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*Artículos Científicos*

## La percepción del espacio escolar y su impacto en el aprendizaje de estudiantes de secundaria a profesional en CDMX

*The Perception of School Space and its Impact on the Learning of Secondary Students to Professionals in CDMX*

*A percepção do espaço escolar e seu impacto na aprendizagem de alunos do ensino médio ao profissional no CDMX*

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### Resumen

El resultado del presente trabajo muestra los hallazgos encontrados respecto a la percepción que tienen algunos estudiantes sobre los espacios donde aprenden o practican algún deporte. Entre ellos el hecho de que son necesarias las mejoras de las condiciones espaciales para coadyuvar en el aprendizaje y la superación personal. El objetivo de esta investigación realizada en Ciudad de México a principios del año 2019 fue evaluar y entender las circunstancias que se viven en la actualidad en el espacio escolar, tan importante para el progreso y la competitividad en el país. La investigación se realizó dentro del paradigma hermenéutico interpretativo; es de corte cualitativo. Se realizaron dos entrevistas en estudiantes becados de secundaria y preparatoria, más un grupo de enfoque de nivel profesional, con beca deportiva, como informantes clave de la propia comunidad de estudio. Asimismo, se reunió y exploró material teórico, descriptivo de diversos autores de diferentes épocas para la comprensión cualitativa crítico-analítica, dentro del paradigma



de la complejidad, gracias a lo cual se generó un modelo de análisis para la comprensión de la información y actuación con miras a la mejora de los espacios educativos. Finalmente, se arribó a la conclusión de que hay un desequilibrio de las condiciones y equipamiento de escuelas para las actividades académicas, con gran demanda en México ante un mundo altamente competitivo.

**Palabras clave:** impacto en el aprendizaje, instalación educativa, percepción.

### **Abstract**

The result of this work shows the findings found regarding the perception that some students have about the spaces where they learn or practice a sport. Among them the fact that improvements in spatial conditions are necessary to contribute to learning and self-improvement. The objective of this research conducted in Mexico City at the beginning of 2019 was to evaluate and understand the circumstances that are currently lived in the school space, being so important for progress and competitiveness in the country. The research was conducted within the interpretive hermeneutic paradigm. It is of qualitative nature. Two interviews were conducted in middle school and high school scholarship students, plus a professional level focus group, with sports scholarship, as key informants of the study community itself. Likewise, theoretical and descriptive material from various authors from different eras was collected and explored for qualitative critical-analytical understanding, within the complexity paradigm, thanks to which an analysis model was generated for the understanding of information and action to the improvement of educational spaces. Finally, it was concluded that an imbalance of the conditions and equipment of schools for academic activities, with great demand in our country before a highly competitive world.

**Keywords:** impact on learning, educational installation, perception.



## Resumo

O resultado deste trabalho mostra os achados encontrados sobre a percepção que alguns alunos têm sobre os espaços onde aprendem ou praticam um esporte. Entre eles, o fato de que são necessárias melhorias nas condições espaciais para contribuir com o aprendizado e o auto-aperfeiçoamento. O objetivo desta pesquisa realizada na Cidade do México, no início do ano de 2019, foi avaliar e entender as circunstâncias atualmente vividas no espaço escolar, tão importantes para o progresso e a competitividade no país. A pesquisa foi realizada dentro do paradigma hermenêutico interpretativo; É qualitativo. Duas entrevistas foram realizadas em estudantes do ensino médio e do ensino médio, além de um grupo focal de nível profissional, com uma bolsa esportiva, como informantes-chave da própria comunidade de estudo. Da mesma forma, materiais teóricos e descritivos de diferentes autores de diferentes épocas foram coletados e explorados para o entendimento qualitativo crítico-analítico, dentro do paradigma da complexidade, graças ao qual foi gerado um modelo de análise para a compreensão das informações e ações com Você procura a melhoria dos espaços educacionais. Por fim, concluiu-se que há um desequilíbrio nas condições e equipamentos das escolas para atividades acadêmicas, com grande demanda no México em um mundo altamente competitivo.

