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ONLINE LEARNING, A PERCEPTION FROM THE STUDENTS IN STOMATOLOGY

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Abstract: Currently, due to the advancement of technology and the use of online tools, universities have modified the learning style which is no longer only face-to-face but also through the use of virtual platforms, so there are more and more courses, university careers, diplomas, among others that are taught through the Internet. On the other hand, a percentage of students who need to take online classes either because they work and this type of educational system is more accessible, do not always know how to use the virtual platforms; this leads to students not taking full advantage of the usefulness of these platforms. an ad hoc questionnaire that measures online learning was applied to 102 students of stomatology with an average age of 20.4 +/- 3.6. Under a descriptive, cross-sectional, scrutinized, homodemographic and prolective study design, it was found that more than half of the respondents think that their online learning is not favorable but very bad (59.8%).

Keywords: e-learning, students, stomatology, online learning

INTRODUCTION

Nowadays, the use of the Internet has played an important role in the area of education, which over time has been increasing with the new generations. With the current pandemic, the increase of distance education has gained a wide ground over the university students. Several authors mention that the use of online learning is observed in the way in which the educational experience of students is manifested; how much can online learning respond to the challenges of current and future society; what are the factors that contribute to the success of virtual students; what are the attitudes, perceptions, and needs of students and teachers regarding the use of technologies for learning and teaching; how do teachers assume their online teaching tasks and what are their support needs. In the area of stomato-

logy, the student faces a severe problem since most of the course is practical and online learning greatly limits this learning, especially in terms of the skills and abilities that students develop in the clinical part.

Learning should be understood with all the senses, since learning not only involves the eyes and ears but also the mind, heart and actions come together to reach the same goal, to take ownership of knowledge and knowledge, so that when performing educational work does not require effort because there is the enjoyment, enjoyment and pleasure that comes from learning something new (Juarez, 2014).

Being able to differentiate the learning styles of each student, is of utmost importance, since there is greater reference of how each student learns, but diagnosing is the first step; to be able to manage in a more didactic way a plan that helps to create all learning styles and can be adapted to the educational system making it interactive, to make individual management more flexible (Almenara,2018).

DIFFERENCES BETWEEN ONLINE, VIRTUAL AND DISTANCE EDUCATION

ONLINE EDUCATION

It is one in which teachers and students participate and interact in a digital environment, through technological resources with the use of the Internet and computer networks in a synchronous manner, i.e., they must coincide with their schedules for the session. This method usually has as an area of opportunity the social dimension, since the teacher may have to make an extra effort to achieve a group union, since it will have to reach a climate of freedom and trust among the students to achieve their pedagogical goals. For online education we can take as an example the classes that are taught through Zoom sessions, and then the activities are uploaded to platfor-

ms such as Canvas or Blackboard for review. It is important to mention the role of the teacher, who in this model is known as a tutor, who only accompanies and assists the student in his learning. Examples of the tools used in this online education are Schoology, Edmodo, Blackboard, Zoom, Google Hangouts and Google Scholar, etc (Altamirano, 2022).

Advantages of online education:

- **Openness:** Access to information is broadened, while at the same time this method reduces geographical barriers, since anyone, regardless of location, can join the courses.
- **Flexibility:** It favors self-management of dedication time.
- **Effectiveness:** This method promotes the development of autonomy, so that the student can manage himself/herself.
- **Personalized support:** Online education is distinguished by the fact that it provides personalized support to the student, even with group work.
- **Economy:** Reduced costs for the use of physical space, as well as transportation.
- **Community:** More debate and dialogue is promoted, in addition to a community linked to academic knowledge (Alvarado, 2014).

VIRTUAL EDUCATION

This model requires mandatory technological resources, such as a computer or tablet, internet connection and the use of a multimedia platform. This method, unlike online education, works asynchronously, i.e., teachers do not have to coincide in schedules with students for the sessions. This method is similar to distance education, with the difference being the use of strictly technological resources. Course materials or documents are uploaded to

the chosen platform so that students can review them, and doubts are usually discussed in public forums for the whole group (Aguilar, 2020). The role of the teacher is to share materials for consultation and work through platforms, where students should upload their activities for review and later receive feedback to see their areas of opportunity. An example of the tools used are platforms such as Canvas, Blackboard, Edmodo, Schoology or e-mail (Barrientos, 2022).

