and urban communities as to the situation that occured in the state of Chiapas with respect to the suspension of classes.

In this sense, what do you think the parents opinion is with respect to this teachers movement? and more: what is the social perception of a parent in a rural community and urban environment?

The principal   subjects participating in this research are the parents of these two types of communities, due to the difference of opinions or viewpoints that may be contradictory, or alternatively, have an integrative opinion about what the citizens of Chiapas are facing today.

The teachers' movement has had a strong presence in the last thirty years. In 1979 teachers came together and started a battle and it was "the intention and desire to regain a social role threatened which was perceived by modernization " (Street, 1995: 75). In addition, two events were part of the demands, "one is the signature and implementation of the Alliance for Quality Education (ACE), the other is the claim to end the normal (teachers) school."

The most recent action prior to the current teachers' movement, occurred between August 18 to November 6th of 2008, and the teachers at different levelse reported a general strike against the ACE considering that "is a reform that promotes a rigorous, competitive system of recruitment of teachers"(Zafra, 2008: 7)

Throughout the twentieth century, teaching has been involved in the greatest struggle for labor rights, "cancellation of the ACE Certification, rejection of sectional and national leaderships of the SNTE" (González, 2009 major movements: 83); and evaluation, for having discovered the deception of these transformations being masked by the privatization policy of the government (Gonzalez, 2009). The last of the movements that had a major impact was in 2008, which protested against the law of ISSSTE and the realization of democratic sectional centers (Gonzalez, 2009), with different states involved such as : Oaxaca, Chiapas, Guerrero and Michoacan. In this same movement the plan of the struggle was presented as boycotting the beginning of the school year, adding parents to the movement, and make a megamarch before the disintrest of the government.

For many years , teachers maintained that their struggle for their job would not be boycotted by the new laws that are constantly implemented, as Zorrilla and Beard have pointed out (2008: 2): "in the last decade of the twentieth century, systems of education of most Latin American countries initiated complex reform processes which are characterized by the transformation of management and the major renovation in the pedogogic field. "

Education reform in Mexico originated in 1992, and was created to complement and stimulate the educational initiative of the states

and municipalities and thereby combat educational lag(Zorrilla and Bonifas, 2008).

At present, they have conducted a statewide strike against the implementation of educational reform in Mexico, issued in the Official Gazette on September 11th, 2013.

Theoretical Perspective

We will describe a theoretical approach that will help us understand why this movement developed and we enter each of the aspects that we considered relevant to the topic. The theory of social representations was considered for understanding this phenomenon.

Social representations, according to Moscovici (Materan, 2008: 2) "is an act of thought in which the subject relates to an object and that object through various mechanisms is replaced by a symbol. This is how the object is represented symbolically in the subject's mind." León (2002: 362) defines social representations as:

"cognitive systems with a logic and its own language (...) that do not represent mere opinions, images or attitudes in relation to an object, but theories and areas of knmowledge for the discovery and organization of reality (...) a system of values, ideas and practices with a dual function; first, to establish an order which will enable individuals to orientate in a material and social world and master it; and second, allow communication between members of a community by providing them with a code for social exchange and for naming and classifying, unambiguously, aspects of their world and their individual and group history."

Representations are specific ways to understand and communicate reality and are determined by their interactions. "Social representations allow building discourses on how we understand social phenomena in our environment" (Diaz, 2205: 4). These ways of thinking and creating social reality are made up of symbolic elements as they are not only ways to acquire and reproduce knowledge but have the ability to make sense of social reality.

Social representations are produced by the experience of everyday life, through common sense; for example , social representations can be developed for situations involving people, such as diseases, life stages such as adolescence, the teachers' movement, etc..

For Leon (2002) social representations serve different functions, including: make objects , people and events found in everyday life conventional; giving them a final shape, locating them in a category and set them as a model of a certain kind, which is distinct and shared by a group of people; in other words, convert a strange reality into a familiar reality; facilitate communication between people-communication that involves sharing many views on various diverse issues; promote collective thinking and reflexivity of groups with these being fundamental requirements for what is called social identity; in other words, knowledge of the group to which it belongs; justify decisions and behaviors that occur in social interactions.

Two are the processes through which social representations are generated. The first is defined as objectification, which is to transform something abstract into something concrete and material- products of thought into physical realities, concepts and images.

The second process is defined as anchoring and is a categorization process, by which we classify and give a name to things and people. This process transforms the unknown into a recognizable system, provides ownership,and creates familiar categories. These mechanisms through which social representations are formed serve to define social groups that guide their action, as well as explain how the social transforms the representation of knowledge and how this representation transforms the social (Materán, 2008).

Therefore, we will now attempt to compare the social representations of parents in rural communities and urban settings regarding the teachers' movement in Chiapas.

Methodology and subjects

The type of research developed in this investigation is qualitative, so it is possible to know the perspective that parents have regarding the teachers' movement. Qualitative research "aims to analyze specific cases in their temporary and local particularity from the expressions and activities of people in their local contexts. Therefore, qualitative research is in a position to design ways for psychology and the social sciences in the trends mentioned Toulmin- transforming them into research programs and maintain the necessary flexibility of its objects and tasks "(Flick, 2007, p 27).

The method that was used is phenomenological. According to Taylor and Bogdan (1982: 16) this method "wants to understand social phenomena from the actor's perspective and examines the way in which the world is experienced." Furthermore it is stated that "a phenomenological study describes the meaning of the experiences of an individual or group of individuals about a concept or phenomenon", with the main objective to "discover what underlies the ways through which conventionally people describe their experience from the structures that they are made of."(Sandin, 2003: 151)

Technique

Interviews were conducted with parents who have children studying in schools that are included in the teachers' strike from the colony of Miguel Hidalgo, municipality of Venustiano Carranza and the City of Tuxtla Gutiérrez.

Interviews are a form of interpersonal communication that seek to provide or receive information, and under which certain decisions (Arias, 1976) are taken. This technique was aimed at obtaining personalized information orally about the aspects of the events that shape were studied.

Subjects and context

In order to carry out the investigation parents of two communitie were interviewed. Five from the colony of Miguel Hidalgo and the municipality of Venustiano Carranza and five from the city of Gutierrez, Chiapas, who have children studying in schools that participated in the teachers strike.

Miguel Hidalgo is a community consisting of 1,178 inhabitants (INEGI, 2013) . Their main source of income is agriculture. It has basic services like water, electricity, health, and education different levels of which two are preschool, one primary school, anda high school (Telesecundaria); It currently also has a presence of higher education with the creation of a campus of the University of Science and Arts of Chiapas. The five parents interviewed perform different jobs such as housekeepers, construction workers, musicians and nursing.
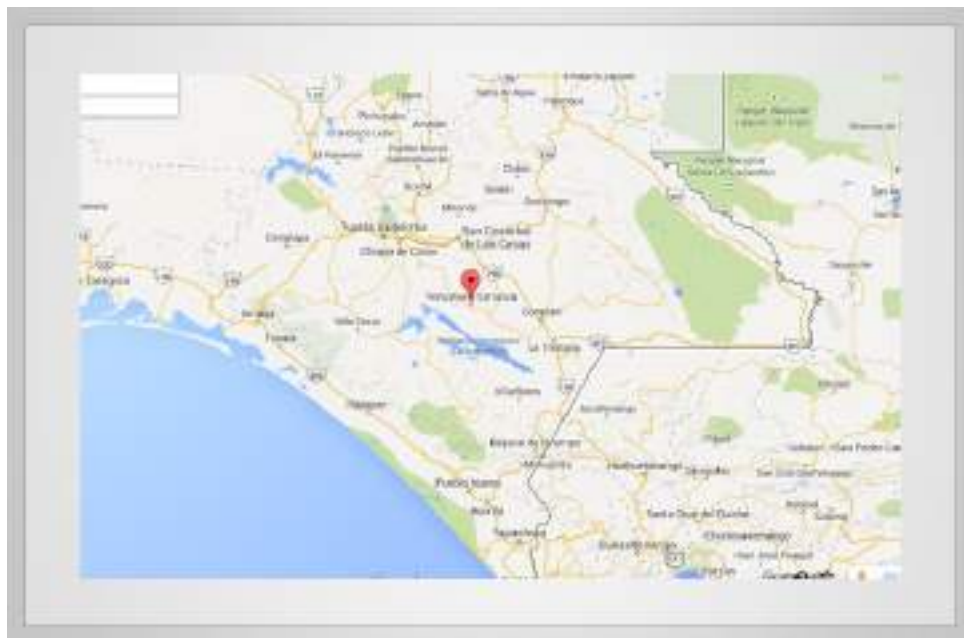
Figura 1. Google Maps: Venustiano Carranza, Chiapas, México.

Figura 1. Google Maps: Venustiano Carranza, Chiapas, México.

Tuxtla Gutiérrez is the capital of the homonymous municipality and capital of the Mexican state of Chiapas. It is an urbanized city and has approximately 553 374 inhabitants (INEGI, 2013). Its growth and economic development has accelerated since the administrative centralization of government, the arrival of domestic and foreign capital investment brought to the city and increasing state economic development aid. The

five parents who were interviewed have their children in public schools, three of which belong to a middle class socioeconomic level, two are from a lower economic level. Those interviewed work as custodial staff, businessman, secretary and lawyers.

Subjects and context

Data analysis is a thought process that enables the systematic review of information, identification of parts, relations between them and the whole, as a tool in the discovery of cultural meanings. The information is linked to the problem under study, the way in which the problem is approached and the strategies used to understand it.

The following procedure is based on the contributions of Taylor and Bogdan, Woods, Goetz and LeCompte, and includes two sections:

a. The method used for exploring the field of study. This follows the path of emerging themes and concepts or propositions are developed to make sense of them. Questions are redefined, working on monitoring the statements that are given. Negative cases, access to other paths or the persecution of intuition is sought.

b. Procedures used after exploring the field of study.

- The first is the discovery in progress which integrates aspects, meanings, feelings of the researcher, classification schemes, concepts and theoretical propositions.

- The second is the encoding of data and refinement of the understanding of the subject matter. This involves dividing the corpus of data, generating units and categories according to certain affinities. It is necessary to code field notes, transcripts, and documents-writing alongside each drive letter or number assigned to each category. Once done, it passes to the separation of the data according to thematic criteria. To do this, the author proposes to create three files, with folders and envelopes, to deposit the various categories and subcategories. This allows you to review the content, check their representativeness, comparisons, perform

triangulations, discard issues and build heirarchies among elements.

- The third is the relativization of the data. The data is placed in the context in which they were collected. It is necessary to analyze whether they were or not requested by the investigator if there are direct or indirect data (Montoya, 1997).

The resulting report is descriptive and interpretive. The situation studied is presented in its entirety, bringing together the different perspectives of the participants and establishing connections between the different aspects that make up reality.

Results

Starting from individual interviews done on different days in the month of November 2013, in the rural community Miguel Hidalgo, Venustiano Carranza and the urban area of the city of Tuxtla Gutierrez, 5 interviews were conducted in rural and 5 more in urban areas with people of different social status. Four analytical metacategories were developed, and were: Teachers demands, response of the authorities, consequences of the teachers' strike and proposals from parents.

The following describes each of these from the perspective of parents in different communities.

Teachers demands

In rural areas it was found that parents knew little about the demands of the teachers, having vague ideas of what was begin requested from the appropriate authorities, or simply they just knew the information teachers have been giving at some meetings but without any source to confirm the data, such as the privatization of education and some benefits to teachers such as tenure. They demonstrated anger about the little or no information that the teachers shared with them ,understanding the current situation superficially and thus waiting to have a solution and that their children can return to school normally.

"Those who told us something said that is about...the privatization of education and that we will have to pay, teachers have commented at the meetings that we have had and about the, the things that are going to be taken away, what is tenure and all that (E, S2, 22/11/2013)"

In Tuxtla Gutierrez parents also had little knowledge about the teachers demands, and the only thing that they knew was that they would lose their seniority rights as workers in education, which will be evaluated by the application of an exam and if they did not pass they would be fired and that they demand that they law is repealed. In either of the two communities, there is not much difference about what is known of this situation, as teachers and authorities have not released to parents the real reasons that were on strike and the demands placed on the authorities.

"What they demand, is that they do not agree or to my knowledge this is the reforms, they want to evaluate them and it's useless because they all are constantly evaluating, but I do not know what they are afraid of, maybe they will see many people fired for failing the exam ... and the positions and everything will pratically go to the garbage (E, S2, 14/11/013)"

"They do not want to be examined, they are afraid to be fired, uh, they want to totally like, the, uh, the, this, repeal of the law, and this, they don't want to lose their rights. (E, S4, 14/11/013)"

In this regard the General Education Act, enacted that "it is for the Institute to assess the quality, performance and results of the national education system of secondary education at the preschool, elementary, and high school levels" (art. 3, fracc. Reformed IX, 2013).

Authorities' Response

Under this metacategory parents in rural areas were deeply unaware of the response of the authorities, which was based solely on the comments heard in the media such as television, and they did not care whether a solution was reached with authorities but that students could return to take classes at the earliest opportunity on a regular basis. Most of the answers indicated that they did not know about information that was given to them by the authorities, who assumed that the answers that they recived did not benefit them at all because all they wanted was that classes continued and that the education of their children was no longer paralyzed. They also added that they did not investigate the terms

in which teachers have been negotiating with the authorities.

"As far as I heard on the news, supposedly at least in the government of the state has already given, this, is supposedly the problem is already solved that they had with the state teachers, and on Monday supposedly classes begin, now if they gave an answer to all of their requests, the truth, and they just told the kids return to school, but that, no, I have not paid attention or asked because the truth is then, to us personally, it does not benefit us at all , that is, not for me, that is good, good, I say that if they are going to pay teachers, they will go to school and ... (E, S5, 2013)."

In contrast, in the urban areas a little more was known of the response of the authorities, as there was no going back on the implementation of the reform and the authorities had proposed dialogue to negotiate some requests-regardless, the reform will continue. Some parents have felt attacked because the authorities have issued payments to teachers during the strike,and have expressed that the actions of the authorities are a joke and they do not understand how can without giving a single day of classes that the teachers were paid by the simple fact of not working. All these data that were obtained were heard in different versions from the other parents.

"Absolute negativity to their demands and to the very end all I could hear was that , that there could be added some other request but the reform was not going to change ... but it was another request to agree that this reform would stay as is without changes (E, S2, 14/11/013)."

"Well from what I've heard is that they are open to dialogue, at this moment, right now during these days they already sat down to talk, we have heard by the same people, the same teachers, that some were paid, this that, So I feel it is a travesty for the people, because if you are paying someone who is not working, that is not complying with their work, tell any of us who are working, if you miss one day, one day that you are late, they, they ,they, they take away your, your money, so then why don't they do that to them (E, S4, 14/11/013)."

Consequences of teachers' strike

There were multiple, direct or indirect, consequences of the teachers' strike. Rural parents said that teachers told them that classes would be suspended for only 45 days, directly affecting students and businesses

that went bankrupt due to low sales of small businesses in the community. Unfortunately the situation with the teachers' movement not only affected students, but also different sectors of society such as traders, transporters, tourism, and society in general wchih complained about the activities that teachers made during the strike, such as positioning themselves of the roads connecting to the capital city, at gas stations and the marches that have continued to happen..

"In the children, we are, almost, they said 45 days they had not presented to school, they were late, they were delayed because they are falling behind. (...) "At least the shops, they say no, they have very few sales, or, since children are not going to class, there are no sales at the stationary stores (...) "Because sometimes we have been going to Tuxtla for shopping, and they blocked the roads, I mean, that is what you can say is affecting us, because its so much, that is, they know that they have their right to request and everything, but we as people also have rights (E, S5, 22/11/2013)."

In contrast, in the city of Tuxtla Gutiérrez consequences have been greater, since teachers have been manifesting indefinitely in the center of the city, affecting students with the loss of classes. Parents expressed their disagreement because they do not agree that their children return to school and that they are forced to regain the level of their studies and not lose the school year. They believed that the school year was lost. Businesses that are near the center of the city were also affected, so that total losses have forced shops to close further affecting citizens. The daily traffic happens on every street, corner to corner. One is unable to get out of a traffic jams for hours, affecting daily activities.

"Children lose their education level and it is not the same as if they stop studying for a long time and trying to get back into momentum and forcing the children is not the same (E, S1, 22/11/2013)."

"Yes, I have had to wait for the damn traffic, forgive me if I say this, because the teachers are making a march, I'm not, I say again I am not against that they make their,this, their fight or whatever you want to call it (E, S3, 22/11/2013)."

" It has brought us problems, this, the, from, the traffic that you cannot be, in the city, in, in the center of town, this, then, the, um, we live near the center where this is happening, there is no where to park, there is no where to go, you want to run errands downtown to pay, a, at the post office, you can walk on the sidewalks, you realize also that not only to me, directly, in addition, , we said our children no, but also for

several companies that believe me that maybe they were just surviving and providing work and they have closed (E, S4, 22/11/2013)."

These manifestations by parents are known as social representations that allow the building of discourse on how we understand social phenomena in our environment (Diaz, 2005) and they have expressed their experiences and how they have been affected by the teachers' strike.

Proposal for parents

During all of these problematic period that the parents in rural areas were going through, many shared proposals to improve the situation that their children, however, many were doubtful that something could be done to improve the situation. Some said that they felt afraid to propose something to the teachers, and preferred to avoid confrontation. Even through all of this period they decided to support their children by studying with them at home and leading activities as a in home solution to the teachers' strike. Other parents said that the solution would be to transfer their children from a public school to a private school but this decision would affect them economically, but in the end they could not keep waiting for the authorities or teachers to give in.

"I do not know, because as I was thinking right now, there are private schools, I would change my daughter to a private school, as they say if it's for the money, but she has to study. (...) "Well, this, this is the only solution I had   because I cannot confront with a teacher, you come out for the worse, sometimes one wants to argue with them or not, as my husband says they talk too much, they don't even know what they are saying, it was the only solution that we had (E, S1, 22/11/2013)."

"In fact we what we are doing is really supporting my children in their work, their homework(sic) , and we are supporting my children in their work, their tasks, so that, that ehy continue, this, really studying with the little that we know (, S2, 22/11/2013)."

In contrast the parents in the city of Tuxtla Gutiérrez consider their proposals or opinions would not help much to improve the current situation of education in Chiapas. They show little more than apathy and prefer not to say much about it since they consider that Mexico is a country that does not advance because there is too much rivalry and believe that everyone survives however they can, and that their opinion is of no use. Others propose to seek alternatives such as courses and workshops for

teachers and teach them to be more sensitive in their jobs. They say that the teacher's job is not easy, dealing with children of different cultures, ages, education- and even more facing too large of a class size that is possible to manage.

"Look … what I do is not going to do any good … not going to do any good because … we live in a very strange society I think, nobody sees, us like, like crabs when someone leaves, when someone gets on tops everyone tries to pull him down so that they don't succeed, this happens with everything, so what good is my opinion if in the end things just continue as always, remain the same. " (…) "While the teachers do not change their opinion, while teachers do not change their mindset, believe me this is not going to advance (E, S3, 22/11/2013)."

"(…) The first thing I would ask the authorities, would be that they have the sensitivity to give, the people who come in new, new courses or workshops or lessons, I don't know what you would call them, those with a different mentality, who think, that it's the same, to be a teacher is a very difficult task, the teacher that faces the children, of, if, if we talk about preschool teachers, now there are teachers that face children of different cultures, different ways of thinking, different education, and they, they have to manage not only a child, have to manage about 20, 30 children … (E, S4, 22/11/2013)."