**Palavras-chave:** impacto na aprendizagem, instalação educacional, percepção.

**Fecha Recepción:** Mayo 2019

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## Introduction

Given the needs of a globalized and highly competitive world, the problem of weak political actions within the Mexican education system, school dropout, low academic performance and sports, appear multiple factors for learning and commitment that influence in the training of students and athletes and professionals. This research is oriented solely to educational spaces with the aim of expanding knowledge regarding the way in which students perceive them for their development. And in that line were answers beyond the pedagogical sense, in the exercise for educational training. This work analyzed the options to promote certain skills and mechanisms that justify the need to incorporate quality



schools, which are necessary for the motivation of participating subjects, with the assumption of a commitment to continuous improvement.

More specifically, the object of the present study was to know the evidence of the conditions and perceptions that students express about spaces as means where they develop in an integral way. Thus, a qualitative research was carried out based on two instruments: two surveys plus a focus group composed of selected informants according to their academic and sports performance, as well as the review and analysis of the literature considered for this important topic. The interviews were conducted to assess whether learning is potentiated when it is conducted within comfort spaces and good facilities of the school or college, as well as to identify the expectations and needs of students. Consequently, after a contrast with the selected literature, a final model was established with several possible action gaps and a solution to the research question. As part of the results it was found that the better the capacity installed in a school, the greater the commitment to learning and sports performance.

## Materials and method

The type of study is exploratory, descriptive, relational and empirical; and belongs to a contemporary phenomenon within the interpretive hermeneutical paradigm. The research was carried out within a search process with the purpose of arriving at an explanation and understanding of a specific reality, delimited by a time and context, with parameters of the qualitative research paradigm, based on the process of qualitative understanding, analyzing theoretical aspects and research instruments based on interviews plus a focus group to understand the aspect of the perception of well-being. First of all, analyze the conditions that individuals perceive regarding the environment; understand how it can be integrated by acquiring a commitment to overcoming and reaffirming axiological in a competitive world. And critically study part of the theories with the current conditions of the spaces of the school organization with key informants of the study community itself in order to arrive at an explanation and understanding of a specific reality, delimited by a time and a context, as already mentioned.



## Sampling method

Non-probabilistic sampling was used. The sample was representative. Two interviews were conducted with selected middle and high school students, plus a professional level focus group. In addition, theoretical material, from various authors, was collected and analyzed within the complexity paradigm.

With the opinion sampling, the field work is simplified because the sample can be concentrated a lot. However, when wanting to concentrate the sample, errors and biases due to the researcher can be made and, since it is a subjective sampling (according to the researcher's preferences), the results of the survey do not have an exact statistical reliability (Conceptos básicos de la metodología de la investigación, 2010, párr. 20).

**Tabla 1.** Variables de estudio e indicadores

| <b>Variable cualitativa</b>          | <b>Del concepto</b>  | <b>Operacional</b>                                    | <b>Indicadores</b>  |
|--------------------------------------|--|---|---|
| - Espacio educativo<br>- Aprendizaje | “El espacio educativo como memoria, transformación y crecimiento, que recoja los procesos temporales y de vida de toda la comunidad educativa”<br>(Abad, 2006, p. 2) | - Estética<br>- Instalaciones<br>- Docentes<br>- Aula | - Percepción del bienestar<br>- Actitud para ser mejor<br>- Comodidad |

Fuentes: Elaboración propia

The present investigation analyzed whether the educational space in the classrooms and school spaces of Mexico City motivate the attitude for teaching learning.

## Theoretical framework

This section mentions some of the most important citations for this research topic.

Any change that is intended to be carried out in the education system can be disrupted if the spaces where they are to be carried out are not adapted. (p. 1)  
It is necessary to move from a quantitative stage of satisfaction of school positions to a qualitative stage in which the school architecture, as a physical