Advantages of virtual education

- **Flexible:** Because the method can be managed asynchronously, students have more personal space to have flexible schedules and manage their personal and professional time as they prefer.
- **Effectiveness:** It is handled in a session-feedback manner, so this helps the topics to advance quickly, avoiding distractions and the students go at the same pace (Aguilar, 2020).

DISTANCE EDUCATION

It is the one that can have a percentage of face-to-face and other virtual, however, this may vary depending on the university where it is taught. Students have control over the time, space and pace of their learning, because an internet connection or computer resources are not strictly required, as in other methods. The materials used are usually physical, such as notebooks, pens, colors, USB flash drives, CDs, among others. Many programs even send the educational material and lessons by mail. An example that we can see of this modality at present is distance education through open television channels that has been applied by the Ministry of Public Education in Mexico, at the beginning of the quarantine, and also in other cases it can be supported by radio. The role of the **teacher is to** grade and accredit, as well as to give feedback to the learning

resources such as activities, to mention an example. This can be by phone, email or text message. Similarly, some teachers have the role of recording the session or class to be broadcast on television or radio. The **tools used are** television, radio, email, postal mail, physical resources such as notebooks, books, notebooks, pencils, etc. (Uribe, 2012).

Advantages of distance education

- **Flexibility:** For the students' personal time, since they manage their own time and school and personal organization.
- **Accessibility:** Distance education programs have greater reach and reach people of all socioeconomic levels thanks to the simplicity of the technological resources required for the classes (Hernández, 2021).

REMOTE EMERGENCY EDUCATION

This concept was born as a result of the world crisis generated by the COVID-19 pandemic caused by the SARS-COV2 virus, a situation that prompted society to take measures such as social confinement to avoid chains of transmission. Faced with this extremely difficult situation, education had to adapt its methods in a very short period of time in order to be able to continue teaching all its students. The main objective of this type of education was and still is to transfer the courses that had been taught face-to-face to a remote, virtual, distance or online classroom. In a report published by *The Learning Factor* in Peru entitled "Emergency Remote Teaching", it is described that different countries as well as institutions responded differently to the educational change, and how this term of emergency remote education is completely new, since the roles and tools are not defined. In the United States, for example, some educational institutions are working face-to-face

with restrictions, and others with the method described above as "online". So it depends on how the country or institution has decided to handle the crisis as to how it would define its type of emergency remote education. The role of the teacher varies depending on which method is used (Fox, 2020).

Advantages of remote emergency education

- This method prioritizes the emergency situation and looks out for the welfare of its students.
- This new term groups all the actions coming from governments, companies, non-governmental organizations and individuals to find solutions and keep constantly updated, so it can change suddenly if the emergency situation changes (Rivera, 2000).

MATERIALS AND METHOD

This research was carried out virtually by applying a validated instrument to undergraduate students of Stomatology through a non-probabilistic convenience sampling with their informed consent.

INSTRUMENT

This research used the instrument proposed by Laura Lezcano and Gabriela Vilanova in Argentina, entitled "Learning assessment instrument in virtual environments. Students' perspective and teachers' contributions", said instrument was validated ($\alpha = 7.9$) (Lezcano-Vilanova, 2017) and consists of 12 items, polychotomous. The items are randomly distributed, with 11 multiple choice and 1 open response.

The data from each instrument were entered into a data sheet of the SPSS version 25 program to perform descriptive statistics using tables with frequencies and percentages.

RESULTS

According to the sex of the students attending the clinic at the School of Stomatology of the Benemérita Universidad Autónoma de Puebla, 58.8% (60 female students) of the population is female, while 41.2% (42 students) is male (see Table 1).

Sex	f	%
Female	60	58.8
Male	42	41.2
Total	102	100

Table 1. Sex of respondents

Regarding the age of the students, it was found that the mode corresponds to 23 years, which corresponds to 25.4% (26 students), with an average age of 20.4+/- 3.6 (See Table 2).