Regarding these aspects, Process states that (2013) parents decided to encourage "extramural classes" and roadblocks in response to the movement of "folded arms" that starred teachers who were against the educational reform supported by the Congress. In Oaxaca, after nine days without classes due to the indefinite strike declared by section 22 of the National Union of Education Workers (SNTE), parents have taken 24 schools in 14 municipalities to give "extramural classes." Official reports state the taking of various schools and blockades by the parents which forced teachers to return to their workplaces and start the school year 2013-2014.

These mechanisms, which were formed by social represntation, serve to define the social groups and at the same time guide their action. This also explains how society transforms an idea into a representation and how this representation transforms society. (Materan, 2008).

Conclusions

From the interviews with parents of the two communities in Chiapas, we can conclude that they have very little information about the reasons why the teachers' strike happened. This can be due to many causes: the lack of information that is disclosed to the public by the teachers and authorities, the parents education level - in some cases illiteracy, lack of means of communication, and in the rural communities few have comprehensive, ciritical information. It was made clear that the only information they could get was rumored in the community, and were content with what they heard from family, friends and acquaintances. Most parents were dissatisfied with the teachers' strike for the loss of classes their children had at different educational levels. Their biggest concern was failure to reach an agreement with the authorities could result in the loss of the full school year. For some parents, these actions have led them to decide to take their children out of Public School and place them in private schools, although this implied an adjustment in their household economy.

However in the urban community it was percieved that parents had a more critical perspective on the situation, unlike rural areas. The only concern of parents in both communities was theirheri children did not miss school. They thought that they could not do anything to improve the situation, felt that this move was purely political on part of the teachers and could not intervene. In this area parents not only care about the academic performance of their children but also for the economy of the capital of the state where teachers manifested. They complained about the multiple issues that affected the population such as the blocking of main streets, traffic, garbage everywhere, and the downturn in the economy of the parents who are downtown. In general, this teacher's movement has affected many sectors of society, directly and indirectly, and the only thing that the parents asked was that both teachers and the government authorities reach a peaceful settlement.

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Professional training preferences, demands and expectatives in distance learning

Irene Barboza Carrasco
Yolanda Castañeda Altamirano
Jorge Luis López Jiménez
Julio Guillén Velázquez

About the Autors

[1] Center of studies for the Municipal Development and Public Policy, UNACH, Tuxtla Gutierrez Chiapas, CP 29000.
Email: irene.barboza@unach.mx, caalyo@hotmail.com, guillenv@unach.mx

[2] Management of Epidemiological and Psychosocial Research, National Institute of Psychiatry Ramon de la Fuente, Tlalpan, Mexico DF, CP 14370.
Email: lopezjl@imp.edu.mx

Abstract

Distance education, specifically online or virtual, has been viewed as a solution to the growing demand for higher education of young people working in different geographically dispersed social sectors, which demand training adapted to the needs of the new millennium. In this context, the purpose of the study was to explore the preferences, demands and expectations that students have about distance education programs.

The research involved students of the College of Bachelors of Chiapas, Mexico. Information on socio demographic profiles was obtained, a feature that is considered relevant to a plan and program of study. The use of computer resources and training and employment expectations with students was obtained.

The results indicate that students use the information and communication technologies widely and demanded a curriculum plan that is offered online. However, the educational offer in distance learning programs is not an option that have considered to continue their professional development, and they consider the traditional in person degrees a better option.

Keywords: virtual education, online education, ICT

Introduction

In Mexico there is a a high number of young people that are at the age to enter higher education. An analysis of the challenges of higher education in the twenty-first century states that compulsory basic education, which currently includes study through high school in Mexico, would increase the proportion of young people continuing their studies at the university level over the short term. The increase in enrollment brings challenges for educational institution, in the imagination and innovation capacity because traditional ways of conceiving education are not sufficient and also in the design of educational systems that make more efficient use of resources, times, modes and academic spaces (ANUIES, 2000). A change was also observed in the age of the population, which observed a considerable growth in demand for higher education for the traditional applicant population (group of 18 to 24 years of age) until 2013 (Hernández, 2005). Additionally there is a population of older applicants who are generally working, who demands higher or continuing education to meet the dynamic requirements of society or to improve their employment status.

Without any doubt, diversification of the programs and extinction of coverage under different modalities in universities is a challenge and a reality, and that public policies need to be strengthened.

Distance education, specifically online or virtual education, has been viewed as a solution to this growing demand for higher education. Silvio (1998) mentions that it can be a hope or promise if properly conducted and with a clear vision of the possibilities and limitations . The possibilities mentioned the reduction of operating costs of the programs, greater control of learning by the student, greater interactivity between students and between students and teachers, an individualized learning pace for each student, and the teacher's change in role from transmitter to facilitator. The author mentions the limitations that have disparities in the degree of incorporation of the Internet, appropriation of information and telematics, inequalities between countries, between regions and localities within a country, between social groups and classes within the same country and between organizations of different institutional sectors of society; resistance to change by social groups who fear innovation for fear of labor and social displacement and by members of different generations; still relatively high technology and access to telematics connectivity in developing countries cost; low purchasing power of large segments of the population to access new technologies, especially in developing countries; complexity of learning technology by many sectors of the population.

Online education is seen as the solution to absorb the increasing demand for higher education, it should be considered that it may not be in the short term as there has to be met certain conditions for this to happen. Silvio (1998) mentions that a very important factor and that has a decisive influence is the emergence of a new generation of young people growing into a world steeped in technology and electronic media, showing a knack for learning and versatility of this technology, they will demand that interactivity, dynamism, a new role for the teacher, and the greater relevance of the content of education in relation to their real world.

Distance education has particular characteristics that need to be considered. Garrison and Shale (1987) mention three of these: a) the majority of educational communication between teacher and student is not contiguous, b) there is bidirectional communication between teacher and students in order to facilitate and support the educational process and, c) distance education uses technology to mediate the necessary two-way communication.

Nipper (1989), describes current distance education as the third generation, which is also called "virtual education" or "online education",

whose characteristics are: a) the use of more sophisticated technologies and direct interaction between teacher and students of the course; b) through a computer connected to a data network, e-mail, discussion groups and other tools offered by these networks, with the teacher personally interacting with students to resolve concerns and guide the learning process.

Meanwhile Holmberg (2003) mentions that: a) distance education provides almost permanent separation of teacher and learner throughout the learning process, b) there is an influence of an educational organization both in the planning and preparation of learning materials and the provision of support services to students, c) the use of technical media (text, audio, video or computer) to unite the teacher and learner and carry out course content, d) the provision of two-way communication so that the student will benefit from the dialogue or even start it and, e) the quasi-permanent absence of the learning group so that people are taught individually, although there's the possibility of occasional meetings for teaching purposes or socialization.

By characteristics that are presented, distance education remains an option to create flexible plans and educational programs tailored to the needs of the professional training of the new millennium, but it is up to universities to study and fully understand the system and its implications for an appropriate response to the increasingly diversified and geographically dispersed social sectors.

In this process of the construction and opening of education we face many challenges and problems that have to do with the (real-virtual) spaces, traditional knowledge against innovative proposals, resistance, lack of educational training , technological infrastructure, the dilemma between form and inform, the appropriate profile of the students, the articulation between theory and practice, and finally you cannot fail to mention the myths that accompany distance education on their path towards the future. In this context, the purpose of the study was to explore the preferences, demands and expectations that students have about distance education programs.

Methodology:

The research involved 159 students aged between 17 and 19 years old of both sexes (59 men and 100 women) of the morning shift of the sixth semester of the College of Bachelors of Chiapas (COBACH),

a Public Institution of Higher Secondary Education in Tuxtla Gutierrez Chiapas, Mexico. The information was obtained through a questionnaire divided into four sections: 1) demographic profile, to know the family context and the prevailing economic situation of the students in order to continue studying; 2) scale of importance, where students expressed the importance of having a plan and program of study with certain characteristics; 3) use of information technology and resources; and 4) training and employment expectations.

A student population was considered with access to new information technologies and communication either personally or provided by the school, as it was believed that they had more information regarding online education. The questionnaires were applied in the classrooms of the institution, and student participation was voluntary and anonymous.

Data were analyzed using the statistical package SPSS, obtaining descriptive statistics as frequencies and contingency tables. The results are described in the following sections.

Results and discussion

Socio-economic characteristics of students

The students surveyed are mostly single and devoted exclusively to study, only 12.6% mentioned that he was working at the time of the application and 1.9% had a marital status as married or in free union. There was still an economic dependence on parents. 93% lived with both parents or one of them and 95.5% dependent on the parent or both to study.

The schooling of both parents is high, compared to the state average of 6.07 years, 6.55 in men and 5.62 in women. In the case of the father, 51.6% had a bachelor's degree or even higher, 22.9% completed high school, technical postsecondary degree or have incomplete undergraduate studies, 17.8% have completed some level of education but did not study high school and 4.5 % did not have any studies. In the case of mothers of these youth, 40.5% have a bachelor's degree or higher, 30.4% completed high school or technical postsecondary degree or have incomplete undergraduate studies, 26.6% have completed some level of studies but not high school and 1.3% have no education.

Civil engineering, the education sector, public accounting, commerce,and federal employees are some of the (main) occupations of parents. Mothers are employed as secretaries, teachers, merchants, nurses, educators or engage in household activities, among others. Their economic situation is stable, as 85.6% students consider that the monthly income of the people of whom they are economically dependent are good enough for them to continue studying. This is strengthened by the number of dependents of the household, which ranges from mainly two (35.8%) and three (34.6%) people.

Additionally it should be mentioned that 90.1% of students live in an urban population and only 1.9% speak an indigenous language. Socioeconomic conditions described by students have easy access, either personally or through the school, to current technological resources such as the Internet, cell phones, digital cameras, copiers, scanners, among others.

Characteristics that are considered important to choose a plan and program of study

In choosing a plan or educational program, students highlighted in order of importance the features that are shown in Table 1.'s

It is important to mention that characteristics such as self-study and self-learning, support of advisors electronically, adjustment to the students schedule, texts and materials available on virtual platforms and the elimination of physical and geographical barriers were also considered very important, but less than those described in the first block.

Characterized by high percentage activities that students consider unimportant are: the reduction of mandatory in person classes (17.0%), classes via satellite (18.9%) and that they can study without attending classes (22.0 %), allowing them to see the projection of the student in a classroom if he continued his studies.

	MMI	MI	I	PI	NI	NR
That combines theory and practice	60.4	27.7	7.5	2.5	0.6	1.3
That the professor has a role as the facilitator of learning and not only as a lecturer	59.1	25.2	13.8	0.0	1.3	0.6
That the teaching and learning course contents are constantly updated	54.1	28.3	14.5	1.9	0.6	0.6
That offers personalized help for students	52.2	27.7	15.7	1.9	1.3	1.2
That proposes new educational situations where the students are trained to use new technologies	51.6	30.2	15.1	1.9	0.6	0.6
That are economically accessible (no travel expenses, no rent, no copies, etc)	51.6	23.9	13.8	6.9	3.1	0.6
That facilitates the incorporation of new technologies	51.6	23.3	18.2	4.4	0.6	1.9
That responds to actual needs of the community	49.7	24.5	20.1	3.8	0.6	1.3
That the material for the academic units can be consulted at any time	48.4	30.2	17.6	1.9	1.3	0.6
That the student has an active role in his or her learning	47.2	38.4	11.9	0.6	1.3	0.6
That the professor and the student are present in the same physical space	45.9	27.7	16.4	8.2	0.6	1.3
That deals with current real problems	45.3	32.7	14.5	6.3	0.6	0.6
That permits each student to plan and organize their time	45.3	25.8	23.9	3.8	0.6	0.6

Table 1. important for the student to choose a plan and educational program (in percent)
Features. MMI. Much Very Important, MI. Very Important,
Important I., PI. Not Important, NI. Not Important, NR. Not answered
Source: Compiled using data from the survey.

Use of computer resources

As already mentioned, the socioeconomic conditions of the surveyed students gave them access to diverse technology and information resources that they generally used. The most frequently used computing resources are presented in Table 2.

Other resources also frequently used in order of importance are: DVD movies, burn to DVD or CD, format paragraphs, send e-mail attachments and use the processor for writing texts. These are less important than those described in Table 2. It is worth mentioning that 56.0% said it was "uncommon" to get help or pay to get help with the tools described.

Other actions noted in the questionnaire included scanning documents, make presentations slides or compressing files.

|	MMF	MF	RF	PF	NF	NR
Search for information for homework/online work	69.2	22.0	5.7	2.5	0.0	0.6
Use Messenger as a means of communication	66.0	24.5	4.4	3.8	0.6	0.6
Create folders to store information	61.0	24.5	3.8	7.5	1.9	1.3
Download music from the internet	53.5	14.5	10.7	13.2	7.5	0.8
Cut and paste images in a wordprocessing program	52.8	21.4	15.1	5.0	3.8	1.9
Download photos from a digital camera	49.7	20.1	12.6	8.2	8.8	0.8
Use email	47.8	26.4	15.7	6.9	0.6	0.6
Use Spell check and Grammar check	44.7	18.2	17.6	10.7	6.9	1.9

Table 2 Computer resources used by students (in percentages).
MMI. Much Very common, MF. Very common, RF. Frequent Regularly,
PF. Infrequent, NF. Nothing Frequent, NR. Not answered
Source: Compiled using data from the survey

Profession and employment expectations

The data obtained in relation to the profession and employment expectations of students show that 98.7% want to continue their studies immediately after completing high school. Public university stands as the best option to continue studying for 79.9% of respondents either due to affordability or they have no other option.

When questioning whether they knew what a distance undergraduate degree implied , 48.4% said they knew almost nothing and 44.5% said they knew little (Figure 1). Overall, only 7.1% reported having sufficient knowledge of distance education, describing how this system was related to the use of virtual media, internet and digital cameras.
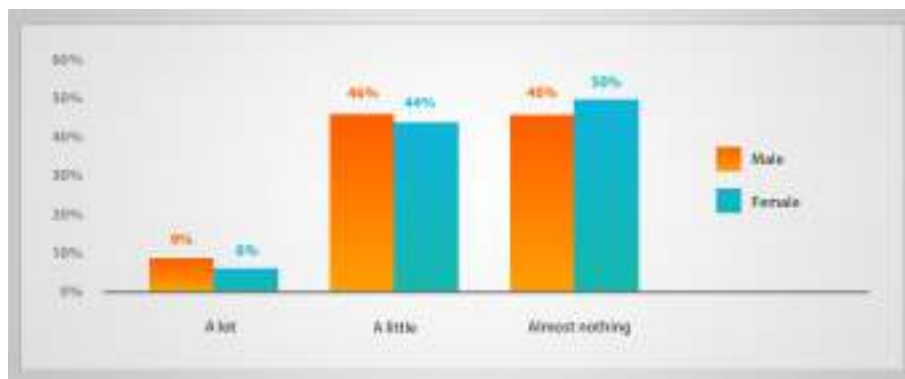
*Graph 1: Distribution by sex, the knowledge they have on a
undergraduate distance. Source: Compiled using data from the survey*

The little knowledge that students have about distance education also impacts on expectations of further study under this system. Of the total respondents, 78.2% did not consider it an option in order to continue his university studies. Among the reasons given for not choosing it are mainly: it is not interesting, they consider that it is not the same, they will learn less and they will be left with doubts.

Considering their current economic conditions and that of their families, students believe they are likely to achieve higher levels of study, 31.0% a doctoral degree, 29.0%, a master's degree 20.0% a specialization and 19.4% an undergraduate degree. It is noteworthy that there are differences by gender in the study expectations, especially at the doctoral level (see Graph 2).
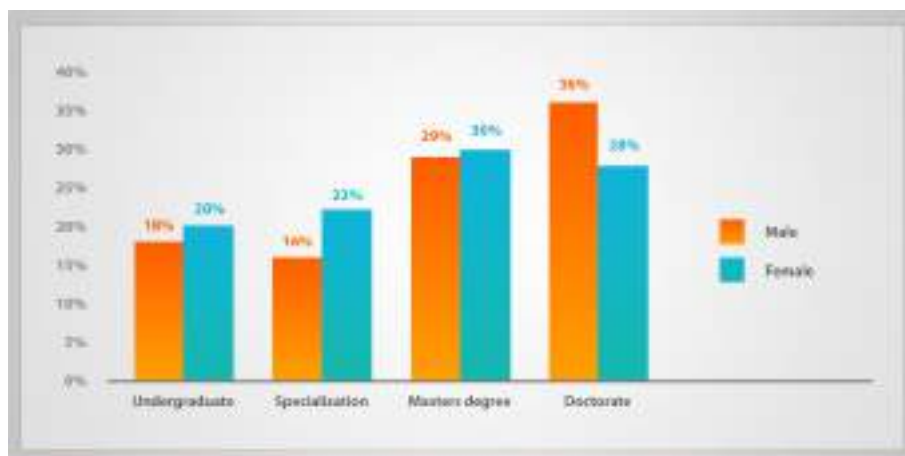
*Graph 2: Distribution by sex, degree of studies that consider reaching
Source: Compiled using data from the survey*

Within the expectations that students noted are maintaining their current socioeconomic status devoted exclusively to continue their studies. However, prospects for a future employment are high for 77.6% of these young people. 30.1% would like to develop professionally in business, 27.6% in private companies and 18.6% in the public sector, among others.

Conclusions

These results indicate that at least for the study population, distance learning programs are not an option that they have considered for continuing professional training, and consider the traditional in person degrees the best option.

If it is true that new technologies have invaded and transformed daily practices, knowledge, and how to interact and communicate, in formal education they have not been able to incorporate efficiently as they are used more as a hobby than as a tool that will strengthen teaching and learning. In this sense, it is necessary to implement educational policies that progressively incorporate the use of new technologies in education and not jumping to generate aversion to them, wasting with it the advantages that are presented.

It is essential to make a correct diffusion of distance learning systems to raise awareness of the advantages and disadvantages of the traditional models and that they continue to be an option for access to higher education, particularly for people who cannot physically attend, for economic, family, health, territorial, and gender reasons, among others. The lack of knowledge about distance education limits students that select this option of professional training that offers the most of the characteristics that an education program demands.

Based on the previous discussion, there is a need for further research in different contexts considering working conditions, age, geographical location, among others, to know the opinion of people who have not had the opportunity and ability to access university or who have left school for various reasons.

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A historical legal approach to town and city comptrollers in Chiapas

Ma De Los Angeles Mendoza González

About the Autor

Language Center at the University of Sciences and Arts of Chiapas (UNICACH)

e-mail: dramendoza@live.com.mx and dramendozag@yahoo.com.mx.

PhD in Public Law from the INEF, Master in Business Administration and Public Accountant UNACH Campus I, Alternative Education Specialist by the EBC. He teaches a PhD, Master and Bachelor level in various public and private institutions

Abstract

This paper presents a historical background of the Municipality and the Municipal Comptroller in Chiapas Mexico, from the colonial period through its development during the Mexican independence and up until modern times. We start from a general point of view then shift to a particular focus, addressing the Municipality and it accounting control as it was known in Spain and during the pre-Conquest times in Mexico in order to understand the legal basis, organization and functioning of the Municipality in the state of Chiapas and its board of control.

Keywords: Town, city comptroller, history, law, constitution.

I. Background of the Municipality

Concept of a Municipality

Etymologically, "The Municipality voice emerges as a legal concept for the first time in Rome. It comes from *munare munus,* meaning load, encumbrance or provision ... *municipium* is the union of those obliged to pay tribute. And so was born the idea of *commnunis*, ie, those who belong with the others in a municipality, and who must participate with them in the municipal positions within the *munus munare* or what eventually was called a municipality" (Robles, 2002: 26).