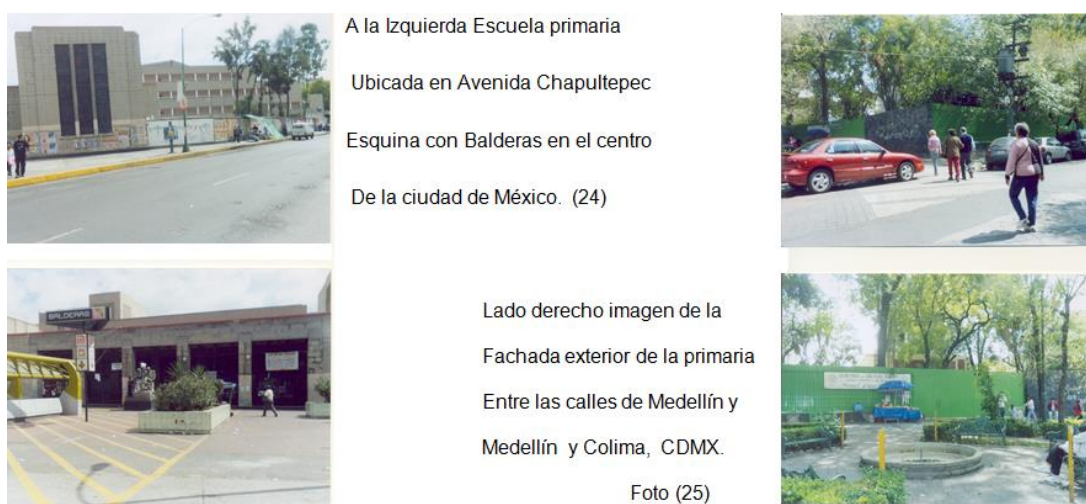
environment, contributes and provides quality to education ” (Salmerón, 1989).

This work precisely refers to the qualitative aspect. How to improve student learning? Through educational spaces. The theoretical information collected for this research is in the process of investigative consolidation, by searching for codes or categories that are still being built and investigated and that are of substantial activity for the theoretical foundation.

According to Casassus (1992), at present Mexican educational modernization is present and a large part corresponds to the government sector through the Ministry of Public Education (SEP), without giving importance to educational spaces. Educational modernity and educational modernization are the conditions to achieve, on the one hand, what is expected: “educate new generations; and on the other, (...) a good relationship between the best use of human, physical and financial resources at your disposal and the quality of the result of the teaching-learning process ”(Casassus, 1992, p. 39).

The objective of the architectural planning is, following this time to Coppola (1997), to satisfy the spatial demands of man, a term that indicates “in addition to the biological-functional requirements, also the psychological ones, that is, the demands linked to behavior, to mode of use of space, to the symbolic meaning of space itself (p. 33).

**Figura 1.** Vistas exteriores de escuelas en las colonias Juárez y Roma.



Fuente: Elaboración propia

The analysis of the state of the art reflects that schools or institutes are also an organizational space and their improvements are required for student achievement. In that line, Ortigosa et al. (2003) proposed “to know the characteristics of the student's pursuit and performance, through the evaluation of the pensum 2000, taking as key elements, the student's performance and prosecution throughout his academic career” (para. 1 ).

On the other hand, a prestigious school called Reggio Emilia has sought the following:

A friendly dialogue between architecture, design and pedagogy to project beautiful schools, suggestive of possibilities and innovative. In short: a conception of the educational space as memory, transformation and growth, which includes the temporal and life processes of the entire educational community (Abad, 2006, p. 2).

And in the same source the words of Loris Malaguzzi are cited as an epigraph, who believes that the children's classroom “should be a kind of transparent aquarium where ideas, attitudes and people were reflected” (quoted in Abad, 2006, p. 1).

Any human activity needs a certain space and time. “This is the case with teaching and learning, with education. It follows that education has a spatial dimension and that, also, space is, along with time, a basic, constitutive element of educational activity ”(Frago, 1998, cited in Abad, 2006, p. 3) .

The quotes from previous research demonstrate the importance of the educational space. As we can see, there are different approaches needed to advance what we do. The organizations, the administrative role, the planning, the educational system demonstrate the multiple factors that exist to cause improvements in student performance and well-being.

Perhaps this is why the diversity of points of view and factors through which the performance problem has been studied is evidenced in the literature review on the subject. What has been demonstrated is that multiple individual and institutional and socio-economic factors are involved in student achievement, so although it is true that the quantification of its indicators is necessary to characterize and diagnose or describe the current situation, no considering the qualitative aspects of it makes the results of the study insufficient for decision making in the application of corrective

measures to improve the performance problem (Ortigosa *et al.*, 2003, párr. 17).