Age	f	%
19	3	2.9
20	11	10.7
21	12	11.7
22	15	14.7
23	26	25.4
24	8	7.8
25	3	2.9
26	6	5.8
27	9	5.8
28	9	8.8
Total	102	100

Table 2. Age of respondents

According to the first two items of the instrument, 100% answered that they have taken online courses at the undergraduate level and 100% have had experience in face-to-face courses (Table 3).

Items	Yes	NO	Total
1. What type of education and/or training did you complete or have you completed online (Bachelor's Degree)?	100	0	100
2. Have you had any experience of attending courses of study and/or courses in person?	100	0	100

Table 3. Respondents' courses

Regarding the online training experience, both sexes (59.8%) agreed that their experience was bad (women 33 and men 28) (Table 4).

By semester it was found that the majority (79.4%), view online training very poorly (Table 4 a).

As to whether the online modality has facilitated student learning, the majority of both sexes (98%) mentioned "no" (women 58 and men 42) (Table 5).

4. Do you consider that the online modality has facilitated your learning process?	Yes	Partially	No	Total
Women	0	2	58	60
Men	0	0	42	42
Total	0	2	100	102

Table 5. Respondents' Online Learning

As to whether the online modality has facilitated student learning, the majority of semesters mentioned "no" (94.1%) (Table 5a).

4. Do you consider that the online modality has facilitated your learning process?	Yes	Partially	No	Total
Sixth semester	0	1	12	13
Seventh semester	0	1	10	12
Eighth semester	0	2	23	25
Ninth semester	0	1	33	34
Tenth semester	0	1	17	18
Total	0	6	96	102

Table 5 a. Respondents' Online Learning by Semester

According to the advantages of online courses, the majority (60.7%) of both sexes mentioned that managing their own time (women 40 and men 22) and unlimited access to the class (women 12 and men 18) (29.4%) are the best advantages of taking online classes (Table 6).

In the advantages of online courses per semester, the majority (42.5%) mentioned that the most obtained advantage was the unlimited access to explanations (43 students)

and the least advantage was the contact with professors (6) (5.8%) (Table 7).

According to the disadvantages of online courses, the majority of both sexes mentioned that it is the difficulties in understanding the explanations (53.9%) for students to take online classes (Table 8).

According to the disadvantages of online courses, most semesters mentioned that they are the difficulties in understanding the explanations (87.2%) when taking online classes (Table 8 a).

Regarding tools for learning, the majority of both sexes mentioned that videos were the best tool for learning (59.8%) and the least used was the use of blogs (Table 9).

Regarding learning tools, the majority of semesters mentioned that videos were the best tool for learning (73.5%) and the least used was the use of chats with teachers (Table 9a).

The online environment has not facilitated contact with their teachers and peers in the majority of both sexes (98%) Table 10.

8. Do you consider that the online environment has facilitated contact with your teachers and peers?	Yes	Partially	No	Total
Women	0	0	60	60
Men	0	2	40	42
Total	0	2	100	102

Table 10. Environment with teachers and peers of respondents.

In most semesters, the online environment has not facilitated contact with their professors and classmates (93.3%) (Table 10a).

8. Do you consider that the online environment has facilitated contact with your teachers and peers?	Yes	Partially	No	Total
Sixth semester	0	1	12	13
Seventh semester	0	2	10	12
Eighth semester	0	2	23	25
Ninth semester	0	0	34	34
Tenth semester	1	1	16	18
Total	1	.9	6	5.8

Table 10 a. Environment with professors and peers of respondents by semester

Regarding the assessment of evaluation for learning, the majority of both sexes mentioned that the times for carrying out the activities are flexible (72.5%) (Table 11).

Regarding the evaluation of the evaluation for learning per semester, the majority mentioned that the times to carry out the activities are flexible (77.4%) (Table 11 a).

The disadvantages of evaluation for learning, the majority of both sexes mentioned that the instruments used to evaluate are always the same (70.5%) (Table 12).

Regarding the disadvantages of assessment for learning by semester, most semesters mentioned that contact with teachers was the main one (77.4%) (Table 12 a).

The platform with the highest effectiveness for learning according to both sexes was Teams (79.4%) (Table 13).

The platform with the highest effectiveness for learning according to the semester was Teams (63.7%) and the one with the lowest effectiveness was Moodle (.9%) (Table 13 a).