For Rendon Huerta (2008: 103), the municipality "is integrated by a population living in a specific geographical area administratively, which has a unit of government and is governed by legal rules according to its own purposes."

Most authors agree that the birth of the town happened in Rome. Tributes, or munus munare were imposed on conquered peoples so that they could continue to administer themselves, but in exchange for a lien or service.

In order to understand municipalities today, it is important to analyze some historical aspects from Mexico and Spain. The reason for including the latter is due to the influence it had on the organizational form of local life that existed in Mexico after the conquest, where the concept of a municipality was not known of in the sense of what was established following the arrival of the Spaniards.

a) The municipality in Spain

For Barbosa (1982) the following characteristics were found in the sixteenth century Spain :

1. The main activity of the population was ranching and agriculture, with an incipient development of manufacturing and crafts.

2. The land was in the hands of farmers, through the *ejido* system, and in the hands of the nobility and clergy which was farmed by *solariegos* who were landless. In this period, the farmer paid more in kind with their work because the rights of landowners were restricted.

3. There was speculation of agricultural products, among other situations, that impeded economic development which most affected farmers.

4. Excess taxes such as the taking of cuts and royal charges resulted in a reduction of consumption.

The above items are from the feudal system that existed at that time. In addition, Spain was divided into several kingdoms with different political and administrative organizations. But this division of kingdoms were gradually being eliminated in order to establish a monarchy based largely on the Catholic religion. At this point, the privileges of the clergy and nobility were predominant, leading to a social breakdown by the subordination of economic, legal and social decisions , and the will of the Kings.

It was decreed that local customs would be respected as long as they did not go against the State. Capdequí says (1993: 61): "... in Castile, while the Columbian discoveries occurred, the town had come to a moment of great prostration and decay, being but a shadow of its former vigorous Castilian municipal system of the twelfth and thirteenth centuries ... ".

Following the victory over the Arabs, the Spanish Kings encouraged the founding of towns and gave them rights to be governed by their own laws. These rights are known as local courts, which were instituted rules to protect municipalities from the abuses of the feudal lords. Acosta says that in the year 1020, Alfonso V of León adopted the Charter, which guaranteed the existence of local governments in the kingdom. The monarchy prevailed in Spain. Alfonso X, the Wise, tried to reduce the

powers of municipal councils by establishing strong tax burdens in the Code of the Seven Parties. According to Rendon Huerta (1998: 79):

> "The trend towards centralization and increased real power originated with the revival of Roman law and the influence of the lawyers, which almost ended municipal autonomy. Considering that the towns were mismanaged, the kings placed judges of the courts. Thus were born the magistrates, who until in 1835 passed on their allocations to the primary judges, and to the government and economy of the mayors….."

This limitation of rights to municipalities was achieved through the appointment of magistrates, who had the power and interference in the judicial and administrative aspect remainder autonomy to the municipalities, as reported directly to the crown and not the mayor or the city council, which until then were the highest authority in the town.

Therefore, it appears that being directly appointed by the King and the monarchy of the time, the Comptroller was more powerful than the Mayor and City Council which resulted in the autonomy enjoyed by the Municipalities being undermined. Thus, decentralization that existed in earlier times, fell to a centralization that delimited the municipality only as an administrative body which could not make important decisions.

In 1504 Queen Isabel de Castillo died, and King Ferdinand ruled Spain with the help of Cardinal Francisco Jiménez de Cisneros. Expeditions continued under his government when the conquering Cuba took place. Martínez (1997: 52) in his book about Cortes, mentions that:

> "Emperor Carlos V, the king of Spain was together with his mother Juana, crazy since 1506 after the death of her husband Philip the Handsome. Queen Juana remained in isolation in Tordesillas and survives until 1555. No documents were signed. However, the methods continue on and the most important requests were issued to Carlos and Juana. And like many others, Cortés received numerous titles, instructions, concessions and prohibitions..."

So in this manner under the reign of Charles V the events related to the conquest of Mexico were managed. The internal and external political experience of Carlos V is complex and vast. Born and educated in Ghent, he led Spain to their Flemish councils whose arrogance and disregard of the Spanish pride and traditions originated problems which were manifested in social tensions. Subsequently, in 1519, during the reign of Emperor Carlos V of Spain, several cities took up arms. However, they were unsuccessful and on April 21st 1521, the King's army beat the

villagers and it is said that this is when the autonomy of municipalities ended in favor of absolutism.

The lack of autonomy to govern, the imposition of excessive taxes, coupled with the economic and social situation of the time contributed to that the municipality in Spain in the thirteenth century, when America was discovered and Mexico invaded, was found in a scheme of monarchical rule through the annulment of local authorities.

b) The municipality in Mexico

The description of the historical background of the municipality in Mexico has been divided into stages: pre-Columbian, in which some aspects of organization of peoples at that period are described; the conquest which corresponds to the arrival of Hernán Cortés and the establishment of the first municipality according to the Spaniards; and finally, the independent era, laying the foundations of the municipalities as found today from the first constitutions and until 1917.

1. Period pre-Conquest

Soustelle (2000:14) states that Tenochtitlan was a fairly complex social and political organization in which multiple forces were at work in transformation:

> "…the Mexican city of the sixteenth century differed profoundly from the wandering tribe that, in 1395, had chosen some islands as a refuge amid the reeds. This difference did not affect only the number of inhabitants, territories, and resources-but also their quality. The city was no longer an enlarged tribe, but it had become something else: now it was a state committed to a race of expansionism , a diversified society, in which antagonisms began to emerge, the regime of the property changed , and public service and wealth began to come into dark conflict."

For Leon (1983), in less than three centuries the Aztecs or Mexica were able to become the largest and powerful people of the time, and were at the height of their commercial, social and religious development. Tenochtitlan was receiving all kinds of goods coming from different regions, social classes existed; there was regulation of crime and family issues; courts had judges appointed by the King or *Tlatoani*; the source of law at the time was a custom linked to religion.

The form of territorial divisions or organization of the Mexica were called *Calpullis*. The *calpulli* or neighborhood, had control over the land they was in their territory. They were independent to decide on almost every aspect of government-both administrative and judicial-although they were forced to pay tribute to the empire. The *calpulli* were a more complete form of organization than the municipalities of Spain, since not only the organization had the effect of collecting taxes for the government, but is perfectly delimited classes, it made sure that not one of the *calpulli* members were hungry which involves aspects of social security, and there was a great union to celebrate their rites and ceremonies. It was a regimen based on a centralization of all of the provinces that formed the Aztec empire.

2. The Conquest

The first expedition to the Mexican coast was performed by Hernández de Córdoba in 1517 in the Yucatan and by Juan de Grijalva the following year. Diego Velasquez, governor of Cuba, sent an expedition led by Hernan Cortes, who on April 22 1519 founded the City of Villa Rica de la Vera Cruz. The existing rivalry between Diego Velasquez and Hernán Cortés is mentioned in most texts, which apparently comes from the monetary participation that each had granted to finance the expeditions, and that this gave them greater power or prominence over the other and what was discovered. Rendon Huerta states (1998 : 95) that "Afterwards the board appointed by Carlos V to know the differences between them, failed to forbid Velasquez who hereinafter mingled in the affairs of New Spain."

This is possibly the motive as to why he appointed Hernan Cortes Captain General, the Villa was founded, and the first mayors were named- Alonso Hernandez and Francisco de Montejo . Velasquez revoked Cortes' appointment before leaving for the expedition to Cuba. Cortez was unable to return since he had disobeyed the King and the punishment would be death by hanging, Therefore it was necessary to establish population centers that were the means to meet the legal requirement for the political support of the King and to act on his behalf and representation, thus becoming independent of Diego Velasquez. Some reasons for founding the first municipality were based on financial, political and military aspects since after the founding of the town, Cortés was appointed Captain General of the Communal Militias of the Real Cross (Vera Cruz). In order to settle the

neighbors of the Municipality, Cortés issued the administrative orders for organizing political life of the Municipality and force residents to settle permanently. In addition he established the ordinances governing the Municipality, such as:

The Ordinances of Cortez

Established in 1524 and 1525, these obligations were military, religious, commercial, and residential in character with respect to the government. They established that each village should have two mayors with civil and criminal jurisdiction, four councilmen, an attorney general and a notary. It was also established that Cortes had to be present when a town council meeting was held.

Thus, Cortés following the form of government of the time, centralized power in himself, as was the Governor and Captain General, and in the villas decisions could not be made without his consent. According to the chronology in which they were issued, the ordinances can be classified as follows:

City Ordinances

The Population Ordinances of Philip II regulated the founding of towns and gives solutions to new problems; For new locations required characteristics were carefully determined to populate the territory, which included: a good climate, healthy people, animals and plants.; the ways of founding populations in advance-comptroller, mayor, colony ; as well as the urbanization of the site through the establishment of streets, municipal building , *ejido*, pasture, political category (city, town or village) and the local government. (Wall, 1989)

Royal Decrees of Carlos V

The main seals that belong to the municipality are:

- From the 1st of November 1521- limits the right of a buyer to a council fee that is not perpetual , but only for one lifetime, and can be sold to qualified people.

- From the 22nd of October, 1523, states that the cities of the Indies should have twelve councilmen, and the rest should have six .

- From the 21st of April, 1544, mandates that people who are not neighbors of the place cannot be elected as councilors or council positions.

Royal Letters of Philip IV

Dated November 23, 1623, these decrees ordered that the Attorney is elected by the councilmen, but without being considered part of the council.

The Ordinances of Mayors

On December 4, 1786, the "Ordinance of Mayors" was proclaimed. This system helps to reduce the autonomy of municipalities since all decisions are relegated to the Quartermaster General and the Viceroy, who were seen as direct representatives of the king-once again centralizing power.

3. Colonial Government

The first councils were formed by a head Mayor, two assistant Mayors, and eight councilmen. In 1526 there were 12 members of the town council. Later 15 members were designated in perpetuity since they usually bought their positions. Among their powers were the election of the two assistant Mayors, five councilmen and a Trustee.

Municipal Government of the Colony

In 1523 Carlos V forbade Cortés to give the indigenous inhabitants parcels of land, but he disobeyed these orders since and he had already done this. He wrote stating that the reason for contempt was to reward soldiers and to keep the indigenous population controlled. In 1524 Cortés issued ordinances that described the form and manner in which the land could be used by the native inhabitants.

Meanwhile, Queen Juana in the decree of October 5, 1522 states that the position of town councilman will be sold to the highest bidder, which ends the free choice through election by the authorities. She also named the head mayors or comptrollers, thus finalizing the intervention of the kingdom in the councils.

The ancient manors of each indigenous town became local indigenous governments- a mix of aboriginal customs and the Spanish municipality . The Tlatoani was now called the cacique, and there was a governor, a general captain, a sheriff and councilmen.

With this, the administration was divided between the indigenous people and the Spaniards. The mayor had jurisdiction over the population of Indians and mestizos, while the comptroller was responsible for Spanish populations. There were positions which depended on the town council and were appointed by the council such as the Deputies of Property, which were responsible for overseeing the management of funds and to ensure the good condition of the finances of the City. There was also the Attorney, which according to Martinez Cabin (1997: 82), was the following: "The background of the trustee: his function was to defend the rights and interest of the cities and towns. They were chosen for year or two-year periods, and their expenses were borne by the population. "

By then, the domains continued to spread. The municipality of Mexico City was established in December 1522, and in its first formal act on March 8, 1524, Francisco de las Casas was named Mayor.

Organizational Role

In colonial times the councils had the following main responsibilities: Public works, construction, care and maintenance of bridges and roads, distribution of lots and layout of the city, care of public services (water, lighting, sales, security of the markets , management of the cutting and planting of trees, and granting of the rights to sell meat and bread).

In the early years of the colony, the city administration was concerned with production, consumption and social distribution through the management of the immediate interests of the community, which had great importance in the formation of our country.

However, the regulation of the town was a mixture of the ordinances issued by the kingdom and is why Cortes was considered necessary to issue the ordinances; these ordinances were adequate during the early years, however later when the differences between people born in Mexico, those descendants of Spaniards and Europeans (newcomers from Spain) as well as those born by mixing indigenous

with Spanish blood, the social reality had changed and needs arose for municipal autonomy and independence.

4. The Era of Independence

This period begins about the year 1786 with the establishment of the intendant system in Mexico, as it delves deeper into the differences between Creoles and Spaniards, since the municipalities power over the government is centralized, excluding Creoles of the political and administrative positions, thus deepening hatred and desire for independence from Spain. This concluded in 1821, when Iturbide proclaimed the Independence of the Mexican Empire.

The system of administration offices in New Spain

According to Cruz Barney (1999:497) on July 4, 1718, Philip V established the system of municipalities in Spain as a form of administration and territorial division giving jurisdiction to the mayors on justice, treasury, war and police.

The special inspector José de Galvez and the Viceroy Croix, intended to establish the intendant system with the same characteristics of Spain, suspending the mayors and magistrates and accusing them of fraud of the royal heritage. On December 4, 1786, promulgating the "Ordinance of Mayors", the Mexican territory was then divided into twelve administrations , each with provinces and capitals. These were: Mexico, Puebla, Veracruz, Merida, Oaxaca, Valladolid, Guanajuato, Zacatecas, Durango and Arizpe.

> The mayor replaced the governors, the councilmen and even the magistrates. Some larger districts and municipalities immediately joined the administrations of their respective province. Others followed suit according to how the vacancies were available or complying with the terms of the title holders.

By suppressing the other members of government, the mayor became the main representative of royal power in the provinces of New Spain, preventing their autonomy. This system lasted until 1812, with the emergence of the Cadiz Constitution which transferred the powers of mayors to other competent authorities. This system finally disappeared in 1824.

Some factors that contributed to the independence of Mexico among others are: The apparent weakness of Spain, resentment of the educated and affluent Creoles by the monopoly of political power of the Spaniards, the success of the revolution of black slaves in Haiti and its independence from France, the ideology of enlightenment, the agitation against the policies and interests of Madrid by the Jesuits, the examples of other Latin American countries (1811, independence of Paraguay, Argentina 1815, 1818, Chile , 1819 Colombia, Peru, 1821), and the New Spain upper class resistance against the reintroduction of the Constitution of Cadiz in 1820. (Margadant, 2001)

Indeed, one of the main causes that generated discontent among the population is the weakness of Spain regarding the French invasion. In 1808 the people called for the abdication of Carlos IV, who handed the crown to his son Ferdinand. Fernando VII ascended the throne by popular acclaim. Napoleon invaded Spain and installed his brother Joseph "Bottles" on the throne. The country rose against the Emperor and each province declared war against the invaders. Also, the council of Mexico City challenged the abdication of Carlos IV and his son Ferdinand VII in favor of Napoleon, arguing that such waivers were invalid because they were not voluntary and were against the right that people have to give their own institutions. Thereafter, the council recommended that the Viceroy should continue ruling ignoring the orders of Spain and that New Spain remain independent of French rule.

Francisco Primo de Verdad, trustee of the City introduced the idea of the Creoles, with respect to the idea that New Spain take over their sovereignty through their representative bodies. Viceroy Iturrigaray expressed interest in supporting the demands of the council and called a meeting of notable citizens, attended by members of The Audience, Consulate, Archbishop and the City council.

It was decided to recognize the viceroy as lieutenant of Fernando VII, and to not obey the orders of Emperor Bonaparte. Iturrigaray was later apprehended and replaced by Pedro Garibay. This caused discontent and radicalization of the Creoles. In Querétaro, Miguel Hidalgo, Ignacio Allende and Juan Aldam conceived a plan to integrate a board composed of representatives of the middle class through councils. They took up arms and clashed with the Spanish troops. José María Morelos joined the fight. On September 14, 1813, Morelos declared in his "Sentiments of the Nation", among other things, that: America is free and independent of Spain and every other nation and that sovereignty emanates directly from the people, placed in their representatives; powers were divided into legislative, executive and judicial branches.

On September 30, 1812, Viceroy Venegas announced in Mexico City the enactment of the Constitution of Cadiz, while the insurgents in 1813 proclaimed the Solemn Act of the Declaration of Independence of Northern America after the 1814 Constitution Apatzingán. Years later, in 1821, Vicente Guerrero issued the Plan of Iguala proclaiming independence and keeping the monarchy. The Treaty of Cordoba was signed after the Mexican Independence Act, which states that Mexico is a sovereign and independent nation from Spain. During this period and in the various documents that were enacted, no importance was given to the municipality, nor mentions were made regarding the aspect of autonomy.

In the Constitutional Elements of Rayon, public power was organized and it implicitly recognized the existence of the municipality, although it was not structured. The Constitution of 1814, of Apatzingán, even though it had no effect, provided that the condition of the Municipal Board was kept.

The Constituent Congress of 1823 issued by the Constitutive Act of the Mexican nation. On October 24, 1824, the first constitution of the country with federal character dis not directly set the terms of the municipality, but in Article 161 provides that each State has the obligation to organize its government and previous administration which resulted in the first Organic Municipal Laws, modeled on the form of organization which was established in the Constitution of Cádiz.

In 1835 the legislative power does not recognize the President of the Republic, declaring themselves invested of the constituent power. Being conservative-leaning, they issued a centralist constitution, called the "Seven Constitutional Laws of 1836". It is the first that directly regulates the municipality. Some important aspects of this Constitution are: The Sixth Act, which regulates the division of the territory of the Republic and the internal government of the people. Among its articles are found : The provision for the obligation to make the bylaws and regulations of the internal police, the governor and municipal boards; that the municipality governments exist in the capitals of departments in which the populations are 4,000 in villages and towns of 8,000 inhabitants or more, should have Justices of the Peace, noting the obligations of the council which are security , assistance, health, welfare, primary education and public works.

The 1857 constitution was liberal and secured the federal form of political organization. This period is identified as one of reform and change, with liberals winning over conservatives. Regarding municipalities, it only mentions that the federal government should contribute to municipal

expenditures and enroll in the municipal register. The municipal government was guided by the decision of the local legislators, without the need to settle in the state constitutions, so that there was an unlimited power of the governors and legislators of the municipalities since no structure and integration was regulated- reserving it as the power of the states according to Article 72. (Lanz, 1947)

In 1906 the Mexican Liberal Party expressed the need to suppress political leaders and reorganize the missing municipalities. The Plan of San Luis stressed the need to regain freedom and no re-election in municipal elections. The Plan of Ayala stated that the municipalities have autonomy to serve communal interests and protect the decisions of the Federal and State Governments.

Carranza in 1916, took up these manifestations and in the draft of the Constitution refers to municipalities as the basis of a free government. It is in the Constitution of 1917 where the principle of a free municipality was established as political and economic independence, which can be freely administered through its own resources and funds awarded by the Federal government. The project established the form of representative, republican and popular government-an autonomous municipality and administration chosen through open elections. Following discussions of the Constitutional Commission of Queretaro on January 24, 1917, in which part II on the free administration of estates, there was a great controversy among several representatives which eventually became Article 115 which states regarding the municipality:

Section 115 - The states shall adopt for internal government, the republican form of government –a representative government,on the basis of its territorial division and its political and administrative organization, a free municipality according to the following rules:

I. Each municipality will be administered by a council of direct popular election, and there will be no intermediate authority between it and the State Government;

II. Municipalities freely administer their finances, which will form the contributions indicated by the legislatures of the states and that in any case will be sufficient to meet the municipal needs...

Therefore, Article 115 regulates the organization of the states to establish the basis of the territorial division of the free municipality and its political and administrative organization.