This work resorted to the complexity paradigm. According to Morín (2008, cited in Logroño, 2014), "complexity is uncertainty within richly organized systems" (p. 1). In addition, it is part, underlies the simplicity paradigm. The latter "puts an order in the universe, and pursues disorder. The order is reduced to a law, to a principle" (Pernia, s. F., P. 1).

Now, the following fragment is worth taking up on decision making:

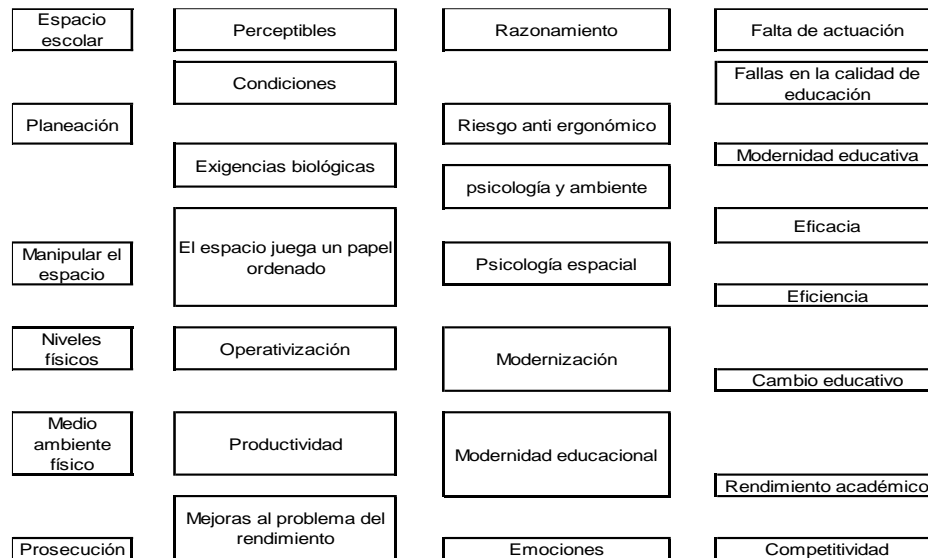
There is no doubt that the science of psychology can (and should) play a role in any architectural project, since the architect and / or designer are in a position to create the various environments that can influence the moods of the inhabitants of these spaces, regardless of whether these are intended for private, public or institutional interests

Many times some structure is designed without taking into consideration the "emotions", "personality characteristics", "the type of culture of origin" (Goleman, 2003), etc., of those who will later occupy the occupied dependencies (Lotito, 2009, p. 14).

*In various articles analyzed, mention is made of the senses, looking to the future, humanity.*



**Figura 2.** Tendencias y códigos más representativos obtenidos del marco teórico



Fuente: Elaboración propia

The results of the analysis of the theoretical framework visualize the need to improve the quality of education. In the case at hand, the problem that persists is the persistence of not applying the theory for improvements in education.

**Figura 3.** Trabajo de campo: actividades en el exterior de una escuela primaria



**La Educación debe hacer real la armonía entre la capacidad personal de aprovechamiento, con la incorporación del educando a las dignidades humanas que permitirán su triunfo.**

**Los valores culturales cuando son adquiridos permiten que existan las más valiosas particularidades humanas.**



**Por ende son importantes todos los atributos que contribuyan a su formación principal de los educandos, la arquitectura en su forma plástica y funcional aporta ciertos motivantes psicológicos y sensación de bienestar.**

**Imágenes de una escuela primaria en la Ciudad De México.**

Fuente: Elaboración propia

“The most important characteristic of an autopoietic system is that it rises above its own conditions and constitutes itself as distinct from the surrounding world through its own dynamics, so that both things are inseparable ”(Maturana, cited in López, 1998, p 112).

Nevertheless:

Do not understand this resistance to the exasperated way of much of the ideologies of our time, because "smile, laugh, joke, play, caress, hug, is also resist."

(...) “Resist, resist ourselves first, our indifference and our lack of attention, our tiredness and discouragement, our bad impulses and our petty obsessions” (López, 1998, p. 113).