The open-ended question made it clear that for the students, six points were mentioned repeatedly, considering that both sexes mentioned the lack of classes by the teacher as the first experience they reported (35.2%) and the lowest was the lack of videos (3.9%) (Table 14).

3. How do you value the experience as a student of training proposals in an online environment?	Excellent		Very good		Good		Regular		Mala		Total	
Women	0	0	0	0	5	6.8	22	33.3	33	59.8	60	100
Men	0	0	0	0	2	6.8	12	33.3	28	59.8	42	100
Total	0	0	0	0	7	6.8	34	33.3	61	59.8	102	100

Table 4. Respondents' Online Training

3. How do you value the experience as a student of training proposals in an online environment?	Excellent		Very good		Good		Regular		Mala		Total	
Sixth semester	0	0	0	0	0	0	2	20.5	13	59.8	15	100
Seventh semester	0	0	0	0	0	0	3	20.5	11	59.8	14	100
Eighth semester	0	0	0	0	0	0	8	20.5	14	59.8	22	100
Ninth semester	0	0	0	0	0	0	6	20.5	23	59.8	29	100
Tenth semester	0	0	0	0	0	0	2	20.5	20	59.8	22	100
Total	0	0	0	0	0	0	21	20.5	81	79.4	102	100

Table 4 a. Respondents' online training by semesters

5. What advantages do you find in the online course modality?	Immediate availability of materials		Contact with teachers		Unlimited access to explanations		Teachers' guidelines for the implementation of activities		Time management		Collaborative work with other students		Others		Total	
Women	6	9.8	0	0	12	29.4	2	6.8	40	60.7	0	0	0	0	60	100
Men	2	9.8	0	0	18	29.4	0	6.8	22	60.7	0	0	0	0	42	100
Total	8	9.8	0	0	30	29.4	2	6.8	62	60.7	0	0	0	0	102	100

Table 6. Respondents' advantages of online courses

5. What advantages do you find in the online course modality?	Immediate availability of materials		Contact with teachers		Unlimited access to explanations		Teachers' guidelines for the implementation of activities		Time management		Collaborative work with other students		Total	
Sixth semester	0	9.8	3	6	3	29.4	3	6.8	1	20.5	3	59.8	13	100
Seventh semester	2	9.8	1	6	6	29.4	1	6.8	2	20.5	0	0	12	100
Eighth semester	5	9.8	0	10	10	29.4	5	6.8	4	20.5	1	5.98	25	100
Ninth semester	3	9.8	2	17	17	29.4	3	6.8	4	20.5	5	59.8	34	100
Tenth semester	0	9.8	0	7	7	29.4	4	6.8	3	20.5	4	59.8	18	100
Total	10	9.8	6	5.8	43	42.5	16	15.6	14	13.7	13	12.7	102	100

Table 7. Respondents' online course advantages by semesters.

6. What disadvantages do you find in the online course modality?	Difficulties specific to the career or course		Difficulty in understanding explanations and instructions		Communication difficulties with peers and teachers		Difficulties in adapting to the new context		Another		Total	
Women	21	36.2	35	53.9	4	9.8	0	0	0	0	60	100
Men	16	36.2	20	53.9	6	9.8	0	0	0	0	42	100
Total	37	36.2	55	53.9	10	9.8	0	0	0	0	102	100

Table 8. Respondents' online course disadvantages.

6. What disadvantages do you find in the online course modality?	Difficulties specific to the career or course		Difficulty in understanding explanations and instructions		Communication difficulties with peers and teachers		Difficulties in adapting to the new context		Another	Total	
Sixth semester	0		13		0		0		0	13	
Seventh semester	1		11		0		0		0	12	
Eighth semester	3		22		0		0		0	25	
Ninth semester	3		31		0		0		0	34	
Tenth semester	4		12		2		0		0	18	
Total	11	10.7	89	87.2	2	1.9	0	0	0	102	100

Table 8 a. Respondents' online course disadvantages by semester

7. Which of the following tools have facilitated your learning?	Discussion forums		Chat with teachers		Chat with colleagues		Blogs	Hyper-links	Videoconferencing		Videos		Total		
Women	3		4		2		0	0	8		43		60		
Men	11		8		2		0	3	0		18		42		
Total	14	13.7	12	11.7	4	3.9	0	3	2.9	8	7.8	61	59.8	102	100

Table 9. Respondents' online learning tools.