As seen from pre-Conquest times there was already a territorial division of people; during the conquest the first municipality was formed in accordance with the rules in Spain. In the Independence period municipalities were formed until the Constitution of 1917, where the municipalities' free administration was approved and the use of its own resources was established.

II. Background of the Comptroller

For background of the Comptroller it is necessary to divide into two periods: the time before the conquest and thereafter.

a) The Pre-Conquest Era

The highest authority of the fiscal organization of the day was the *Cihuacóatl* (civil servant, a kind of alter ego of the King), below him was the high *Capixqui*, who was in receiving what the lower *Capixques* gave him and keep accounts in respective books using hieroglyphics. The *Cihuacóatl* took care of distribution and proper use of taxes, with the authority to use them as he saw fit.

The control that he exercised was respect to the punishments that were given to the fiscal administrations if there was poor management of the tax collection process. If this occurred, they were imprisoned and condemned to death, and their wealth was given to the king.

b) New Spain

In Spain accounting was done before the eyes of the king, who gave more attention to the collection of funds than its accounting. Some Accounting Ordinances were given by Juan II de Castilla at the beginning of the 15th century through the Ordinances of 1436 which created the Accounting House of Valladolid. In 1437 the Great Accountant of accounts was organized, and in 1442 the regulation and control of expenses was established.

Antonio Dougnac states that the royal treasury was entrusted to the royal officers, who were responsible for ensuring the collection, storage and investment in royal incomes. These officers were the treasurer, who

received the royal treasury and paid the expenses; The factor, which handled shopping, declining revenues and tax litigation; the seer, who watched the actual payment of royal fifths and the counter who kept track of the Treasury. They had to comply with the rules established in book 8 of the Collection of the Indies, added after the ordinances of 1542 in which their performance was established through joint management and joint responsibility, and shall submit reports every three years and a kind of state budget resulting year.

According Dougnac (1994) due to irregularities in the reports, in 1554 it was decided that in the places where there were hearings, accounts were given annually before the President and the judges, and every three years before the Governor and two councilmen. In addition these officers were overseen at their homes and given searches and visits which today would be called audits.

Other measures were taken to control the actions of officials, such as a personal guarantee given by the royal property owners; an oath of secrecy and to perform their jobs well with loyalty that was done at the beginning of the term of the management official; an inventory at the inauguration of the post of existing assets of the chest ; books that were rigorously kept of the accounts and were examined in inspections; and several locks with keys to the chest.

In 1787 the functions of treasurer and accountant were created, which were assigned by the factor, and a custody and depositary lieutenant. In 1789 a higher official was appointed, and in 1812 the treasurer was established as a provisional accountant.

On November 16, 1824, the dissolving of the directions and general income accounting was ordered; in 1825 a government direction and all other branches of the federation were established. This period was characterized by the centralization of the management and administration of the Treasury Department by establishing the Department of Accounts and reasoning, responsible for accounting, budgets and annual accounts and the Auditor General under the Chamber of Deputies with the obligation to examine the public accounts each year.

It wasn't until 1917 that the Secretaries of State Act was enacted, and in 1918 the Department of Comptroller was created and issued its own law of operation and depended on the Ministry of Finance. Its creation reflected the need for an office to exercise effective inspection on the management of the funds and assets of the nation through previous control.

In 1932 the Department of the Comptroller was suppressed by decree, and the Ministry of Finance took over the functions granted to it by the Federal Treasury. In 1935, the Federation of Accounting was created; In 1977 the Budget , Accounting and Federal Public Expenditure Law which aims to modernize the public expenditure management was enacted with the Ministry of Planning and Budget in charge of the central management and the systems of planning and control.

In 1982 through renovations and additions to the Organic Law of the Federal Public Administration, in effect from 1983, the Secretariat of the Comptroller General of the Federation (SECOGEF) was established, granting powers of surveillance, control and discipline with regard to the responsibilities of public servants.

In 1986 through President Miguel de la Madrid Hurtado, the Federal Public Interstate Entities was established, which according to the preamble of the initiative was primarily to strengthen the means of state control over the state sector and its autonomous management.

In 1992, the Ministry of Planning and Budget disappeared, and they were fused by the Ministry of Finance and Public Credit. It restructured the SECOGEF administratively and issued its Interior Regulation in 1993.

In 1994 the SECOGEF amended its name to Secretariat of the Comptroller and Administrative Development (SECODAM), which by decree on December 24, 1996 set new powers under the National Development Plan 1995-2000.

By decree on April 10, 2003 the Organic Law of the Federal Public Administration Reform and SECODAM changed its name to Ministry of Public Service, retaining much of its authority and powers and adding some fractions to Article 37 and 47 , among others. The Act was made in order to establish a structure for the better development of the control system and government evaluation agency that prevails today, although with modifications and adjustments.

From pre-Conquest times, and there was the figure of the tax collector. During the period of New Spain various rules and positions were created to perform the tasks of collection and expenditure control, but what really mattered was what was collected and not revision or good management. It is not up until the mid-sixteenth century is when the first steps of control were taken, and in 1918 the first Federal Comptroller Department was established.

III. Legal basis of the municipality and the comptroller in Chiapas

The municipality is the political and administrative authority of the Mexican state and it is subject to its own legal standards. So first of all for the purposes of this study the Constitution of the State of Chiapas was referred to which incorporates the spirit of Article 115 of the Constitution of the United Mexican States. In that jurisdiction, legal action and administrative power is set.

The Constitution of the State of Chiapas

On September 12, 1824, Chiapas was annexed to Mexico through the "Act of Incorporation of the province of Chiapas in Mexico", issued on the 14 of September that same year as the " Solemn Pronouncement of the Federation of the Province of Chiapas Act ". The Constitution that was recognized at that time was the Federal Constitution of October 24, 1824, while the State Constitutional Convention was installed.

Background

The first Constitution of the State of Chiapas was approved on November 19, 1825 and published on February 18, 1826. In January of 1858 a second constitution was promulgated .The third was enacted on November 15, 1893. The fourth constitution dates from February 1, 1921, which by Decree No. 92 of July 17 1973 and Decree 103 of August 24, 1981, remains unchanged. The current Charter was enacted on August 25, 1981.

Constitution of 1825

In the Constitution of 1825 there is no specific chapter on the municipality. However, Decree 51 dated November 23, 1825 includes the "Provisional Regulations for the election of Members of the Legislature of 1825" which in the Chapter 3, rules 29 to 39, refer to the powers of mayors in terms of their municipalities. Also in Chapter 4 º, the powers of municipalities, rules 40 to 52, refers among other things the role of municipalities in taking care of cleaning up the streets, markets, plazas and hospitals.

Constitution of 1893

In chapter II of this Constitution regarding "internal administration" , Article 53 provides that: The state administration must have political chiefs, councils and municipal agents, whose number, jurisdiction and powers are ascertained by law. Political heads are appointed by the Government and local councils by popular election.

Until this period there was a centralization of power in the figure of the Governor of the State, having say in the direct appointment of political bosses, while the Congress, according to Article 30 F. XIV and XV, were assigned the task of making the divisions of the Departments in municipalities and in determining the amount of the budget allocated to each of them.

Constitution of 1921

In the Fifth Title "Of the Towns" in Articles 65 to 70 , it is seen that the legal personality of municipalities is recognized, and the autonomy in the management of its property as well as the duration in the order of the members of the City Council and their replacement in case of permanent absence of staff. Also in Title III, Section One, Chapter II the initiative and making of laws, the right to initiate legislation and decrees by the councils relating to municipal administration is recognized.

On November 15, 1922, pursuant to Decree No. 35, 2nd Art reformed of the State Constitution to establish the Law of Free Municipality municipalities and delegations of Chiapas were divided.

Constitution of 1973

Amending and supplementing Title Five "Of the municipalities", which recognizes the Free Municipality as the basis of territorial division and political organization, establishes the obligation for municipalities to check their accounts and propose the budget to be used, and increases the duration of the members of the City Council of one to three years and establishes the requirements to be a member.

1981 Constitution

Regarding the 1973 Constitution, only the content of the articles shall be amended to clarify the terms and implicit legal purposes. Title V becomes the Seventh Title "Of the municipalities", which contains Articles 58 to 63, among others, and the following: General Provisions- Identify their territorial jurisdiction, legal action and administrative powers, form of administration through a collegial body called a council, with authority and jurisdiction in cases that are stipulated by the state constitution and municipal organic law; Recognizes the legal personality required for all legal purposes. The City provides integration: For the mayor, vice-mayor and councilmen.

The current Constitution has changed slightly since its decree, primarily related to the integration of the municipalities according to population, disappearance of municipal agencies, requirements for membership of the City Council, and the inclusion of public services in charge, formulation, administration Municipal Urban Development Programs and regulatory aspects of the workers of the municipality.

Municipality Law of Free State of Chiapas

This Act was enacted on February 4, 1931 by the then Governor E. Raymundo Enriquez, its main items are the following: (. Art. 1) The State of Chiapas, for administrative political operations is divided into municipalities First- at least five thousand inhabitants, Second, at least three-thousand, Third, minimum one thousand, categories and dependent Township Municipal Agencies that are attached. (. Art. 68) Members of the City Council and City Treasurer, are jointly responsible for the irregularities in the management of municipal funds; (Art. 69.) All residents of the Municipality have the right to complain to the relevant council or the state government's poor investment of municipal funds and all the facts that matter regarding the municipal treasury.

The Municipal Comptroller

In the municipality, in first place is the control that corresponds to the mayor. The authorities exert a permanent hierarchical control over the operation of agencies and staff performance of their dependency. The Municipal Law of the State of Chiapas (LOMCH) provides in Article 59 of Chapter I the administrative organization of municipalities, which

may have a municipal comptroller in order to verify that permanent municipal actions are performed according to plans and programs approved by the City Council, as well as monitor the correct application of financial resources according to the approved aid and to serve the trustee in office who will propose to the municipal comptroller before the City Council a budget. Under this appointment, being under direct command of the comptroller.

Also, in Chapter IV Accounting, Article 28 of the Law of Budget, Accounting and Municipal Public Expenditure, it is established that the municipalities provide an area of Internal Control that will depend on the syndicate of City Hall.

An important aspect that concerns the subject of this paper is referred to the State Congress and the board of control, from August 18, 2003. According to Decree No. 207 published in the Official Gazette of the State, the Superior State Audit replaces the Treasury Accounting Office. It is on that date that the Superior Law of the State of Chiapas under article 1 has an objective the regular revision of public accounts of the State and the municipalities and their audit, compensation and financing, and determination of responsibilities among others. Municipalities must submit documentation on the public account, understood as the report that municipalities pay to Congress on their financial management in order to ensure that revenues and expenditures were exercised under the terms of the related legal and administrative provisions . Information will be presented on a monthly, quarterly, semiannual and annual basis.

The municipal comptroller legally arises from the 1917 Constitution, as Article 115 which allows the autonomy of municipalities and therefore the need to control the exercise of public spending. However, despite the importance of transparency in accountability in Chiapas, the relevant legislation is relatively new and may be considered insufficient, under which every member of society must set limits to the legitimately constituted political power.

Conclusions

The calpulli was based on the centralization of all of the provinces that formed the Aztec Empire- a more complete organization than the municipalities of Spain, since it could raise taxes, identifyied social classes

within the regime, and watched that none of its members starved and existed a union for the celebration of rites and ceremonies.

The municipalities that were established during the colonial administration were divided between the indigenous population and the Spaniards.Municipal administration was concerned with production, consumption and social distribution by managing the immediate interests of the community. The administrative system that was subsequently established caused discord because the centralized political power, among other things, contributed to the independence of Mexico.

In the 1917 Constitution established the basis on which the principle of a free municipality actually developed and political and economic independence was established, which is freely given through its own resources and the participation of funds granted by the Federal government.

Moreover, when Chiapas was annexed to Mexico in 1824, the first constitution did not recognize municipalities. It was until 1893 that the chapter on the administration of the municipalities was established and in 1931 the Municipality Law promulgated the Free State Chiapas. This is where the history of the Municipal Comptroller was established in the state.

Although in recent years progress has been made in transparency, work still needs to be done in the area of municipalities, as there is still a lack of knowledge and training of municipal trustees who are the auditors of the municipality which do not rely on the creation of a municipal comptroller to verify the proper use of resources and power granted by citizens to municipal officials who must be brought under control in order to prevent diversion and abuse in the exercise of powers granted by the people.

Finally, it is important to note that the municipal control helps to ensure the proper functioning of the municipalities not only suitable for detecting damage to the treasury, but to prevent and eliminate irregularities in the handling of public funds.

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Academic Papers

Health-disease-care in Chiapas, Mexico

An academic view

Dra. Laura Elena Trujillo Olivera
Dr. Néstor Rodolfo García Chong
Mtro. Octavio Orantes Ruiz
Mtra. María de los Ángeles Cuesy Ramírez

About the Autor

Academic group, Health Promotion and Education
Tuxtla Gutiérrez, Chiapas. 2012

Introduction

Beginning in the second decade of the century, it was observed that the situation of health, disease, and healthcare in the population in Chiapas had greater complexity than in the two previous decades.

There is no doubt that the current social changes blend with a marked intensity the components of human wellbeing that try to be described. However, we should remember that human health is merely the result of the interaction of both distal and proximal determinants, and the current dominant model explains this phenomenon. That is why the association is particularly relevant to its counterpart: disease, and as a consequence, the emphasis given to medical attention.

As part of the description it must be recognized that each component underlies the idea of contradiction, that is merely the perceived dissonance between reality and official speeches; between economic policies aimed at achieving development and increased burden of disease- all under the assumption that further development would have greater well-being and quality of life in social groups.

Therefore, this material is organized in three main areas that give the title to this work, starting with health and its determinants[1], followed by disease, and finally health care within the formal model. This logic reflects the purpose of conferring the foundation for the curriculum redesign of a medical degree program.

This section describes the main characteristics of Chiapas regarding health problems whose complexity is considered in particular two major categories: marginalization and multi-ethnicity.

This material is devoted to medical students, and aims to place systematic information at their fingertips to help develop their *awareness of the need to serve.*

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[1] The determinants of health are all of the factors that influence the health status of individuals interacting at different levels of organization which define or determine the health of a population. They are organized into two main categories: proximal or distal or macro determinants and micro determinants; The latter group is a conglomeration of variables and society and attributes of population (PAHO, 2002

1. Health and social determinants

As stated earlier, the hegemonic model of human health is the result of a number of aspects of that condition which falls under the rubric of macro-determinants grouped according to socioeconomic, cultural and environmental conditions .None of these have not been radically modified, since all social change reflects a logic, has to overcome inertia, and must fit the pace of macroeconomic processes.

The processes of Globalization are unavoidable local expressions. Social change is observed in the country and particularly in the state of Chiapas, and forces the proposal of alternatives due to the consequences that develop from complex problems in the quality of life of social groups, particularly in the field of health.

In the dialectical view of health and disease it is recognized that environmental degradation has an effect on the quality of life of social groups. When found with no options for productivity and to meet basic needs, many choose to migrate. Recently migration has increased in Chiapas. There is both rural-rural and rural-urban movement, as well as to various destinations in the country and the United States. The human development index has been maintained in recent years, and indicates that the epidemiological profile has moved in a strong tendency towards non-communicable chronic diseases, and an early stage of the demographic transition can be observed. In this sense, there is a substantial change in social policy of a different nature that is somehow impacting health.

The socioeconomic context of Chiapas

Located in the southeast of Mexico, Chiapas has a population of 4 '796, 580 inhabitants[2], most of which are in an economically precarious condition which allows for forms of potentially pathogenic life, from the point of view

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[2] INEGI. Results of the XII General Census of Population and Housing 2010. Available http://www.inegi.org.mx/sistemas/consulta_resultados/iter2010.aspx

of health determinants[3]. Some indicators that explain the vulnerability of the population in Chiapas are summarized in Table 1

Population (2010)	4' 796, 580
% Population aged 15 and over who do not know read and write	17.91
% Population 15 or older without complete primary	37.13
% Occupants in dwellings without drain or toilet	5.06
% Occupants in dwellings without electricity	3.82
% Occupants in houses without piped water	22.37
% Housing with some level of overcrowding	53.90
% Homes with floor	15.66
% Population in towns with less than 5000 people	57.86
% Working population with incomes up to 2 minimum wages	69.85

Cuadro 1. Main indicators of socioeconomic status in Chiapas, 2010
Source: CONAPO, 2012

[3] OPS. Modules principles of epidemiology for disease control. 2nd. Edition Washington, D.C., 2003

The share of the secondary sector in the state is emerging, except for the production of electricity and oil, although there is also great potential in the agribusiness and manufacturing sectors.

In the tertiary sector, incipient participation is highlighted by tourism, in particular by exploiting natural attractions as socially cooperative ecotourism sites.

According to the National Population Council[4], Chiapas, Guerrero, Chihuahua, Oaxaca and Veracruz are the states with highest Marginalization Index. According to the model of health determinants these conditions increase the vulnerability of the population to damage (Figure 1).
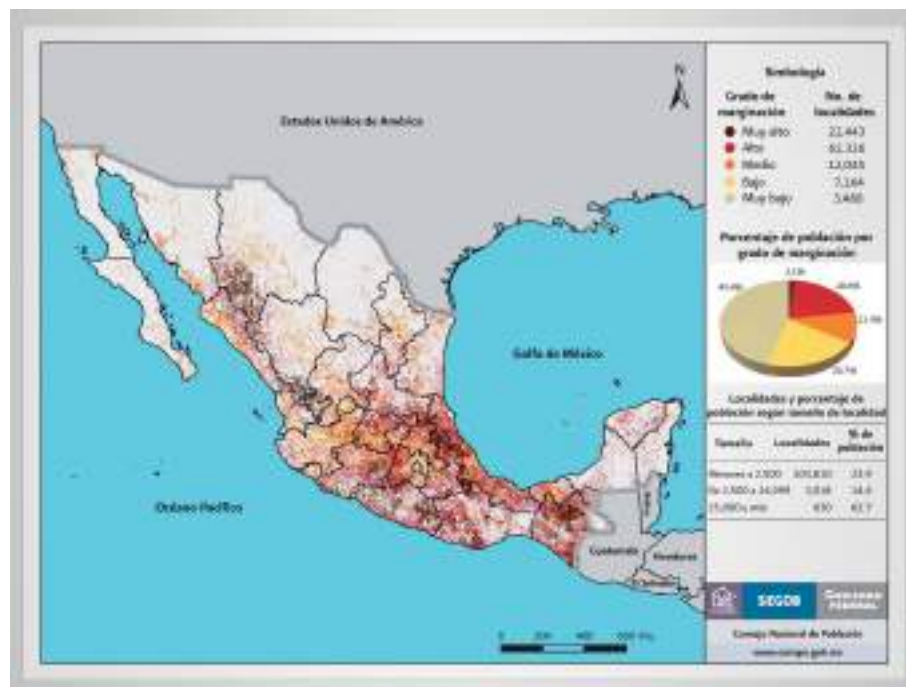

Figure. 1 Mexico. marginalization level by state, 2010
Source: CONAPO estimates based on INEGI, Population and Housing Census 2010,
Main results by location.

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[4] CONAPO. Marginalization Index by Location 2010. 1a. edition, January 2012 Available at:. <http://www.conapo.gob.mx>

Also, Chiapas ranks first nationally in marginalization by location. 87 of its municipalities (67.13%) are located in the High or Very High levels of marginalization. Almost 100% of the indigenous population and 70% of all residents speak one of the five main indigenous languages which are registered in the state in addition to Spanish: Tzeltal, Tzotzil, Chol, Zoque and Tojolabal. In addition to these languages, Mame, Chuj, Kanjk'obal, Jacalteco, Lacandon, Cakchikel and Mochó are added to form the nucleus of different ethnic minority Chiapas. These groups are residents of the border region with Central America and share cultural backgrounds with Mayan groups located in the state and provide the substrate for the porous border, which is described below.