These last theoretical antecedents base the present investigation.

**Figura 4.** Escuela primaria rural al oriente de Ciudad de México

El presente trabajo investigativo reúne un sustento para promover la mejora en estos espacios educativos, causar la calidad en sus instalaciones, debe ser una prioridad.

En estas imágenes se observan las carencias de instalaciones en poblados no tan lejanos en la periferia de la Ciudad De México y que merecen ser escuchados también.

La capacidad instalada para la enseñanza y aprendizaje es muy escasa.



32.- Personal docente y administrativo



33.- Padres de familia



34.- Población de alumnos



35.- Auditorio al aire libre

Fuente: Elaboración propia

## Interview data and focus group

### Interview one

Surveys and a focus group were conducted. Regarding the former, the following is shown as an example:

- Hello how are you doing? [Break the ice].
- What is your name? How old are you? Where do you study?
- It's nice to meet you.

**Figura 5.** Proceso de la entrevista



Fuente: Elaboración propia

**Figura 6.** Proceso de la entrevista



Fuente: Elaboración propia

- What do you think of your school? R = My public school is one of the most recognized in the Federal District, recommended by different friends. I feel proud to be there.
- How do you perceive the spaces of your school? R = Considerably large compared to the primary where I studied.

- For you, Emmanuel, what is the most important area or space? R = The central courtyard has a fountain surrounded by many trees. It is a very beautiful place, many little birds go and it is nice to be there.
- Please talk about your experience in the educational space. R = As I said, in elementary school it was very small. In this high school it is warmer. It is much bigger and I feel more comfortable. Although the director is more strict, it is warmer. The furniture was more comfortable, the primary, and the furniture of this secondary is very uncomfortable, although the light, ventilation, windows, lighting and heat is good.
- What do you enjoy most about your studies? R = Win some contests and keep my scholarship.
- What attracts you most to your school? R = I am attracted to think that it is one of the best schools and I am proud to belong to this campus.
- What do you understand by the educational space? R = The educational space is important to learn better, because if the space is more comfortable you will learn better, because when the space is uncomfortable you only concentrate on the discomfort of the space and not so much on what you are learning.
- Your main motivations to study. R = It is living together or studying with the closest people, and I feel comfortable that the school is bigger, feel proud of the school even if I do not study much.
- What people do you like to work with? R = With my closest friends.
- What is your biggest challenge today? R = Maintain the 8.5 grade to maintain my scholarship.
- You like to study? R = Sometimes. It bothers me not to understand some things or not explain them well.
- Tell me about your experience. How do you enjoy the spaces, facilities of the areas and hotels you visit? R = The space does not change much, it has a table, a chair, what attracts attention is outside, since they have very large areas, a quieter, more comfortable environment is perceived and the forest is enjoyed.

With the Atlas.ti software the following codes were defined for the analysis of interview one.



Figura 7. Definición de códigos de la entrevista uno

|   |  |   |  |
|---|--|---|--|
| [1:1] orgulloso<br>orgulloso  | [1:2] reconocida<br>reconocida   | [1:3] Considerablemente grandes<br>Considerablemente grandes                                    | [1:4] El patio central, tiene una fu..<br>El patio central, tiene una fuente rodeada por muchos árboles, es un lugar muy hermoso, van muchos pajaritos y es agradable  |
| [1:5] primaria era echo muy pequeña<br>primaria era echo muy pequeña  | [1:6] secundaria es mas cálida<br>secundaria es mas cálida   | [1:7] siento más cómoda<br>a siento más cómoda  | [1:8] la luz, la ventilación, las ve..<br>la luz, la ventilación, las ventanas y el colar controlado es bueno  |
| [1:9] Lograr ganar algunos concursos..<br>Lograr ganar algunos concursos y mantener mi beca.  | [1:10] mejores escuelas<br>mejores escuelas  | [1:11] siento orgulloso de pertenecer..<br>siento orgulloso de pertenecer a este plantel.       | [1:12] El espacio educativo es import..<br>El espacio educativo es importante para aprender mejor, pues si el espacio es más cómodo vas a aprender mejor porque cuando el espacio es incómodo solo te concentras en la incomodidad del espacio y no tanto en lo que estas aprendiendo. |
| [1:16] llama la atención es al exteri..<br>llama la atención es al exterior ya que tienen áreas muy grandes, se percibe un ambiente más tranquilo, más cómodo y se disfruta del bosque. | [1:14] sentirme orgulloso de la escue..<br>sentirme orgulloso de la escuela aunque no estudie mucho. | [1:15] Mantener la calificación de 8..<br>Mantener la calificación de 8.5 para mantener mi beca |  |
| [1:13] me siento cómodo que las escue..<br>me siento cómodo que las escuela sea más grande  |  |   |  |