7. Which of the following tools have facilitated your learning?	Discussion forums		Chat with teachers		Chat with colleagues		Blogs	Hyper-links	Videoconferencing		Videos		Total			
Sixth semester	3		0		2		0	0	0		8		13			
Seventh semester	0		0		2		0	0	0		10		12			
Eighth semester	0		0		1		0	1	3		20		25			
Ninth semester	1		0		4		1	1	2		25		34			
Tenth semester	0		0		0		1	3	2		12		18			
Total	4	3.9	0	0	9	8.8	2	1.9	5	4.9	7	6.8	75	73.5	102	100

Table 9 a. Respondents' online learning tools by semester

9. Which of the following aspects do you value in the evaluation of learning in online education and/or training environments?	The timing of the activities is flexible.		Teacher feedback is conducive to learning.		Error is not experienced as failure		Evaluation activities can be carried out with other students		The instruments used to evaluate are varied		Contact (by chat, e-mail, video-conference) with the teachers to ask questions		Total	
Women	43		10		0		3		4		0		60	
Men	31		8		0		1		2		0		42	
Total	74	72.5	18	17.6	0	0	4	3.9	6	5.8	0	0	102	100

Table 11. Respondents' assessment for e-learning evaluation

9. Which of the following aspects do you value in the evaluation of learning in online education and/or training environments?	The timing of the activities is flexible.		Teacher feedback is conducive to learning.		Error is not experienced as failure		Evaluation activities can be carried out with other students		The instruments used to evaluate are varied		Contact (by chat, e-mail, video-conference) with the teachers to ask questions		Total	
Sixth semester	10		0		0		3		0		0		13	
Seventh semester	11		1		0		0		0		0		12	
Eighth semester	20		2		1		2		0		0		25	
Ninth semester	28		6		0		0		0		0		34	
Tenth semester	10		6		1		1		0		0		18	
Total	79	77.4	15	14.7	2	1.9	6	5.8	0	0	0	0	102	100

Table 11 a. Respondents' ratings for online learning assessment by semester

10. In your opinion, what are the main disadvantages of learning assessment in online education and/or training environments?	The timing of the activities is flexible.		Teacher feedback is not conducive to learning.	Error is experienced as failure	Evaluation activities are carried out with other students	The instruments used to evaluate are always the same		Contact (by chat, e-mail, videoconference) with teachers does not facilitate consultations.		Total	
Women	3		0	0	0	44		13		60	
Men	3		0	0	0	28		11		42	
Total	6	5.8	0	0	0	72	70.5	24	23.5	102	100

Table 12. Disadvantages for assessment for online learning of respondents.

10. In your opinion, what are the main disadvantages of learning assessment in online education and/or training environments?	The timing of the activities is flexible.		Teacher feedback is not conducive to learning.	Error is experienced as failure	Evaluation activities are carried out with other students	The instruments used to evaluate are always the same		Contact (by chat, e-mail, videoconference) with teachers does not facilitate consultations.		Total			
Sixth semester	1		0	0	0	3		9		13			
Seventh semester	0		0	0	0	2		10		12			
Eighth semester	1		1	0	2	2		19		25			
Ninth semester	0		0	0	2	6		26		34			
Tenth semester	0		0	0	3	0		15		18			
Total	2	1.9	1	.9	0	7	6.8	13	12.7	79	77.4	102	100

Table 12 a. Disadvantages for respondents' online learning assessment by semester

11. Which platform do you consider to be the most effective for receiving your classes?	Teams		Zoom		Classroom	Moodle	Blackboard		Others		Total	
Women	50		6		0	0	4		0		60	
Men	31		6		0	0	1		4		42	
Total	81	79.4	12	11.7	0	0	5	4.9	4	3.9	102	100

Table 13. Respondents' best platform for online learning

11. Which platform do you consider to be the most effective for receiving your classes?	Teams		Zoom		Classroom	Moodle	Blackboard		Others		Total			
Sixth semester	3		6		0	0	2		2		13			
Seventh semester	11		1		0	0	0		0		12			
Eighth semester	18		4		1	0	1		1		25			
Ninth semester	20		4		5	0	4		1		34			
Tenth semester	13		1		2	1	1		0		18			
Total	65	63.7	16	15.6	8	7.8	1	.9	8	7.8	4	3.9	102	100