Figure 2 provides greater detail of the distribution of the marginalization in Chiapas. Note that the darkest points represent the highest level of the phenomenon.
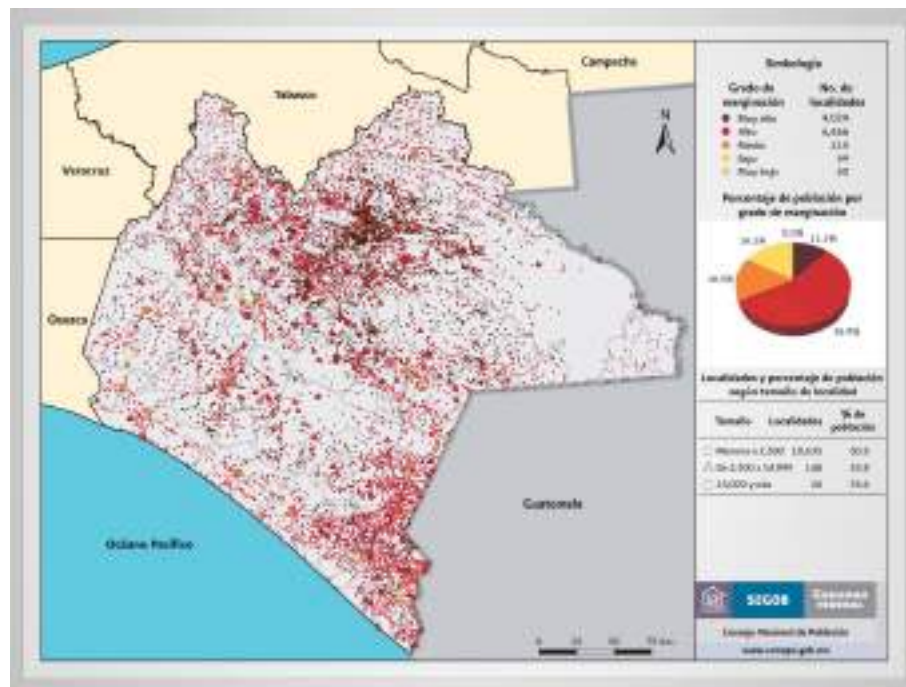

Figure. 2. Chiapas: Degree of marginalization by location, 2010
Source: CONAPO estimates based on INEGI, Population and Housing Census 2010,
Main results by locality

In contrast, 16.33% of the 118 municipalities[6] reported by the official source, have published indicators that are located with Low and Very Low marginalization.

The complex social problems

The previous paragraphs roughly show the complex diversity of material living conditions of the people of Chiapas, however, the dynamics of social processes are not evidence, which is why it is necessary to treat the most important aspects related to health separately regardless their hierarchy. However concepts include various epistemic origins is an approach to health as a complex system.
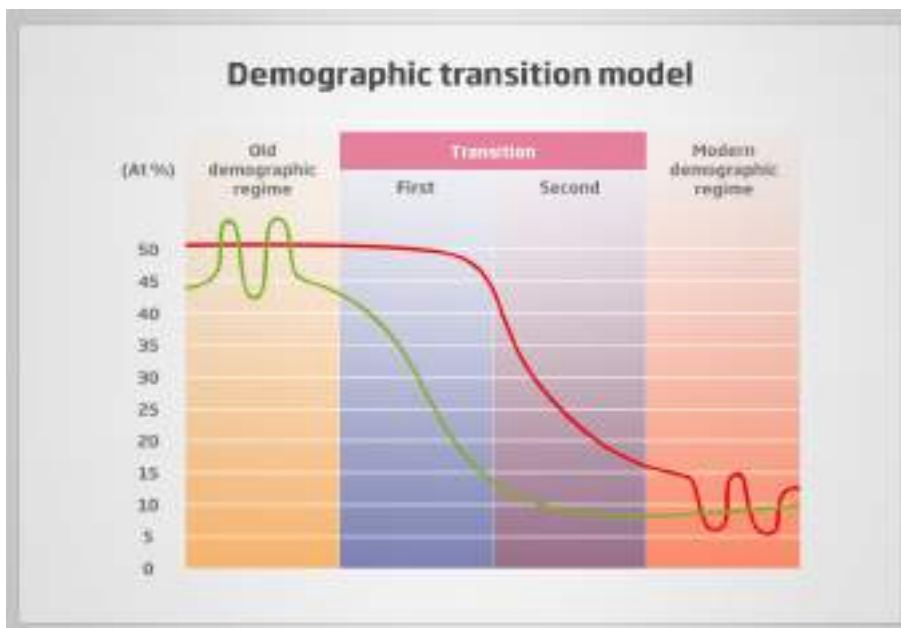
Demographic Transition

"The demographic transition model began as a classification of populations differentiated by different combinations of levels of birth and death," where societies go from a demographic regime of high birth and mortality that determines a stable population, to low levels of birth-death[7] that determines a new stable population. From one regime to another, societies pass through a situation in which mortality declines to control their causes, but the birth rate remains high determining population growth. In another there is the further progressive decrease in birthrate with a trend towards stabilization of the population (Graph 1).

The demographic transition also determines progressive changes in the distribution of the population with a predominance of women and the elderly.

> "While the concept of demographic transition had its origin in the attempt to explain the relationship between demographic and socio-economic changes in Europe during the eighteenth century, its use has been extended to the present because it relates to identifiable demographic processes even in different historical situations, such as because it refers to identifiable population dynamics in the light of their interrelationships with the social, economic and cultural variables (Zavala de Cosio, 1992)."[8]

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[6] From 2011 four municipalities more were added, for a total of 122 in the state, although there is no disaggregated data available. Institute of Social Communication of the Government of the State of Chiapas (ICS). . 2011 Newsletter 3768: Decree of the State Government for 15 economic regions. January 12, 2011.

[7] Vera Bolaños, M. The theory of epidemiologic transition. In: Research Papers Mexiquense. 2008; 37.

Phases of the demographic transition model.
*Available at: http://mx.kalipedia.com/graficos/fases-modelo-transición-demográfica.*
html

In Mexico, the improvement of living conditions and health services has changed lifestyles and impacted the distribution of the population, gradually increasing population of the elderly (Graph 2).

Life expectancy in the country has increased to 75.5 years for those born in 2010 and in Chiapas, the value is 74.4 years for the same group, with an approximate advantage of four years for women. This increase is associated with the relative improvement in health services and food[9].

The same graph clearly shows the prospective behavior of the demographic transition by 2025. White bars correspond to the distribution of the population in 1975, where the group of 0-25 years is 50% of the total. In contrast, the red bars indicate the projection to 2025, when 50% of the population according to the group will be 30 years old and over.

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[8] Cited in: IDB / ECLAC / CELADE (IDB / Economic Commission for Latin America and the Caribbean / Latin American and Caribbean Demographic Centre), Impact of Demographic Trends on Social Sectors in Latin America. Santiago.Disponible in: http://www.eclac.org/Celade/SitDem/DE_SitDemTransDemDoc00e.html

[9] SSA. National Health Program 2007-2012 SSA. Mexico 2007 Available at: <http://www.ssa.gob.mx>
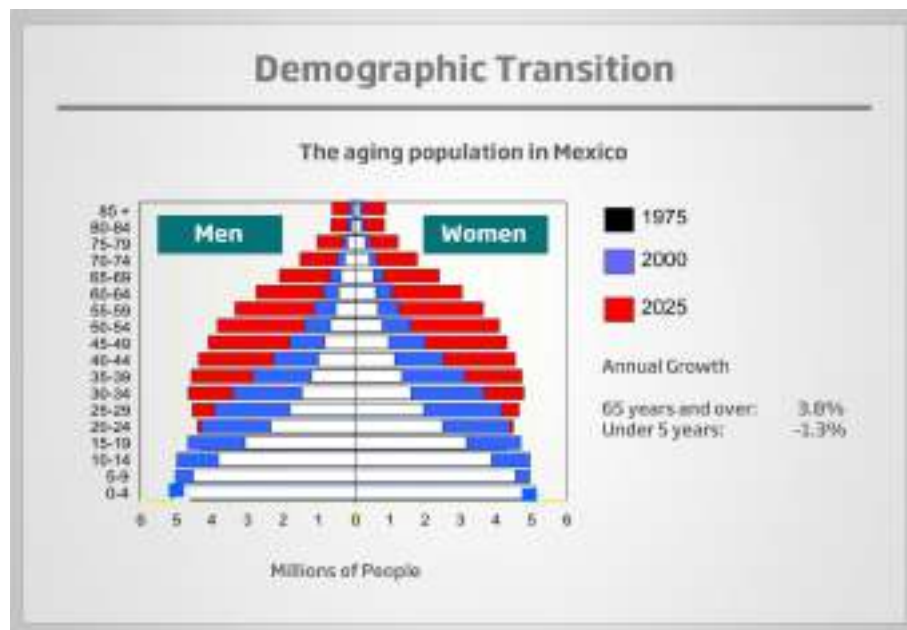
Graph 2. Demographic Transition
Source: Population estimates Conapo. 2000. Quoted in Frenk Mora,
J. Impact on Public Health. 2001.
Available on the Internet. www .. FUNDALUD. org. mx

Chiapas has one of the highest rates of population growth in the country: 2.0% annually, which configures an expansive population pyramid[10].

The overall rate of fertility in the state declined from 2.85 to 2.33 children per woman in 2000-2005, while at the national level it increased from 2.41 to 2.11 children per woman between 15 and 49 years old. Fertility regulation programs have had greater impact on urban and mestizo population than among other ethnic minorities.

In Chiapas, the male / female ratio is 103/100 at the time of birth, and remains unchanged up until 19 years of age. From age 20, there is a decrease in the population of men corresponding to 96.28/100, a phenomenon probably related to migration, among other determinants. In the country the same indicator is 95.6/100, according to the 2005 Census[11].

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[10] INEGI. Census of Population and Housing 2010. Principal results. INEGI 2011. Available www.inegi.gob.mx / est.

[11] Ídem
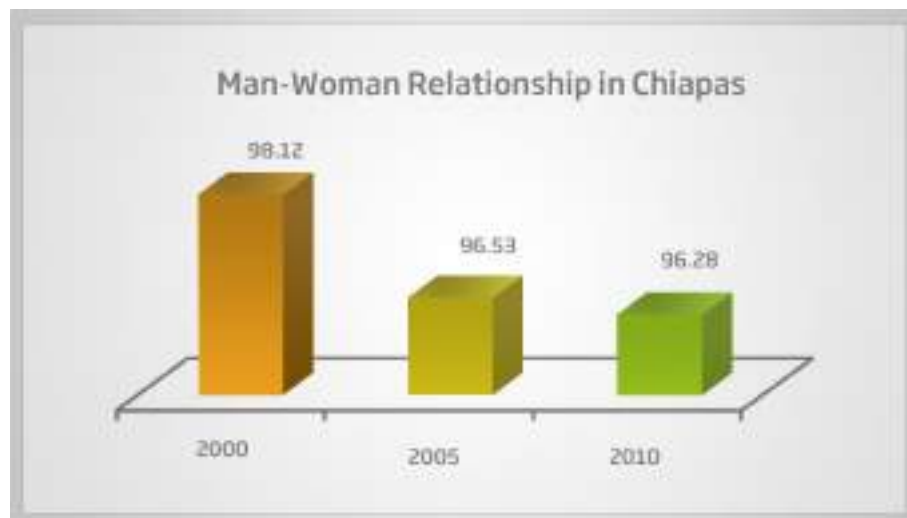
Graph 3. Relations Man-woman in Chiapas
Source: Authors' calculations based on information in the II Population and Housing 2000, 2005 and 2010. Basic Tabulations.

The population dynamics of Mexico and Chiapas have different implications for the stages of demographic transition in which they are found, and are invariably represent modifications in structure and composition. In Mexico, the aging of the population has a different rhythm- the median age nationally is 23, while in Chiapas it is 20.

For municipalities with predominantly Tsotsil ethnic populations (Chanal, Chenalho, Chalchihuitán, Aldama, San Juan and Santiago el Pinar, Cancuc, etc.) middle age is at 15. The composition and demographic structure are related closely with different epidemiological profiles, creating more complex needs and health services, education, job creation, and decent housing conditions[12].
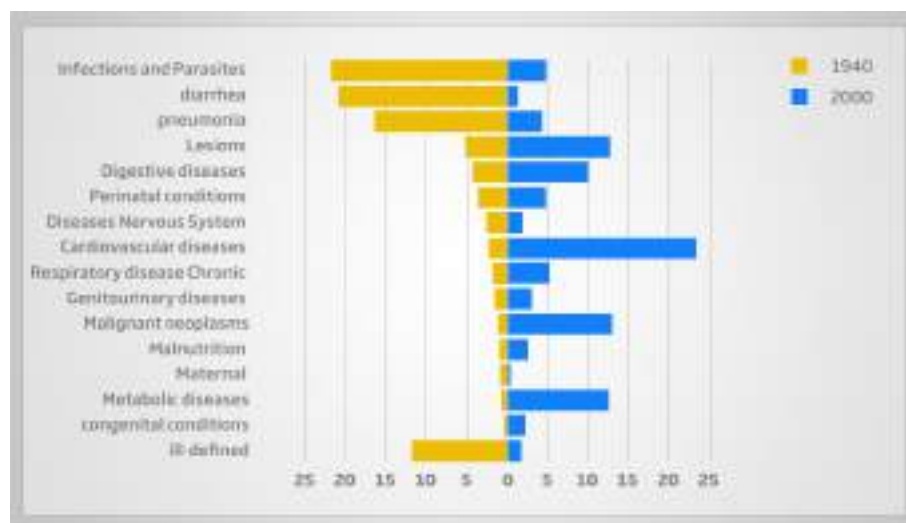
Epidemiological transition

Just as the concept of demographic transition was modified by social, economic and cultural changes, the same occurs with the concept of

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[12] Ídem

epidemiological transition. It is worth noting that there is a multiplicity of variables influencing the patterns of morbidity-mortality, particularly in its temporal variation.

It should be stressed that these changes in the epidemiological transition are closely related to social, economic and cultural determinants that characterize the regions that exist within a country or state.

The graph below shows the epidemiological transition in Mexico (Figure 4). As we can see, in 1940, the proportional distribution of the main conditions favored the contagious and controllable in nature. However, by 2000, cardiovascular disease, metabolic diseases, malignancies and accidents dominated.

Graph 4. Epidemiological Transition.
Source: Frenk Mora, J. Impact on Public Health 2001.
Available online: www.funsalud.org.mx

This explains the efforts of the Health Sector in the control and prevention of communicable disease. However, in the case of Chiapas we assume that marginalization and multiethnicity sets up a scenario in which the epidemiological profile of 1940 co exists the current profile.

The distal[13] health determinants explain the profile of disease and death in a population, however, they must be regarded with the frequency and distribution of recorded cases that correspond to official statistical information and may not correspond to the whole of the occurrence of these events, particularly in Chiapas, due in part to the

sociodemographic and cultural characteristics that impede access and utilization of available medical services.

Migration

Before 1980 there was evidence that migration was positive for Chiapas. The building of infrastructure for hydropower generation became the incentive for population growth, which was much more evident in the four major cities over 50 thousand inhabitants.

However, in a permanent manner, there exists intense migratory transit along the border with Guatemala because the geographic boundaries for the resident population are a formality overtaken by reality. It is a fact that residents of the border trade or work on one side of the line and live in the other, making a regular crossing without any legal process, forming a dynamic unregulated border[14].

The exchange of material goods and services, in addition to the illegal trade in other goods, is the most visible portion of the phenomenon. Consumption habits, vital living spaces of human interaction and the risks of exposure to potentially pathogenic environmental elements are shared. It is a porous border, which helps to increase the complexity of the health problems of the entity.

The migratory transit component is accented with citizens from around the world that target the United States in a process in which risks occur that are associated with the sexual abuse of victims who are women, children and young men[15,16] to which must be added the trafficking of people and drugs[17].

There are no systematic records on the extent of migration on regional population dynamics, however such movements are differential

[13] The determinants of health are all factors that influence the health status of individuals, interacting at different levels of organization, define or determine the health of a population. Are organized into two main categories: proximal or distal or macrodeterminants and micro determinants; agglutinate the latter group variables and society, population attributes (PAHO, 2002).

[14] J. Rebolledo porous borders: the case of Mexico and the United States. Approaches Rev No. 8. Faculty of Political Science and Public Administration. Central University of Chile; 2008. Pp.. 173-191.

and are presented usually as follows: Tzotzil and Tzeltal in the central highland area to the central depression including Frailesca, the Soconusco and the Lacandon Jungle. Also, displacements to the Tsotsil Zoque and Tseltal area in the northern mountains and highlands to the pastoral areas of the Gulf Coastal Plain have been identified. Within areas designated as the source of movement, movements are made from small marginalized peripheral localities towards greater regional development centers such as to the municipalities and the state capital. One of the main reasons for such movement is attributed is the search for better economic, social and life conditions.

In the Soconusco coffee areas, there is a temporary demand for labor (about 90,000 people) during harvest which coincides with the months of September to December, or October to January; at this time there is the presence of indigenous population from both the Chiapas highlands and Guatemala. This population is commonly known as farm laborers and present social and economic problems associated with production[18].

Today, there is a negative net migration registered per year, close to 66,000 people. This figure is consistent with the sex ratio. The population pyramid is achieved by identifying the number of men older than 20 and younger than 45 that are missing in the period between 2005 and 2010.

After 2000, it is confirmed that that temporary migration to the United States is overestimated in the official documents of both countries. Although it is recognized that in general migration has intensified in the last three decades of the twentieth century[19].

Starting from the new global circumstances, it is estimated that the economic conditions in the United States has gradually discouraged migration, reduced the magnitude of remittances and increased the economic difficulties of many Mexican domestic groups, particularly in Chiapas[20].

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[15] Caballero M, Leyva R, Bronfman M. Women and International Migration in Southern Border. In: Memory. Women affected by migration in Mexico. An approach from a gender perspective. Mexico: National Institute for Women; 2007

[16] ML Rojas-Wiesner. Women and Migration in the southern border of Mexico, Histoire et Mémoire Amérique Latine. Les Cahiers ALHIM 2007. 14 Available at: http://alhim.revues.org/index2252.html

[17] CIM-OAS, INM, INM. Human Trafficking: The Basics. National Women's Institute. Mexico. ., 2006 Available at: http://cedoc.inmujeres.gob.mx/documentos_download/100878.pdf)

Vulnerability to natural disasters

A disaster is "… the result of an important ecological breakdown in the relationship between humans and their environment, a serious and sudden event (or slow, such as drought) on such a scale that the stricken community needs extraordinary efforts to cope, often with outside help or international support. "[21]

This classification includes those disasters of natural origin and those that are brought about by human intervention. According to the WHO, there is a greater vulnerability to natural disasters where there coexists circumstances of poverty coupled with inequality and exclusion, rapid population growth and environmental degradation – aspects which coincide in developing countries[22].

Precisely in Chiapas these circumstances are combined and the consequences are evident and impact beyond the phase of the disaster. Citing as an example the contingency effects following the effects of hurricane Stan in late 2005- the lack of urban planning, the omission of sanitary regulations possibly derived from poverty, and weak technical capacity to deal with post-disaster health conditions.