Fuente: Elaboración propia

## Interview two

Figura 8. Proceso de la entrevista



Fuente: Elaboración propia

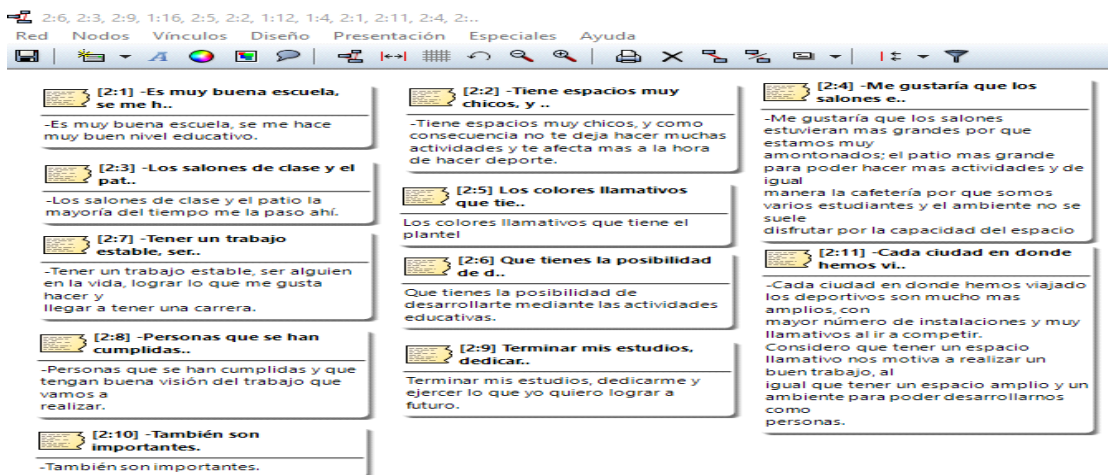
Figura 9. Proceso de la entrevista



Fuente: Elaboración propia

As in the previous case, with the Atlas.ti software the following codes were defined for the analysis of interview two.

Figura 10. Definición de códigos de la entrevista dos



Fuente: Elaboración propia

### Focus group

A brief presentation of a book of sports spaces was prepared. Subsequently, the focus group was carried out.

**Figura 11.** Grupo de enfoque



Fuente: Elaboración propia

**Figura 12.** Grupo de enfoque



Fuente: Elaboración propia

This was done to be able to interpret and understand the spaces where they work, the facilities of their school sites.

Figura 13. Red Atlas.ti. Definición de códigos del grupo de enfoque

3:3, 3:9, 3:6, 3:16, 3:2, 3:5, 3:15, 3:12, 3:4, 3:11, 3:14, ..

Red Nodos Vínculos Diseño Presentación Especiales Ayuda

[3:1] =Luis: Opino que va a definir ..  
=Luis: Opino que va a definir la preparación y la forma en como nos desenvolvamos.

[3:2] -Cristina: Bueno a mi parecer ..  
-Cristina: Bueno a mi parecer estas invirtiendo en una educación integral, como podría ser el deporte te está aportando a los estudiantes disciplina y el problema es que lo fomentan más académicamente pero como no lo toman mucha importancia.

[3:3] i veo la diferencia porque en ..  
i veo la diferencia porque en mi secundaria si tenia canchas y en mi universidad no tengo un espacio en donde pueda hacer deportes, pero en mi universidad tengo cafetería, pero en mi secundaria no la tenía, entonces no hay un balance en el apoyo de instalaciones en las escuelas.