Table 13 a. Disadvantages for respondents' e-learning assessment by semester

12. If you wish to add any comments about your experience as a student in an online environment, you may do so in this space	Lack of classes		Teachers with little use of the platform		Internet failure	Excess of online tasks		Lack of videos		Few evaluations		Total		
Women	19		11		12	10		2		6		60		
Men	17		7		5	8		2		3		42		
Total	36	35.2	18	17.6	17	16.6	18	17.6	4	3.9	9	8.8	102	100

Table 14 . Respondents' open comments for online learning by semester.

12. If you wish to add any comments about your experience as a student in an online environment, you can do so in this space	Lack of classes		Teachers with little use of the platform		Internet failure		Excess of online tasks		Lack of videos		Few evaluations		Total	
Sixth semester	5		1		1		5		1		0		13	
Seventh semester	1		6		1		4		0		0		12	
Eighth semester	6		7		4		3		4		1		25	
Ninth semester	4		16		6		5		1		2		34	
Tenth semester	6		6		3		3		0		0		18	
Total	22	21.5	36	35.2	15	14.7	20	19.6	6	5.8	3	2.9	102	100

Table 14 a. Respondents' open-ended comments for e-learning by semester

The open-ended question made it clear that for the students, there are six things that were mentioned repeatedly considering that by semesters, they mention that the majority (35.2 %) report the poor preparation of the teacher to manage the platform and the lowest was few evaluations (2.9%) (Table 14 a).

DISCUSSION

With this study, it was shown that Stomatology students think that their online learning is not favorable but very bad with 59.8%, unlike the results obtained with Lezcano et al in 2019, where students mention that their online learning experience was very good 53%.

Regarding gender, in the present study, women (32.3%) and men (27.4%) mentioned that their online learning experience was bad, this agrees with Carvajal's study in 2018 where he mentions that the student experience in virtual environments is bad, where 33% were men and 20% were women.

The age students from 21 to 23 years old indicated that their experience in virtual form is bad this does not coincide with what was stated by Garcia Faroldi, L. et al. in 2017 who argue that the processing capacity of young people is regular.

In reference to the semester, most semesters mentioned that their online learning experience was bad (79.4%) compared to a study conducted by Cabero Almenara J. et al. in 2018, who mentions that 69% of their students had a negative online experience.

Most students believe that the new online modality has not facilitated their learning process in comparison with the results obtained by a study proposed by Da Graça Fagundes et al. in 2014 in which they affirm that the experience of students in formal virtual instruction and education systems is effective in the virtual learning process.

CONCLUSION

The virtual world has generated rapid and profound changes in the field of education. The virtual education model has given rise to a new paradigm of instruction and learning in which it will be necessary to take into account a series of new factors that have profoundly modified teaching planning and virtual learning.

Currently, both public and private institutions had to develop and offer virtual education programs due to the pandemic suffered. Through this, it can be considered that the new virtual educational model is fully active, and its use will be decreasing in the coming years, but the perspective of students is not entirely positive, since the experience as students in virtual environments is highly negative considering that more than 50% of all students consider this new educational modality they went through as a failure.

It was found that virtual education at the higher education level is currently very affected from the point of view of the students themselves, since it does not have the same educational effectiveness that is obtained by receiving a face-to-face education.

The challenge now is to implement the design of new virtual learning spaces that are able to provide better teaching according to the educational level, so that each student is able to develop their learning skills and not have that lag in knowledge.

Although it is important to point out that the students stated that the teacher is to blame for this deficiency, from his commitment to teaching on the platform to the use of pedagogical interactions that strengthen their learning and thus have better knowledge.