Poverty

According to the Bank of Mexico[23], the distribution of income in the country is one of the most unequal in the world arena, and ranks thirteenth among 111 of the countries that were assessed.

According to the National Council for the Evaluation of Social Development Policy (CONEVAL)[24], poverty in Mexico increased between 2008 and 2010 at the expense of the population group that has some vulnerability due to social deprivation or income. The official source

[18] Fábregas Puig A. Indigenismo. Structural Change in Chiapas. Progress and prospects. Tuxtla Gutiérrez, 1988 pp UNACH. 37-39

[19] Corona R, Tuirán R. Magnitude of Mexican emigration to the United States after 2000 Population Papers 2008: 57: 9-38.

[20] INEGI. The global economic situation could affect patterns of international migration of Mexicans. Press 2009; 055/09.

estimated that in 2010 there were 52 million people living in poverty. The non-poor and vulnerable population increased during the same period from 19.7 to 21.8, which shows a variation of 2.1% of the total.

INDICADORES 2010*	Mexico	Chiapas
Population in poverty a (%)	46.2	78.4
Population in Extreme Poverty (%)	10.4	32.8
No. average social deprivation **	2.5	2.8
Percentage change in people deficient Educational Backwardness	-1.3	-7.8
Percentage change in people lack access to health services	-37.6	-30.1
Percentage change in people deficient Social Security	-4.3	-3.6
Percentage change in people with lack of quality living spaces	-2.5	-13.3
Percentage change in people with lack of basic services in the dwelling	-2.7	-6.1
Lack of access to food	3.2	15.6

[21] Noji E. General. In: Disaster Impact on Public Health. Bogotá, Colombia: Pan American Health Organization; Pp 2000. 9-24

[22] Ídem

[23] Salgado N, Rebecca W. Gender and poverty: determinants of health in old age. Mexico Rev Pub Health 2007; 49, Suppl 4: 515-521

Percentage change in persons with lower income to the line Minimum Economic Welfare	2.1	5.5
Percentage of population with 3 Social Gaps or more	26.6	48.7

Table 2. Selected Poverty Indicators in Chiapas and Mexico. 2010
Source: Own elaboration from CONEVAL 2011.
* The range refers to the difference between 2008 and 2010.
** There may be up to 6 types of social deprivation

The situation in Chiapas is deplorable. Table 2 summarizes the current state of some indicators of the economic condition in 2010.

What calls attention is the striking contrast in levels of malnutrition between Chiapas and other southern states (Guerrero, Yucatán, Puebla and Oaxaca)which have a prevalence of moderate and severe malnutrition exceeding 20%, in contrast to some northern states (Tamaulipas, Sinaloa, Jalisco, Durango, Coahuila, Baja California and Sonora) which is less than 8%. The data are consistent with the indicators of Table 2. Note that the lack of access to food is almost five times higher in Chiapas than nationwide.

In developing countries, child malnutrition is among the top 5 causes of death and is inserted in a context of social, economic and cultural variables that besides being very unfavorable, are by themselves risk variables affecting the development of children under five.

In Latin America and the Caribbean food insecurity and hunger are phenomena that are closely linked to extreme poverty, but do not be confused. Inadequate food, either from a nutritional point of view, or for failing to adapt to the habits that prevail in society, affects not only those living in extreme poverty but also to a broader strata and groups living in certain areas or regions with permanent food insecurity.[25]

[24] National Council for Evaluation of Social Development Policy (CONEVAL), Poverty in Mexico and the federative entities, 2008-2010. July 2011 Available at: www.coneval.gob.mx

[25] Ávila A, Shamah T, Galindo C, Rodríguez G, Barragán L. La desnutrición infantil en medio rural mexicano. Rev Salud Pública de México 1998; 40(2):150-160.

Furthermore and paradoxically, the influence of Information Technology and Communication, particularly television, have induced changes in cultural patterns- particularly abandoning traditional diets at the expense of junk products. It has been determined in recent years the onset of obesity at an early age with the combination of associated diseases is becoming another human health problem.[26]

To summarize, we can say that poverty is the substrate in order to generate or accentuate difficulties for the development of human potential and capabilities in large population groups. With little or no schooling, most people simply perform the unskilled production activities for a minimum income that is insufficient to meet basic needs, from which important decision are taken for the individual and collective lives.

Political Changes in the State of Chiapas

In the amendments to the Constitution[27] published on March 30th and November 14th 2011, 122 municipalities are recognized. However, the reform focuses on article 4, based on the enjoyment of individual and social rights which was added to those conferred by the Federal Constitution and issued by the Universal Declaration of Human Rights of the United Nations.

In general, the amendments relate to the alignment of all social programs to the Millennium Development Goals. In particular, numeral XXV states that "Everyone has the right to: an adequate standard of living for himself and his family, health and wellness, food, clothing, housing, medical care and necessary social services. "

In the case of the creation of one of the new municipalities , attention was called to a problem of territorial demarcation between the states of Chiapas and Oaxaca and has not yet been determined whether the decision has compiled its purpose. The potential legal for disputes for the right to land are fertile ground for interests of another type- since in the local daily reality, the indigenous population of the area are involved and quite possibly have family ties and a shared culture.

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[26] Instituto Nacional de Salud Pública. Encuesta nacional de salud y nutrición 2006. 2006. Disponible en: www.insp.mx/ensanut/sur/Chiapas.pdf

[27] Executive Branch of the State of Chiapas. Constitution of the State of Chiapas.

In January of 2011, the creation of 15 Economic Regions in the state of Chiapas[28] was officially published, which changes in practice public administration and thus access to resources. The implication of this rearrangement occurs in the administration of health services, since each of the economic regions must have a health jurisdiction that is consistent with their area of dependency and preferably with the epidemiological profile of each region. Table 3 disaggregates the new territorial distribution of Chiapas, noting the county seats.

Región	Municipios
I. Metropolitan	Berriozábal, Chiapa de Corzo, Suchiapa y Tuxtla Gutiérrez*
II. Valley-Zoque	Cintalapa*, Jiquipilas, Ocozocuautla Belisario Domínguez**
III. Mezcalapa	Chicoasén, Coapilla, Copainalá*, Francisco León, Ocotepec, Osumacinta, San Fernando y Tecpatán, Mezcalapa**
IV. De los Llanos	Acala, Chiapilla, Nicolás Ruiz, San Lucas, Socoltenango, Totolapa, Venustiano Carranza* y Emiliano Zapata**
V. Highlands-Tsotsil	Aldama, Amatenango del valle, Chalchihuitán, Chamula, Chanal, Chenalhó, Huixtán, Larráinzar, Mitontic, Oxchuc, Pantelhó, San Cristóbal de las Casas*, San Juan Cancuc, Santiago el Pinar, Tenejapa, Teopisca y Zinacantán
VI. Frailesca	Ángel Albino Corzo, La Concordia, Montecristo de Guerrero, Villascorzo; El Parral** y Villaflores*
VII. De los Bosques	Bochil*, El Bosque, Huitiupán, Ixtapa, Jitotol, Pantepec, Pueblo Nuevo Solistahuacán, Rayón, San Andrés Duraznal, Simojovel, Soyaló, Tapalapa y Tapilula

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[28] Institute of Social Communication, 2011

VIII. North	Amatán, Chapultenango, Ixhuatán, Ixtacomitán, Ixtapangajoya, Juárez, Ostuacán, Pichucalco*, Reforma, Solosuchiapa y Sunuapa
IX. Isthmus-coast	Arriaga, Mapastepec, Pijijiapan y Tonalá*
X. Soconusco	Acacoyahua, Acapetahua, Cacahoatán, Escuintla, Frontera Hidalgo, Huehuetán, Huixtla, Mazatán, Metapa, Suchiate, Tapachula*, Tuxtla Chico, Tuzantán, Unión Juárez y Villa Comaltitlán
XI. Sierra Mariscal	Amatenango de la Frontera, Bejucal de Ocampo, Bellavista, Chicomuselo, El Porvenir, Frontera Comalapa, La Grandeza, Mazapa de Madero, Motozintla* y Siltepec
XII. Selva Lacandona	Altamirano y Ocosingo*
XIII. Maya	Catazajá, Benemérito de las Américas, La Libertad, Marqués de Comillas y Palenque*
XIV. Tseltal-Chol	Chilón, Salto de Agua, Sabanilla, Sitalá, Tila, Tulijá y Yajalón*
XV. Plateau Comiteca-Tojolabal	Comitán*, La Independencia, La Trinitaria, Las Margaritas, Las Rosas, Maravilla Tenejapa y Tzimol

*Table 3. New Economic regions of Chiapas, 2011. *County seat*
***Created by the Decree of the LXIV Legislature on November 14, 2011.*
Source: Institute of Social Communication, 2011.

These substantial changes are part of the Mesoamerica Project, consistent with the neoliberal economic policy. However, it is essential to stay vigilant, since as Mendez[29] stated the recession of 2009 is evidence of a crisis of the capitalist model which leads to a deterioration of the quality of life, the natural environment through

[29] Méndez, Silvestre, 2005:222

pollution, and a surplus in production cannot be placed, rising job losses and the resulting insecurity. The only thing that is predictable is the maintenance of an apparent chaos and fragile stability threatening the well-being of societies. Consequently, there are impacts on health and disease.

The official discourse ensures that the "Mesoamerica Project incorporates in its second stage projects with high social impact in areas of health, the environment, natural disasters and housing which represents a great opportunity for cooperating countries to participate with their expertise and resources in the consolidation of the priorities of nine countries[30]. " Mexico is the country responsible for the agenda of human development[31]. Table 4 summarizes some relevant indicators on vital events.

Indicators 2010	National	Chiapas
Birth Rate	17.5	20.4
Total fertility rate	2.0	2.2
Life expectancy at birth (years)	75.6	74.6
Population doubling time	39	32
Average marriage rate	5.5	5.0
Divorces / marriages (2008) Relationship between (a)	13.9	7.2
Female-headed households	24.6	20.2
Population affiliated health services	64.6	56.8
Age dependency ratio (b)	55	66
Death rate	5.0	4.3
Infant mortality rate	13.7	18.8
Net migration balance	-	-1.3

Table 4. Selected Indicators, Mexico and Chiapas, 2010. Fuente: INEGI, 2011
(a) Number of divorces per hundred marriages
(b) Shows the number of people out of a hundred, "dependent" ages under 15 and over 64, compared to people in economically productive age (15-64 years) in a population.

In a way, these indicators are consistent with the early stage of the demographic transition, which tends to show an incipient aging population in Chiapas, linked to the reduction of total fertility rate, which, hypothetically reduces the average size of families particularly in urban and rural areas with a mixed population. Both phenomena are closely related, ie, aging is consistent with the profile of disease and death in Chiapas.

In 2010 recorded 1'072, 239 inhabited private dwellings, three out of four (73.5%) have piped water; 83.4% have drainage and 95% have electricity; however, only 39.9% have the three services. Approximately 15% of homes have dirt floors, compared with 7% in the country.

Regarding the availability of goods in the home, the most common is the availability of television (76.7%); the refrigerator is present in 56.7% of homes; a washing machine in 36.2%; motor vehicle (car / truck) occurred in 19.2% of households; while nationwide the availability of goods in the dwelling is 92.5, 82.1 and 66.4 percent, respectively. It should be noted that that there is a computer and Internet access at 12.6 and 7.2% of households respectively in Chiapas; while in the country, the indicator is at 29.4 and 21.3%, respectively, which means a large trade gap in Chiapas compared to the rest of the country.

Regarding education indicators, it should be highlighted that 17.8% of those over 15 are not literate, in contrast to 6.9% in the country over the same period. Currently about 95% of children between 5 and 14 years attend school.

The historical asymmetric transfer of resources has not only contributed to the impoverishment of large sectors of society, but also promotes environmental deterioration and substantial alteration of ecosystems-a sort of vicious circle that accentuates previous social disadvantages.

[30] Martí, 2009:10

[31] The HDI measures the average achievements in a country in three basic dimensions of human development: longevity, knowledge and a decent standard of living. The HDI is a composite index that contains three variables: life expectancy, educational attainment (adult literacy and combined primary enrollment, secondary and tertiary) and real GDP per capita (PPP $)

Based on official information and according to the model of the determinants of health, these conditions increase the vulnerability of the population to present health damage.

In Chiapas the social situation, in particular health, affects most of the population due to limited access to resources and basic services for geographical, cultural and economic reasons. Material conditions and lifestyles shape particular patterns of population growth, disease and death, whose complexity is clearly beyond the capabilities and attention of the state.

2. Health hazards: illness and death

As already mentioned, the notion of transition is clarified in the profile of illness and death. In this section the multiplicity of factors that influence patterns of disease and death are highlighted, particularly in its temporal behavior. It should be noted that changes in the epidemiological transition are closely related to social and cultural determinants that characterize the different regions within the same country or state.

Morbidity in Chiapas has a distinct composition of population groups and urban or rural locations. In the rural population there is still a prevalence of transmissible disease, including acute, intestinal and urinary respiratory disease, and intestinal and extra-intestinal parasitosis which aggravated by nutritional deficiencies that accentuate the severity of disease in the most vulnerable population.[32]

No.	Cause	Rate*
1	Acute Respiratory infections	13.123.02
2	Intestinal infections	3.398.26
3	Infection of urinary tract	2.087.87

[30] Ídem

4	Intestinal amoebiasis	804.26
5	Paratyphoid and other salmonella	455.36
6	Acute Otitis	434.29
7	Other helminthiasis	366.50
8	Urogenital candidiasis	365.97
9	Diabetes mellitus	268.04
10	Hypertension	266.92
11	Conjunctivitis	262.25
12	Gingivitis and periodontal disease	231.98
13	Acute Vaginitis	180.20
14	Urogenital Trichomoniasis	161.44
15	Head injury	158.98
16	Ascariasis	140.36
17	Mild Malnutrition	132.89
18	Scabies	123.97
19	Asthma and status asthmaticus	119.47
20	Other intestinal infections	115.87

Table 5. Twenty leading causes of morbidity. Chiapas. 2010
Source: SOFT. Epidemiological Week
* Rate per 100,000 inhabitants.

In this population, the biodiversity and climates in the state also create favorable conditions for the spread of vector-borne endemic diseases (malaria, dengue, Chagas disease, leishmaniasis, onchocerciasis, etc.) and conditions. See Table 5.

The main causes of **death** are classically define epidemiological transition. In the productive age, there is a higher frequency of chronic degenerative diseases observed (ischemic heart disease, cerebrovascular disease, type 2 diabetes and its complications, malignancies) and associated causes of an infectious origin (complications of respiratory and gastrointestinal diseases) and inherited components in the younger groups.

One of the most vulnerable groups are children under one year of age. The infant mortality rate in 2005 at the national level was 20.6 deaths per thousand live births- in Chiapas it was 25.9; In 2007 it fell to 21.7 per thousand live births in the state. This indicator is above the 15.7 estimated for Mexico in 2007[33,34]. According to UNICEF, the

infant mortality rate calculated for Mexico in 2010 was 14 deaths per thousand live births.

This situation is aggravated by observing indigenous infant mortality, which is 58% higher than the national average. This means that among the 63 Mexican ethnic minority groups the likelihood of dying before their first year of life is little more than double any mestizo[35] group.

The maternal mortality-those deaths related to pregnancy, childbirth and postpartum-reaches a value of 38.1 deaths per ten thousand live births in the country, while the state-level indicator is 61, concentrated in municipalities with a prevalence of indigenous populations.

This phenomenon is associated with the wide cultural diversity and the particular characteristics of the health services in Chiapas[36].

Similarly in the urban adult population, the most common diseases are of a non-infectious origin and usually multifactorial-associated with lifestyles-among which predominate hypertensive disease, type 2 diabetes, liver cirrhosis, ischemic heart disease, stroke and malignancies which have been recorded as reasons for hospitalization. It should be noted that there is an increase in the frequency of intentionally inflicted injuries and accidents as causes of medical[37] care.

Location	Cause	Chiapas	Mexico	Location
		Rate*	Rate*	
1	Heart diseases	54.07	87.7	1
2	Malignant neoplasms	52.00	61.8	3
3	Diabetes mellitus	44.43	70.1	2

[33] SINAIS. Major causes of infant mortality 2005, available at www.sinais.salud.gob.mx/mortalidad/index.html

[34] The indicators were constructed from databases INEGI and SINAIS in the period 2000-2006

[35] SSA. National Health Program for 2007-2012. SSA. Mexico 2007 Available at: <http://www.ssa.gob.mx>

[36] Die in Chenalhó G. Freyermuth. Gender, ethnicity and generation. Constitutive factors of maternal mortality. Doctoral Thesis in Anthropology. UNAM 2000

[37] Idem

4	Accidents	34.43	35.6	4
5	Liver disease	30.99	28.7	5
6	Cerebrovascular disease	19.53	27.9	6
7	Pneumonia and influenza	12.87	15.4	8
8	renal insufficiency	12.16	10.6	10
9	Assault (homicide)	10.99	17.9	7
10	Intestinal infectious diseases	10.60	3.0	18
11	Certain conditions originating in the perinatal period	481.4	738.7	9
12	Malnutrition and other nutritional deficiencies	9.62	7.5	12
13	Chronic obstructive pulmonary disease	8.40	16.0	8
14	Congenital malformations, deformations and anomalías cromosómicas	5.88	8.2	11
15	Bronchitis. emphysema and asthma	5.54	5.0	13
16	Disease human immunodeficiency virus	5.54	4.6	15
17	Anemias	4.34	3.3	17
18	alcohol dependence syndrome	3.80		
19	Pulmonary Tuberculosis	3.57		
20	Intentionally self-inflicted Injury 20 (suicides)	3.38	4.7	14
	poorly defined	29.22	10.8	
	TOTAL	426.3	509.8	

Table 6. Twenty leading causes of mortality, Chiapas and Mexico, 2009.
*Rates per 100,000 inhabitants.
Source: Authors' calculations based on information from cubes SINAIS, 2010.

Note that there is overlap in the top six causes of death in comparison with what happens in the country. However, the magnitude is different. Except for accidents, the other causes are chronic. The probability of

dying from renal failure is higher in Chiapas than in the rest of the country. This risk is directly related to the response capacity of the health system in the state, and also with the populations access to health care services.

Another important difference to emphasize is death due to gastrointestinal infections. While Chiapas ranks 10 in the country, it has shifted to 18. The risk of dying from it is almost three times higher in the Chiapas. It also draws attention to the syndrome of alcohol dependence and pulmonary tuberculosis which remain within the top 20 causes of death. It is part of a larger phenomenon, whose analysis is beyond the scope of this document.

3. Healthcare

It is traditionally understood that the organized social response as a union of a set of systematic actions that are intended to promote the health and care of the disease, in which two areas are identified: individual and collective, both with equal complementary relevance.

The individual / collective health care, related to the health care system is also undergoing profound changes under health reform policy.

It is important to recognize that international policies have an impact on the epistemic orientation and configuration that the health system adopts. For this reason it is essential to recognize the expression of the Mesoamerica Project. Originally the project of economic integration promoted the Mesoamerican Epidemiological Surveillance Program. Today it has evolved into the Mesoamerican Public Health System (SMSP) from the combined efforts of the various existing mechanisms and programs in this health region. This system will address six priority areas: a) food and nutrition to eradicate child malnutrition; b) maternal health; c) surveillance; d) control of dengue and malaria; e) universal vaccination and the f) strengthening of human resources. It will also create the Mesoamerican Public Health Institute (MHI), as a facilitating system, with the aim of strengthening the technical and scientific capacity of human resources in the region for the comprehensive care of health needs through research, assessment, teaching and service in public health. *It is therefore a non-extendible commitment to strengthen the training of human resources for health at the Autonomous University of Chiapas.*

The multiculturalism of the Chiapas population obliges one to assume the diversity of ways in which diseases are treated, whether recognized or not by official medicine, which depends on the quality and quantity of diseases that are recognized and quantified. One of the reasons that argue for a Sustainable Rural Cities Program is the need to rally the population to make the provision of health services more efficient-population dispersion justifies the lack in health care coverage.