[3:4] Jugamos en una cancha de cemen..  
Jugamos en una cancha de cemento cuando la UVM tiene el dinero para la infraestructura.

[3:5] Si, por que yo estudio fisioite..  
Si, por que yo estudio fisioterapia y en mi universidad si hay apoyo en laboratorios y materiales, pero en cuanto a instalaciones deportivas son muy escasas, considero que tendrían que haber mejores instalaciones.

[3:6] Estoy estudiando el segundo se..  
Estoy estudiando el segundo semestre en UVM centro y considero que en lo particular no me agrada tanto porque en las instalaciones son muy pequeñas y sus edificaciones son muy viejas, dicen que aguanta terremotos, pero yo me siento seguro.

[3:7] En nuestra escuela solo nos ap..  
En nuestra escuela solo nos apoyaron con un aro de basquetbol y mi coach se estuvo "peleando" con el coordinador de deportes para que nos pusieran un espacio definitivo de deportes, pero no se pudo por que el gobierno les tiene que otorgar un permiso y llevan años así, no hay apoyo gubernamental.

[3:8] Si, pero es un campus muy chiq..  
Si, pero es un campus muy chiquito y existen pocas carreras, estudie ingeniería ambiental en Anáhuac Sur.

[3:9] Se ve la diferencia en Anáhuac..  
Se ve la diferencia en Anáhuac y el Tecnológico de Monterrey, además el apoyo económico cambia, pero me siento bien en mi universidad.

[3:10] Pues estudie en prepa UNAM, si..  
Pues estudie en prepa UNAM, si tenía instalaciones, pero las restringían, se tiene que complementar las instalaciones educativas con las deportivas. Por ejemplo: Mi amiga Paola va en la Anáhuac y entro con beca deportiva, pero en su planten no tienen espacios deportivos, no puedes entrar a una universidad que te ofrece algo cuando en realidad no te lo dan.

[3:11] Por ejemplo, Cuidad Universita..  
Por ejemplo, Cuidad Universitaria tiene todos los espacios deportivos y educativos, pero no son espacios cerrados y afectan al desarrollo deportivo.

[3:12] En lo particular pienso que, s..  
En lo particular pienso que, si porque yo estoy llevando contaduría y finanzas y tenemos que utilizar las computadoras, pero restringen el uso por que otras ingenieras lo que están haciendo es reubicar los horarios.

[3:13] Pienso que en lugares públicos..  
Pienso que en lugares públicos porque tenemos que dejar de ver los intereses propios y ver intereses comunes.

[3:14] No pueden hacer nuevos espacio..  
No pueden hacer nuevos espacios porque no tienen una buena planeación de las instalaciones en las universidades.

[3:15] Si, por que por ejemplo yo tra..  
Si, por que por ejemplo yo trabaje en un restaurante y tenía una altura aproximada de 5 metros y hasta arriba estaban los vasos, si tenían escaleras, pero como de biblioteca no había mucho problema para subir cuando había poca gente, pero el problema era cuando había mucha gente porque se me complicaba estar subiendo y bajando.

[3:16] Si, por que en mi universidad ..  
Si, por que en mi universidad no hacen las cosas a las medidas como fueron los tableros de basquetbol.

Fuente: Elaboración propia

## Results and Discussion

Figura 14. Conteo de códigos. Resalta la capacidad instalada y los espacios confortables

Administrador de códigos [UH: Nueva unidad hermenéutica]