REFERENCES

- Aguilar Juárez I. y Ayala de la Vega J. Las propiedades técnicas deseables en las plataformas educativas y herramientas de autor como productoras de contenido estandarizado. *Revista Iberoamericana para la Investigación y el Desarrollo Educativo*, (2014). [Internet] No. 12, 3. Disponible en <http://ri.uaemex.mx/bitstream/handle/20.500.11799/41151/850-3336-1-PB%20%281%29.pdf?sequence=1&isAllowed=y>
- Cabero Almenara J, Barroso Osuna J. Los escenarios tecnológicos en Realidad Aumentada (RA): posibilidades educativas en estudios universitarios. *Aula Abierta* [internet]. 2018 [consultado 22 septiembre 2020]; 47(3):327-36. Disponible en: <https://idus.us.es/bitstream/handle/11441/79138/Los%20escenarios%20tecnol%3b%3gicos%20en%20Realidad%20Aumentada%203.pdf?sequence=1&isAllowed=y>
- Milton Rodrigo Altamirano-Pazmiño, Franklin Gerardo Naranjo-Armijo. Educación en línea: Evolución, beneficios y expectativas Pol. Con. (Edición núm. 71) Vol. 7, No 6, Junio 2022, pp. 542-555, ISSN: 2550 - 682X
- Alvarado, M. (2014). Retroalimentación en educación en línea: una estrategia para la construcción del conocimiento. *Revista Iberoamericana de Educación a Distancia*, 17(2), 59-73. Recuperado de <http://revistas.uned.es/index.php/ried/article/view/12678/11873> [Links]
- Barrientos Oradini, Nicolás; Yáñez Jara, Víctor; Barrueto Mercado, Eduardo; Aparicio Puentes, Carlos. Análisis sobre la educación virtual, impactos en el proceso formativo y principales tendencias. *Revista de Ciencias Sociales (Ve)*, vol. XXVIII, núm. 4, 2022
- Aguilar, F. D. R. (2020). Del aprendizaje en escenarios presenciales al aprendizaje virtual en tiempos de pandemia. *Estudios Pedagógicos*, XLVI(3), 213-223. <https://doi.org/10.4067/S0718-07052020000300213>
- Fox, K., Bryant, G., Lin, N., y Srinivasa, N. (2020). *Time for class - COVID-19 Edition. Part 1: A national survey of faculty during COVID-19*. Tyton Partners and Every Learner Everywhere. <https://www.everylearnereverywhere.org/wp-content/uploads/TimeforClass-COVID19-Part-1-NationalFacultySurvey-Final.pdf>
- Gil Rivera, María del Carmen. La educación a distancia. De la teoría a la práctica. *Perfiles educativos*, (2000) 22(88), 89-92. Disponible en: <http://www.scielo.org.mx/pdf/peredu/v22n88/v22n88a7.pdf>
- Uribe, Carmen. (2012). La educación a distancia: sus características y necesidad en la educación actual. *Educación*. 17. 10.18800/educacion.200802.001.
- Hernández, Liliana. (2021). Educación a distancia: transformación de los aprendizajes. *Telos Revista de Estudios Interdisciplinarios en Ciencias Sociales*. 23. 150-160. 10.36390/telos231.12.
- Lezcano L, Vilanova G. Instrumentos de evaluación de aprendizaje en entornos virtuales. Perspectiva de estudiantes y aportes de docentes. *Informe Científico Técnico UNPA*. [internet] 2017 [citado el 1 sep 2020];9(1):1-36. disponible en: <https://dialnet.unirioja.es/servlet/articulo?codigo=5919087>
- Carvajal J, Suárez F, Quiñónez X. Las tic en la educación universitaria. *Universidad, ciencia y Tecnología* [Online]. 2018;22(89):31-35 [Accessed 15 October 2020] Disponible en: <https://www.uctunexpo.autanabooks.com/index.php/uct/article/view/28>
- García Faroldi, L., Grande Martín, R., y de Miguel Luken, V. Redes sociales en el aula: fomentando el aprendizaje activo entre los alumnos universitarios. *UMA Editorial* [Internet]. 2017. [consultado 22 septiembre 2020]; disponible en: http://www.enrique-sanchezrivivas.es/congresotic/archivos/AplicWeb_20/GarciaFaroldi_Otros.pdf
- Da Graça Fagundes Freire Ana Carolina, Saliba Garbin Cléa Adas, Saliba Rovida Tania Adas, Reis dos Santos Renata, Cabus Góis Bruno, Reatto Diogo. Percepción de estudiantes de odontología sobre educación a distancia. *Rev Cubana Estomatol* [Internet]. 2014 Sep [citado 2022 Feb 03] ; 51 (3): 348-357.