Concept	National		Chiapas	
	No.	%	No.	%
Medical Units Total	21064	100.0	1650	100.0
Insured Population	2929	13.9	94	5.7
Non insured population	18135	86.1	1556	94.3
External consultation	19842	100.0	1601	100.0
Insured Population	2464	12.4	79	4.9
Non insured population	17378	87.6	1522	95.1
Hospital	1222	100.0	49	100.0
Insured Population	465	38.1	15	30.6
Non insured population	757	61.9	34	69.4
Hospital beds range				
With less than 30 beds	538	44.0	25	51.0
With 30-59 beds	270	22.1	17	34.7
With 60-119 beds	211	17.3	5	10.2
With 120-179 beds	102	8.3	2	4.1
With 180 beds	101	8.3	0	0.0

Table 7 Units Medical and Hospital Outpatient public health institutions by type of beneficiary population and range of Beds per Unit. 2009 Source: INEGI, 2011

Note: The term for the national total data IMSS, ISSSTE, PEMEX, SEMAR, SCT-STATE, Metro and medical services (pop Insured.) And Ministry of Health, IMSS-Oportunidades and University Hospitals (pop not assured.). In Chiapas there are no hospitals or university data SCT-Metro.

Table 7 summarizes the ability of the health care system of the state in terms of infrastructure. In Chiapas, 1650 health units reported different response capacity. The population with social security is much lower than that reported for the country. The behavior is consistent with the differences in outpatient demand. Regarding inpatient care the proportion increases resembling that of the rest of the country: 30.6% in Chiapas and 38.1% for the national average.

Half the hospital infrastructure in Chiapas is located in the so-called Comprehensive Hospitals. About 35% of hospital beds[38] are located in medium-sized hospitals (30 to 59 beds). In the logic of the Rural Cities, this situation would be resolved-hypothetically-to concentrate the population.

Whereas a very low proportion of the population is dependent on social security which involves medical care, the right to a pension and retirement, maternity leave, unemployment, among others, the most likely option for accessing health services is the System of Social Health Protection , with its operating arm, the Seguro Popular.

Popular Insurance (Seguro Popular), begun in the decade of 2000-2010, is gradually replacing the Chiapas Institute of Health (Ministry of Health, ISA) in providing medical care. By decree, the population belonging to the first two income levels are automatic beneficiaries of Popular Insurance , which is free throughout the country.

In Chiapas, according to the information available on the website of the National Commission for Social Protection in Health, (2006), 178.318 families were affiliated , of which 81.6% were classified in the first income level. These families are residents of urban areas (82.4%) and a little more than 16% in rural areas.

This information suggests that the focus should be an error by erroneously assigning benefits to families who do not meet the requirements or those that require truly benefit fail to qualify for registration. In any event, an administrative weakness is observed.

[38] It is the service bed, installed in the ward for regular use inpatient; must have the necessary space and resources for health care personnel, is controlled by the service entrance of the unit and the patient is assigned at the time of admission to hospital to undergo observation, diagnosis, care or treatment.
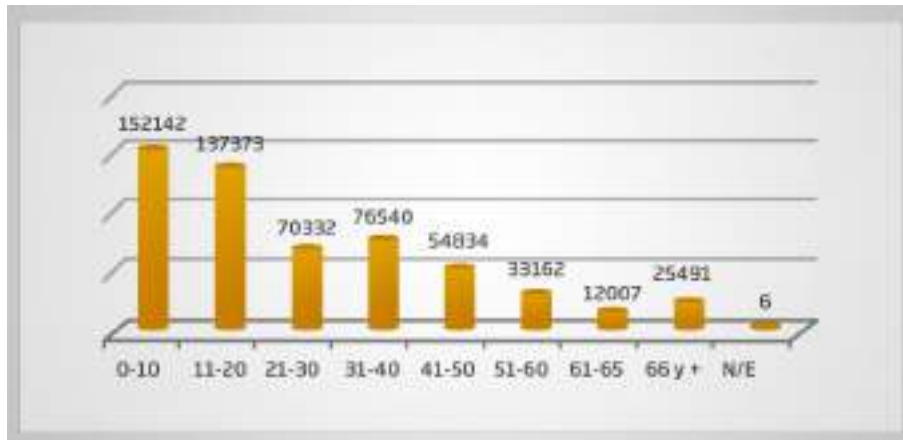
Graph 5: People's Insurance Target Population, by age. Chiapas, 2010
Source: National Commission for Social Protection in Health

According to the same source, in 2006 the goals of incorporating candidates in health centers (only 3.7% of schedule) had not been achieved, but more progress has already been made in the incorporation of the general hospitals in the state to the Protection System Social Health.

Popular Insurance currently has a Service Catalogue (CAUSES) 2010, which includes a list of just over 275 interventions organized by service, level of care, age group, among others. It also has a catalog of 275 drugs which includes 14 biological agents from the Universal Vaccination Program. It also includes a list of the 49 diagnoses and treatments covered in the Catastrophic Protection Fund.

In this catalog the 128 interventions of the Health Insurance for a New Generation is listed, which entered into force on January 1, 2010. (SS, 2010).

While this space is short to account for the difficulties in access to health services, it is essential to recognize that the quality of medical and paramedical staff is particularly relevant in addressing the care needs of the population of Chiapas. In this regard, it should be noted the type of staff that are linked to the services described in Table 7.

Concept	TOTAL	Insured Pop.	NO insured
		%	%
Medical Staff	4982	32.6	67.4
In contact with patient	4567	31.8	68.2
General	2226	26.8	73.2
Specialists	1685	48.7	51.3
Physicians in training	656	5.6	94.4
In other work	415	40.7	59.3
Paramedical Staff			
Nurses	6486	28.4	71.6
Ancillary services for diagnosis and treatment	1435	29.7	70.3
Social Work	572	53.1	46.9
Other staff	4927	40.1	59.9

Table 8. Medical and paramedical services and selected public health facilities by type of beneficiary population 2009. Source: INEGI, 2011
a) includes medical and dental interns, undergraduate interns and residents.
b) Includes staff in administrative work, teaching, research, epidemiologists, pathologists and other work.
c) Includes other professional staff
d) Includes administrative, technical, statistical, health workers, other technicians, clinical archiving, preservation, maintenance, quartermaster, laundry, kitchen and others.

As can be seen, there are about five thousand doctors linked to health services, both in social security and the general population. One in three attends the fifth of the Chiapas population that is entitled to public health services, which implies the quality of care. The distribution of time of a hired physician will be greater in proportion to the extent of assigning fewer patients per day. This behavior was observed in virtually all other staff.

In short, the reality is that the available scientific and technical knowledge is sufficient to meet the demand for medical care, although

for different reasons it is not accessible to the entire population, thus planning should rethink the health system.

Recognizing that change is the only constant in social, economic and cultural phenomena one must pause in order to confront the challenge of educating doctors with a comprehensive ethical and humanist sense, capable of facing the task of meeting a set of heterogeneous and in some cases singular diseases, whose substrate is understood with social sensitivity and attended with optimal clinical competency. For all of the above, the task of renewing, with relevance, medical training at the Autonomous University of Chiapas it essential and urgent.

Cognitive Development: an inter-subjective reading in order to appropriate knowledge.

Book Review Barbara Rogoff (1993). Learners thought. Cognitive development in social context. Spain: Polity Press. ISBN 8475098967.

Steven Araya Abarca
Martha Patricia Astudillo Torres

About the Autor

Steven Araya Abarca has a PhD in Education at the University of Costa Rica, he teachesundergraduate and graduate studies at the State University of Costa Rica / Distance Education and teaches classes on research at Masters level. He received the "Distinguished Tutor/Teacher of 2012 of the School of Educational Sciences" from the State Distance Education University of Costa Rica.
Contact: stevenabarca20@gmail.com

Martha Patricia Astudillo Torres is a doctoral student in Education at the University of Costa Rica, Fellow of the Autonomous University of Chiapas and the National Council of Science and Technology of Mexico. Member of the Research System of the State of Chiapas, she has published academic articles in indexed magazines and participated in national and international congresses on the theme of ICT in higher education conference papers.
Contact: patricia.astudillo @ unach.mx

Abstract

Since time immemorial humans have been fascinated by knowing how people learn to use the tools necessary to survive in a society and at a particular time. This exciting puzzle has led different authors to seek scientific explanations that break with the dichotomous proposals of what is inherited and what you obtain, as if they were faces of a coin that will never intertwine. They give new insights into cognitive development, human learning and everything that it allows, hopefully, promoting the acquisition of knowledge in areas of both formal and informal education- helping people to transform themselves and the society in which they are immersed.

It is from the interpretation Rogoff (1993) in a more systematic reading of the surrounding reality, as well as sociocultural theory of Vygotsky, which arises new findings that provide insight into the contribution made by parents, teachers, peers and culture in the general cognitive development of the individual.

With the metaphor of guided participation, a term coined by Rogoff is intended that this essay addresses the reaches of inter subjective relations in the acquisition of knowledge, as well as make a critical reading of the strengths and weaknesses of the author with respect to the role of learning in people.

Keywords: Cognitive development, social context, guided participation, inter subjective relations.

Introduction

Barbara Rogoff, taking reference from Vygotsky's theory and to a lesser extent the contributions of Bruner, Piaget, Leontiev, Cole, Whiting, Wertsch and Trevarthen, became interested in investigating the influences of caregivers and culture in the development of thinking infants.

Her interest in studying *guided participation* in the activities of children, led her to defend a position in which the learning of people goes from an inter subjective processes to an inter subjective processes. That's to say, for this author, that people acquire knowledge from their relationships with others, and once that the acquisition has occurred the individual cognitive structures are modified to give way to higher

psychological processes that allow a ever more complex level of thought by the subject.

This essay will be a critical reading of the salient findings of Rogoff, contrasting her proposal with postulates of other authors that have both convergent and divergent positions. It is then asserted in the discourse of the authors that the premise of the epistemological position adopted by Rogoff is not the only explanation of the acquisition of knowledge by the subject, rather it becomes one more factor that allows one to partially understand the complex process of knowledge acquisition in humans.

Therefore, the paper aims to show the reader some of the strengths and weaknesses of the theory of Rogoff in their attempt to understand cognitive development in subjects.

Warned beforehand that the positioning of the authors of this paper we are not in favor or against the tenets of Rogoff. Instead, the focus is on rescuing their contributions and those of other authors, for a more comprehensive understanding of the appropriation of knowledge in the person.

Description of the Literature

In her analysis of the acquisition of learning in humans, Rogoff (1993, p 28.) questions the tenets of Piaget's theory, arguing that Piaget "paid little attention to the role of the social world, in that it helps to structure reality or helps the child to attribute meaning to it." That is, to Rogoff (1993), Piaget should give greater emphasis to the cognitive development of the child, considering the context in which it unfolded, and focusing less on mental skills developed spontaneously and individually. Piaget and his colleagues believed that the ability to learn the subject will depend more on the level of cognitive development than prevailing sociocultural conditions (Coll and Martí, 2009).

From this perspective, the fissure that Rogoff encounters (1993, p.37) in Piaget's theory regarding the influence of context on learning, leads to the second inclination at cementing her proposal in the sociocultural theory of Vygotsky (Hernández, 1998; Cubero and Luque, 2009), or socio-historical (Ferreyra and Pedrazzi, 2007) in which the socio-historical environment plays a major role in the learning of individuals.

To justify this dominance of the socio-historical context, Rogoff (1993, pp.12-13) supports her theory on three themes: activity, because for her thinking makes sense from the perspective of human action, especially when children and adults act. Society, because it considers that development is inseparable from social processes that are progressively internalized; ie society is inseparable from a system of relations that define the roles and functions of those involved in the activity. And the last axis is culture, because for this author the human being participates in common goals and instruments that permit their achievement and that they are transmitted from one to another, from generation to generation.

In summary, we can say that learning to Rogoff is inseparable from a sociocultural context where the learner is actively involved in the company of other members of the community in acquiring skills and forms of socially valued knowledge.

In addition to the theory of Vygotsky, Rogoff (1993, p.30) considers the contributions of other authors such as Leontiev, Bruner, Cole, Whiting, Wertsch, Trevarthen and Piaget. This last author, despite the discrepancies, Rogoff (cited by Tudge and Rogoff, 1995) rescues that for Piaget development involves more qualitative than gradual growth transformations. This author also takes the theoretical assumption that there is a dialectic foundation in the development and the relationship between the individual and society, as well as the active character of the child in their own development, as knowledge is obtained from the world through activity.

That is why Rogoff sees children as learners of knowledge, active in their attempts to learn from observation and participation in relationships with peers and more skilled members of their social group. In this way children acquire skills that enable them to address culturally defined problems, with the help of instruments that can be easily accessed, and constructed from what they have received from new solutions in the context of sociocultural activity. That is, for this author, the cognitive development of the child is necessarily immersed in the context of social relations, tools and sociocultural practices.

Under these assumptions, Rogoff (1993) suggests the concept of Guided Participation to suggest that both the guide and participation in culturally valued activities are essential to consider the child as a learner of thought.

This guided participation involves the child and their caregivers or friends in two types of collaborative processes. The is a building of bridges,

from the level of understanding and skill, where the child shows them at some point in order to achieve new ones.

In the terms of Vygotsky (1988, p.133), these bridges would allow the child to move from one area to a current zone of proximal development, a term coined by this author that defines the zone of proximal development as the distance between the level of actual development, determined by the ability to independently solve a problem, and the level of potential development as determined through problem solving under adult guidance or in collaboration with a more capable peer. This concept, as the reader may infer, stresses the importance of cooperation and exchange in social development.

The second process of collaboration is the organization and structure of children's participation in certain activities, including changes in the responsibilities assumed by the child during development. It follows that, as the child develops and acquires greater autonomy, they can take on more complex responsibilities at school, home or community where they live.

This being so, we can say that the development of the person is influenced by both universal endowments, for example, biological traits (ie, all members of the species have in common), and specific traits (physical and interpersonal circumstances) . Thus, to understand the development one must take into account "the cultural and biological similarities that underlie individuals and differences between them" (Rogoff, 1993, p.34).

Rogoff (1993, p.63) takes the idea of Vygotsky's Zone of Proximal Development to explain how the child can learn skills with the support of caregivers, however, Rogoff (1989, p.68) sees the Zone of Proximal Development as a "dynamic region sensitive to the learning experiences in which the child's development is guided by social interaction."

From this definition, we interpret the historical and cultural framework which is the foundation for social interaction. Therefore, instruments and teaching mediation procedures are part of the educational culture and constitute specific teaching tools for action that have been developed over years of educational action. A proper example of early childhood education is the use of corners or activity areas, such as the spatial method rooted in the pedagogy of Decroly, and which are widely used in schools for years, mediates the child's approach to the different areas of expertise and facilitates the adjusted support of educator and teacher to each child (Prieto, 1998, p.7).

Moreover, Leontiev (1981, p.66), refers to the tenets of Vygotsky which state that higher psychological processes can be acquired through interaction with others via interpsychological. processes. These inter psychological exchanges that help the child develop higher psychological processes, do not necessarily require a formal and systematic instruction to develop. It is sufficient with people interacting with the immediate environment, within the family, learning behaviors, principles or values that will be useful to develop in the context where they live.

This premise evidences that the fundamental finding of Rogoff (Prieto, 1998: 9) is "to discover that in all cultures adult's structure tasks for children and adjust their aid according to the level of understanding. However, these processes, although apparently universal, are not produced in the same way in all cultures and are subject to important contextual variations. "

From this perspective, to Rogoff (1993, p.129), the school is called to form communities of learners, where community character predominates and teachers loses their role as the driver of the education process to become a facilitator of group activity. The classic instructional discourse based on the monologue- the educator questions, the child answers- is replaced by conversation and dialogue.

The importance of the process is emphasized against the product and interest in activities where children assume social responsibilities. The assessment is qualitative and occurs through the observation of children in working together with the teacher, putting special emphasis on the individual performance over traditional collective comparison. Learning is cooperative and occurs within a global program that has vital meaning for children and where each individual takes a different, asymmetric role with respect to other subjects, but adjusted to their own development.

The above arguments are supported by the bio-ecological theory proposed by Bronfenbrenner. For this author, "each biological organism develops within the context of ecological systems that support or suppress its development" (Papalia, Wendkos and Duskin, 2005, p.35). So, if we understand the ecology of the human environment, we can know how children develop.

In short, to Rogoff (1993, p.55) cognitive activities take place in socially structured situations, including value systems about the interpretation given social relations and how they are organized. The way in which individuals attempt to solve problems is intrinsically linked to the values and goals of society, with the instruments, and the

institutions as regards to the definition of the problems and the practice of their solution.

Moreover, from the educational field, the proposal of Rogoff (1993, pp.44-45) comes to break the traditional paradigms of teaching, to make way for a more active process of teacher and student, where the first is a facilitator of spaces for exchange through dialogue, considering, of course, the context in which the student develops.

Discussion

Cognitive development: an approach to understanding.

As stated by Santrock (2005, p. 41) "Examining how children develop help us to understand them better." It is imperative from the beginning of this statement to understand that educational processes cannot be limited or reduced to teaching and pedagogy, but have as a challenge to understand how people develop, cognitively speaking, from childhood to adulthood. It is undeniable to recognize that Piaget was quite right when he said that the child is not an tiny adult and that a number of factors must be considered in the educational process if you want to develop lasting learning in people.

The attempts in educational psychology to seek approaches for understanding in a better way how a person develops and contingently to this, how they learn, has been covered by a variety of authors and behaviorists: BF Skinner, John Watson, Ivan Pavlov, E. L. Thorndike; constructivist Jean Piaget, Lev Vygotsky, Jerome Bruner, David Ausubel, Barbara Rogoff, and other more comprehensive anthropological positions such as constructivist pedagogical positions of Joaquín García, and more recently neuroscientists like Sarah Jane Blakemore and Uta Frith, Marco Iacoboni, Norman Doidge, Tomas Ortiz and Francisco Mora, to name some of the most noteworthy. These authors mentioned above have been given the task of explaining how learning occurs in humans from different perspectives.

These different perspectives that human learning is conceived are not mutually exclusive. Instead, they allow in a complementary way for a more global view of learning in humans and the accompanying cognitive development.

It is for this reason that in the following the theory of Rogoff will be taken into consideration (1993, p.31) and will be strengthened by other authors and principles that allow a more comprehensive understanding of the complex web involving cognitive development.

Thus, as was mentioned above, Rogoff (1993, p 28.) in her analysis of the acquisition of learning in humans, questioning the tenets of Piaget's theory, arguing that the author, " paid little attention to the role played by the social world in which reality helps structure or helps the child to attribute to it a meaning. " That is, to Rogoff, Piaget should give more emphasis to the cognitive development of the child, considering the context in which this unfolded, and focus less on the mental skills that developed spontaneously and individually. As for Piaget and his collaborators, the learning ability of the subject will depend more on the level of cognitive development that the prevailing sociocultural conditions (Coll and Marti 2009).