Códigos Edición Miscelánea Imprimir Visualizar

Buscar

| Nombre                     | Fundamentado | Autor | Creado      | Modifica... |
|----------------------------|--------------|-------|-------------|-------------|
| AMBIENTE TRANQUILO         | 2            | Super | 18/05/20... | 18/05/20... |
| CAPACIDAD INSTALADA        | 18           | Super | 18/05/20... | 18/05/20... |
| COMPETITIVIDAD             | 2            | Super | 18/05/20... | 18/05/20... |
| CUMPLIMIENTO DEL TRABAJO   | 1            | Super | 18/05/20... | 18/05/20... |
| EDUCACIÓN INTEGRAL         | 1            | Super | 18/05/20... | 18/05/20... |
| ESPACIO EDUCATIVO          | 2            | Super | 18/05/20... | 18/05/20... |
| ESPACIO IMPORTANTE         | 2            | Super | 18/05/20... | 18/05/20... |
| ESPACIOS CONFORTABLES      | 5            | Super | 18/05/20... | 18/05/20... |
| ESTETICA                   | 3            | Super | 18/05/20... | 18/05/20... |
| GESTION                    | 2            | Super | 18/05/20... | 18/05/20... |
| LOGRAR GANAR               | 2            | Super | 18/05/20... | 18/05/20... |
| NIVELES DE INFRAESTRUCTURA | 1            | Super | 18/05/20... | 18/05/20... |
| ORGULLOSO                  | 1            | Super | 18/05/20... | 18/05/20... |
| reconocida                 | 4            | Super | 18/05/20... | 18/05/20... |
| RECONOCIMIENTO             | 4            | Super | 18/05/20... | 18/05/20... |

Fuente: Elaboración propia



Figura 15. Modelo que contempla las acciones a seguir



Fuente: Elaboración propia

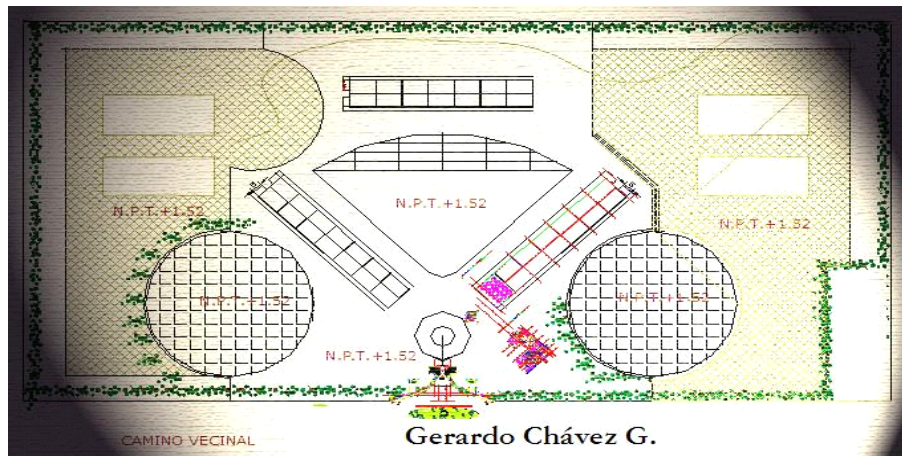
The theory explains and supports, through various authors, the need for educational modernity. This document evidences the lacks and conditions of current educational spaces. These spaces are means by which subjects can develop comprehensively, and they are also insufficient sites that affect teaching and learning.

The interviews and the focus group indicate that it can improve student performance, teaching, learning in the classroom and in sports, which, in turn, is obtained with the complexity paradigm, a model that reflects order, balance and understanding of a system as an important strength; documents techniques for proposals and improvements in educational spaces that have a greater increase in competitiveness and educational modernity.

## Conclusions

In theoretical research there is a tendency towards progress and modernity for education. The field work documented data that reflects the problems and the students need to carry out their activities. Committing to progress, modify and erect through interdisciplinarity, it must be the engine that drives our country to produce comfortable and quality school spaces.

**Figura 16.** Reflejo del orden en los espacios educativos



Fuente: Elaboración propia

This research invites to participate in the design of educational spaces that are harmonic, balanced, beautiful and transcendental for man.

**Figura 17.** Imagen utópica de las escuelas del futuro



Fuente: Elaboración propia

In conclusion, learning performance can be improved with comprehensive teaching without forgetting the importance of school spaces as a sphere of improvement, which defines emotion, with visual order, demonstrates discipline, therefore, the student learns to To conceive a well-being that gives knowledge together with the space and that is aimed at a quality of life. It is expected that human capital will form their families and will be integrated as is common in most cases to an organization, and will foster changes in culture, promote sustainable spaces in education at different levels, with the hope of creating better workers, executives and technicians with a solid background that involve a spatial identity value apart from their education, focusing attention on ergonomic school spaces.

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