Although Rogoff (1993) is right to say that Piaget should give greater prominence to the influence of context on learning acquired by children, it is undeniable that the Swiss biologist was not entirely wrong, because in studies by Goustard, Greco, Matalon and Piaget (cited by Coll and Martí, 2009) show that, although the physical experience can make significant contributions to the acquisition of learning, this:

> "It is insufficient for the acquisition of operative structures that require the intervention of a logical-mathematical activity based on the coordination of schedules and actions and not just in the reading of the physical properties of objects. Only in this way, through the reflexive abstraction that allows the extraction of information about the coordination of actions and not just objects, the subject can access the construction of logical structures. (Coll and Martí, 2009, p.77)."

In other words, from the studies mentioned above (Goustard, Greco, Matalon and Piaget, 1959; cited by Coll and Marti 2009, p.77), it could be demonstrated that:

> "Learning will be based on the level of cognitive development of the subject. All research results confirm this fact. Generally, there is only progress in subjects that at next operational level to the acquisition of a notion that will learn (a level called "intermediary", as it is halfway between the absence of the concept and its full acquisition) ."

These Piagetian postulates are supported by the neuro scientists Blakemore & Frith (2007, p.14), who argue that although in many countries children start going to school at an increasingly early age, "the

brain sciences have revealed that, generally, the precise coordination of the fingers is not reached until at least five years of age and progresses more slowly in boys than in girls. " In other words, even though the child has a stimulating environment, or in terms of Rogoff (1993, p.43), guided learning, operationally and cerebrally speaking, the child is not mature enough to acquire certain knowledge at determined ages. Therefore, inter subjective learning exchanges are not enough in order to generate knowledge in the person.

In short, to the extent that demonstrates that learning depends on the cognitive and brain maturity level of the subject, these results could support Piaget's thesis (Coll and Martí, 2009, p.78) "in which all learning takes on an intervention of logical elements from the general mechanisms of development and have not been learned only in the light of experience. "

From the previous quote we can take the idea that you cannot reduce a child's development to a mere accumulation of experiences and social interaction, but you should also consider the cognitive and brain maturity that the child has to know to what extent these social exchanges that are getting obey real learning or behaviors that are issued by a mere mechanical imitation of what is seen in a more advantaged person ,and not because they really understand what they are doing or why they are performing.

While not undermining the contribution of Rogoff (1993, p.180), Piaget himself (1975, p.79) recognized that intelligent behavior of the subject and the adaptation of this should be characterized as a balance between actions of the organism in its environment and the inversee actions, in other words, the environment on the organism. Indeed, any relationship between a living being and its environment presents the specific nature of the subject, rather than passively submitting to the object (medium), is modified imposing its own certain structure and vice versa.

However, it must be recognized that Rogoff (1993, p.182) inclined to cement her proposal of the sociocultural theory of Vygotsky and socio-historical theory (Ferreyra and Pedrazzi, 2007, p.58) in which, in order to explain the human intellectual operation one must consider four genetic domains: phylogenetic a), which is linked to the socio-genetic evolutionary history of the species, b), or historical-cultural evolution, which refers to the subject as a participant in an ontogenetic cultural group, c) ontogenetic, relating to personal development which is influenced by the biological characteristics of the specie

which are genetically transmitted and that it is the cultural influence of development that is related to language and other symbolic systems, d) microgenetic, which deals with the changes that have a place in a limited and not very extensive period of time (Cubero and Luque, 2009).

These four domains contributed to why Rogoff (1993, p.15) saw children as learners of knowledge, active in their attempts to learn from observation and participation in relationships with peers and more skilled members of their social group.

In this way children acquire skills that enable them to address culturally defined problems, with the help of instruments that can be easily accessed and built from what they have received- new solutions in the context of sociocultural activity. That is, for this author, the cognitive development of the child is necessarily immersed in the context of social relations, tools and sociocultural practices.

According Pedrazzi and Ferreyra (2007, p.84), Rogoff, from her anthropological and educational studies, raises the concept of "guided participation". As its name implies:

"It consists of a learning process oriented or guided by a person (adult, peer or teacher) so that the trainee (teen, young adult student) find support and encouragement through social activity to understand reality, as well as the skills to use the tools of the culture. The sociocultural basis of skills and human activities, including the child's own inclination to participate in the activities surrounding it and to join them-is inseparable from the biological and historical basis of the human species."

The term "guide" refers to the direction offered by both the cultural and social values as well as for the other members of the social group. The term "participation" accounts for both the observation and the actual implications of learner activity. The direction or guide does not include the facilitation of participation in certain activities. It does include restrictions or indirect channeling of activities in which people participate (Wertsch et al, 1997, p.112).

It is from these inter subjective processes that we could say that the fundamental remote evolutionary origin of mental abilities, the ancestral character socially mediated learning and contribute to the development and acquisition of complex social behaviors (Garcia, 2007, p.48) ; inter subjective processes and that these cannot be detached from the cognitive, social and emotional exchange.

This being so, we can say that the development of the person is influenced by both universal endowments, eg biological conditions (ie, all members of the species have in common), and specific (physical and interpersonal circumstances). Thus, to understand the development must take into account "the cultural and biological similarities that underlie individuals and differences between them" (Rogoff, 1993, p.34).

Moreover, Leontiev (1981, p.66), referring to the tenets of Vygotsky, manifested higher psychological processes that can be acquired through interaction with others via inter psychological processes. These inter psychological exchanges that help the child develop higher psychological processes, do not necessarily require a formal and systematic instruction to develop. People are simply interacting with the immediate environment, within the family, learning behaviors, principles or values which will be useful to develop in the context where they live.

Thus it can be inferred that, we must not make the mistake of thinking that a person can only learn within the four walls of a classroom, but can learn in different spaces other than school, hence the importance of the education system to look to parents, caregivers and the immediate environment as scaffolding, or as support in the process of acquisition of socially valued learning and not eliminate them, because in the measure in that there is deficiency of the knowledge of the context of where the student comes from, it will become more difficult to learn it.

Furthermore, we must emphasize that from this standpoint that cooperative learning becomes a teaching tool par excellence, because as mentioned in Calero (2008: 99), cooperative learning increases skills in spelling, vocabulary, math calculation, history, and between other disciplines. It has also been found that the "discussions during cooperative learning stimulates the discovery and cognitive development rather than individual reasoning processes performed in other learning skills."

All this highlights the importance of breaking with the traditional paradigm in which the teacher gives the lecture, to encourage cooperative learning spaces which, instead of having thirty people learning one by one, thirty one people can learn at the same time.

The above arguments are supported by the bio ecological theory proposed by Bronfenbrenner. For this author, "each biological organism develops within the context of ecological systems that support or suppress its development" (Papalia, Wendkos and Duskin, 2005, p.35), so, if we understand the ecology of the human environment, we can know how children develop. In this way, for Bronfenbrenner (Papalia,

Wendkos and Duskin, 2005, p.35) development occurs through processes of increasing active bidirectional complexity between a developing child and his immediate everyday environment, processes that are affected by the most remote contexts, which existence can be ignored by the child.

From the perspective of Rogoff (1993, p.73) and Bronfenbrenner (Papalia, Wendkos and Duskin, 2005, p.36), both child development and higher psychological processes may be affected by microsystems, mesosystems, exosystems, macrosystems, and cronosistemas. These contextual systems interact continuously, so you have to know them in order to understand in a more comprehensive way the acquisition of higher mental abilities.

At this point in the discussion the reader might infer that this article is assuming an orthodox position with respect to the influence of the social environment on child development. However it is not, because it would mean the denial that the person is a bio psychosocial being, simply recognizing that the subject and the world are mutually intertwined and it would be difficult to conceive of a person developing a language and behaviors that conflict with the tools provided by the culture in which it is immersed. It is what permeates life and, therefore, is the model to follow. In other words, a person cannot exist who is separated from the influence of the environment in which it is developing, because there is no human being that can be considered completely asocial. As stated by Rogoff (1993, p.55):

> Development involves both effort and individual predisposition, such as the sociocultural context in which the individual is immersed, and even what was before he was conceived. Biology and culture are not alternative influences, but inseparable aspects of a system in which individuals develop.

From this perspective, and using the philosophy of Aristotle (During, 1990, p.87) to illustrate the above, we can say that no matter (biological makeup of the individual) without form (social influence), nor is there any form (social influence) without matter (ie, without a human being to influence). We cannot find some amorphous material nor a form separate from matter, because both are needed in order to exist. In other words, there is no society without subjects to conform to it, nor are there subjects if there is no society that welcomes them in its bosom.

In considering what has been exposed so far, it can be said that cognitive development occurs in a biological organism which is regulated by the brain, which is the engine that drives the human being. However, it

is intimately intertwined with the synaptic connections that develop and that allow, in the end, the person matures certain cognitive structures-operative structures that will lead the individual to make higher psychological processes through sharing with others. Exchanges will depend on the cerebral tools and maturity to be enriched, and reciprocally enrich synaptic connections and the maturity of the operating structures.

Here a number of questions may arise in the reader's mind: Can a person establish appropriate interactions with others regardless of the brain? Can the brain evolve without social interaction? Can a person develop the operating structures of the brain and while ignoring the social? To these concerns and many others the answer would be a resounding no. For it is undeniable that these are fundamental parts of the gear called cognitive development.

Reading faces: An element that allows us to grasp the knowledge of the other and make them our own.

From the perspective of Rogoff (1993, p.99) children are "adept at getting information from the eyes, grimaces and mood of adults." This means that the child from his early adult life seeks to interpret situations that are ambiguous from the child's point of view, in a process called social reference. The interpretations offered by adults through the use of gestures of the face or body inform the child about the best approach to a new situation. For example, if the mother expresses gestures of awe or fear, it is likely that the child's behavior does not continue the behavior; on the contrary, if the mother shows gestures of trust, the child is likely to continue performing it.

However, a question arises that is inescapable to avoid: Is this interpretation of faces and gestures that the child can make from birth are merely social or do they have a biological component?

It is in recent studies that have revealed the contributions of neuroscience to give an answer to this and other questions. In this regard, Blakemore and Frith (2007, p.153) found that people in "different tasks involving the deduction of intentions, beliefs and desires in people, three key social brain regions are activated: the medial prefrontal cortex, superior temporal sulcus and the temporal poles adjacent to the amygdala".

Although there have been few conclusive studies, the authors (Blakemore and Frith, 2007, p.153) argue that the medial prefrontal cortex

is involved in controlling both internal mental states of the self (I) as well as others. The superior temporal sulcus is important to recognize and analyze movements and actions of people and the temporal pole involves the processing of emotions.

Moreover, studies by Rizzolatti (Iacoboni, 2009, p.29) have shown that the human brain has an area called F5 in which are housed the "mirror neurons" which are those that allow not only the interpretion of gestures of the face and body in other people, but also as assist in predicting what is happening or going to happen based on the interpretation of these gestures. Also, Iacoboni (2009, p.30) states that mirror neurons allow us to copy the behaviors and emotions of other people, hence, we have all experienced shock, pain or emotion after seeing these emotions projected in other people in real life or in movies.

Among the most important findings, as manifested by Blakemore and Frith (2007, p.237) , is the fact that it has been shown that the same areas of the brain are activated when we are performing an action, when we observe them in others or when we imagine that we are making them. Furthermore, "mirror neurons that respond to the use of tools are a very seductive proof to link them with the imitative behavior, which is a powerful learning mechanism" (Iacoboni, 2009, p.47).

These findings may not only explain how the brain has certain areas that allow the child from the moment of birth copy and interpret the faces, gestures and emotions of other people, as well as empathize with them, but also makes a significant contribution to education. In the XXI century teachers cannot ignore the importance of play activities to be imitated by students and create more lasting learning.

In addition to this, we can question that it is not necessary to perform an exercise in order for it to be kept in memory, but merely to remember or reconstruct in memory, we are activating the same areas of the brain, so it can be inferred that this kinds of mental exercises strengthen synaptic connections necessary to maintain a learning memory.

Furthermore, these investigations analyze the contribution being made by the media in learning both altruistic and violent behavior, as manifested as Iacoboni (2009, p.16), "mirror neurons may also play a role very important imitative violence induced by media violence. "

In short, reading faces, capacity in which people are born to a greater or lesser extent, is developed through brain areas such as medial prefrontal cortex, superior temporal sulcus, temporal poles and mirror

neurons. These allow people to interpret, feel and copy emotions and social behaviors of others.

These findings provide new insights into the educational system and adults, through simulations, play and models to develop in children or students which are socially accepted behaviors and long lasting learning. It is also paramount to eradicate all behaviors at home, school and the media that promote the imitation of violent behavior. That should be the direction to follow in the guided participation of the XXI century.

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User experience (ux) and digital products

Mr. Angel Sanchez

About the Autor

Head of UX at SocialBro Peru

The fact that digital products are in style is more than obvious. Hundreds or thousands of young (and not so young) flying the flag of the venture capital, designing and developing for the Internet various applications and services, seeking to solve or at least make life simple to a huge amount of people with the urgency of improving productivity, meet entertainment needs, optimize time in everyday life, etc.. and incidentally, generate a source of income, while working under the Start Up model.

According to Eris Ries, author of *Lean Start Up*, this activity is defined as a business venture that begins with great uncertainty and where the founders put their ax to the grindstone until exhausting their capacities, seeking rounds of venture capital funding to enable them to continue the development of the ideas that are taking place.

But not all do. The reasons why a lot of Start Ups fail are many and throughout my career I have seen that it is commonly found in those failed projects the lack of application of basic concepts of UX.

It is not easy to achieve a round of funding, much less in these times, that allows making your dream a reality. They are achievements that require hard work, they are slow to materialize and demand a seriousness and greater responsibility on the part of the founders. But it is also true that for this purpose of influences to have a product with a certain mass of users which pay attention, "see and hear" what you do, what they say they do and how they do it. The UX provides special techniques to do this.

The founders are undoubtedly the mainstay of Start Ups. They are those who take risks and take responsibility for failures, and in turn, when they succeed, are those who enjoy the recognition of success. But the team also plays a role in success or failure, and therefore members of a Start Up that are considered part of the team are an effective and necessary tool know that motivation plays an important role and is demonstrated in sessions to define new functionality, improve an existing product, etc.., the team feels engaged and part of the product design. In short, the team is fertile ground for applying new techniques in the design and development of their products, in this case the UX and specifically in its two branches ideal for enterprise environments, such as the proposed Agile UX and Lean Jean Claude Grosjean and Jeff Gothelf UX.

I have seen how the various Start Ups in which I worked, the product did not quite take off, and on the other side of the coin with the right strategy achievements were happening one after another. In my

opinion the implementation of the UX has been one of the truths in the cases of success and its negation (and in some cases their minimization) for the CEOs part of the failure.

I'm more than sure, because my professional experience has shown me that (apart from many other fortunate decisions or not) to ignore, minimize, ridicule, not be taken seriously or just completely ignore all the benefits of implementing the UX as a science to all types of products, and with the means at hand, the digital, it is certainly a mistake.

But what's the User Experience about (or UX as it is best known)? of the hundreds of definitions that can be found, for me the most successful is the one that explains that the UX is "The science that seeks to understand the context to enhance effectiveness" -and here is the key for their non-application contributes in a destructive manner to develop products or deficient systems that ultimately failed. I'm not saying that there aren't lucky breaks where time and right place cross for the success of a product, but not all entrepreneurs in the world have these strokes of luck. It's not the norm.

The theory of UX is wide. This article does not pretend to cover the entire universe that compose the theme but I can say that in their fields of study and action the UX is broken down into various activities. The UX is a subset of the general concepts we call "experience" for the UX is directly related to the use of digital products (which is our case), or systems, and is primarily individual and unique and is influenced by past experiences and expectations based on past experience about what the user expects when faced with a system or application, service or any other digital product.

I want to emphasize that the UX is not the same as usability (which is ever so slightly defined as the "application of common sense") and that this is a contributory aspect to the UX, as is the design of interfaces (UI), since the UX is more than just an exquisite design.

Can UX be applied in small teams?

The UX is not complicated and therefore a Start Up that cannot afford the cost of a professional UX on your computer can go applying basic concepts that will be very welcome when resources are made available to enable the team to provide a professional devoted exclusively to it

and who can do user research, to collate information from stakeholders that make quantitative and qualitative evaluations, know tabular test results with users, and you know, well, do a thousand things necessary that a small team concerned with developing and a minimally viable product is not able to perform for a while ... and cost.

You can do UX with small teams and even more if this team is developing its product with agile development methods (either extreme, scrum, kanban, etc..) which complements perfectly with the practice known as Agile UX as it is focuses on product development and rapid deployment.

As I said above, the UX line is viable when there is a commitment to carry out best practices that make our product easy to use and that users perceive it as such, thus being able to perceive the usefulness of our system that will help solve one or more problems and would therefore lead to a click on the payment button.

In any case the UX should not be understood as everything by and for the user, but should help achieve business goals and the users means to accomplish these objectives. This phrase can create controversy, but to be honest, one provides UX the best you can to make the company profitable, for that there are dozens of methods that may fit your need, my entrepreneur friend.

There are certain factors that influence the user when faced with a system and can be classified into three categories: the context surrounding the user and the system, the status of the user and the system itself (or product in this case we refer to Start Ups):

- The context: where UX changes when the context changes, even when the system does not change. The context in the field of UX refers to the combination of the social (when working with others), physical (eg the difference when using a desktop or product in the car with mobile phone), the context of tasks completed (the other tasks that surround the user is also running for attention) and technical and informative context (such as network connection or other products).

- User: The UX is dynamic, because the very people who are related to a product are themselves dynamic, and understand this dynamic as the motivation to use a product-their mood, their expectations and their own mental and physical resources.

- The system: The perception that a user has on the properties of a system or product influence the user experience. The UX are important properties specifically designed for each product as functionality, aesthetics, adaptability and interactive designed behavior (or IxD Interaction Design). Consider the concept of TAM (or Technology Acceptance Model developed by Fred D. Davis). The properties that the user adds or changes in the product are consequences of its use (the same with avatar customization or the way how the user distributes information of a dashboard). These factors help to identify what is behind the experiences of users when they interact with our products.

How simple it can UX be carried out in a Start Up?

The entrepreneur should focus on iterating with his team that everyone make sketches of the new features they plan to launch and discuss with them that these deployments are continuous, that they are not looking for the perfect product, but with common sense what you give to your users, not into the "dogfighting". Always test the product one thousand and one times from the start point to the end of the journey made by users.

The entrepreneur must be aware that your entire team should feel like product designers, that the pretty does not guarantee a sense of utility, and that a thousand functions does not make a more powerful product, perhaps a complicated product. Try to stabilize your product and that it does not give an image that you have not worried about doing something with effort. You can do user testing continuously, looking for it what Steve Krug says for this reason,to always keep in mind two words "prove and improve"- and above all, entrepreneur , you do not always have the last word, you're not all of the users and if you do tests, tests and more tests you will not know more than you believe what they want, what frustrates them, what pleases them.

The UX is being established and being recognized as an important part of organizations, businesses and strategies. Discussions involving UX should always be at all levels within the organization and should be integrated as a key multidisciplinary activity, especially when resources are limited and must be accepted as a valuable part of the design and product development.

Finally, you must understand that the UX as a concept should be applied in a strategic position to ensure its influence on:

- Business decisions in terms of new value propositions to develop,

- The choice of designs in developing and contributing to business objectives, and

- The development of the processes used to guide the way in which the organization operates

You see, you do not require the consultant with UX. It does not make you need to incorporate as a professional UX on your computer if you do not have resources to spend, but you can be define strategies that will refine your product to achieve the business goals you have on your roadmap. You can do it , just like hundreds of other Start Ups. Why aren't you going to be able to do it?

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