
Nursing Teaching at Clinical Practice Scenario Students Perception, Cohorte, 2017-2021

Dr. Leonila Roman Fernandez^{1*}, Dr. Erick Gerardo Leyva Roman² and Dr. Lucio Diaz Gonzalez³

¹Autonomic University of Guerrero, Superior Infirmery School No 1, Mexico.

²Autonomic University of Guerrero, (CIPES-UAGro. by its initials in Spanish) Mexico.

³Autonomic University of Guerrero, Superior Mathematics School, Mexico.

*Corresponding author email id: leonila54@hotmail.com

Date of publication (dd/mm/yyyy): 05/11/2021

Abstract – The clinical tutor is responsible of the organization, supervision and accompaniment, during the clinical practices in the learning process. Objective: Analyze the perception of students, cohort 2017-2021, undergraduate level in Nursing, on the situation of clinical practices, during their training process. Methods: Quantitative-qualitative research; The Likert scale and the Sampieri numerical scale were used to evaluate each dimension. The X2 to identify if there are associations between these competences, with learning. Also measures of central tendency, to identify problems that students detect during their practices. The variables were: specific competence of the profession, teaching competence, composed of three dimensions, pedagogical domain, teaching-learning process and students' knowledge acquired. Results: Specific competence, 55% mentioned having regular knowledge, 38% high. In the pedagogical competence dimensions, on average 58% have regular knowledge. Crossing the specific competence, with the pedagogical competence dimensions, it was recognized that if they influence significantly each other, in learning. The problems that the students detected during their practices were: 60% large groups, shortage of materials, scarce, insufficient preclinical practices, assignment to services that don't correspond to the planned practice, insufficient practice time. 61% of the teachers responsible of the school Learning Units totally abandon the students during their clinical practices.

Keywords – Clinical Practices, Clinical Tutor, Nursing Students, Perception.

I. INTRODUCTION

The beginning of clinical practice in health institutions is an essential part for nursing students, it becomes fundamental, as it is a way of getting in touch with reality and put into action the theoretical knowledge that has been provided to them in class. Knowledge that is achieved with the support of clinical tutoring, since it is a pedagogical activity oriented to support students in their training process. The aforementioned activities do not replace the teacher responsibilities, it is a complementary task, oriented to practitioners based on previous theoretical knowledge, their problems, academic needs, concerns, and professional aspirations (López and Sánchez, 2005) [1]. Because only through internships, students acquire the specific and generic competencies, that are essential for the profession exercise (Vollrath et al., 2011) [2].

Achieving this task is not easy, for this it is essential that the action of the clinical tutor is open to dialogue and allows his students to participate as protagonists of the teaching-learning process in the context of clinical nursing practices (Freire, 1983, p. 175) [3]; admitting that when they arrive at the beginning of the practices, it generates emotions, fear, anxiety, difficulties due to lack of experience, which is more intense at the beginning, but as they gain confidence in themselves, it is expected that they will be strengthened, assuming from that moment on, the professional role, which will later grant satisfaction (Sevilla and Ferre, 2013, pp. 109-114) [4] The fusion of theory with practice in the training process is one of the great tasks that training institutions have, because all these elements are perceived by students at the beginning of the internship periods.

The clinical practices, is to take the students to a real environment, in front of patients and health team, where the students experience the opportunity to implement the nursing care process in all its stages; assessment, diagnosis, planning, execution and evaluation, facilitated in the teaching-learning process; Likewise, this experience helps him in the development of multiple attitudes and good emotional intelligence, Pulido et al. (2016) [5].

"Given this, it is worth highlighting the role played by the clinical tutor during the process, providing the basic tools that facilitate the application and learning of the nursing process, a scientific method, used by the nursing professional to provide care" (Tessa, 2014, p.36) [6].

To identify the difficulties that students face in clinical contexts, the present study was carried out, so that later methods and strategies that facilitate this process are searched.

II. THEORETICAL FOUNDATION

We are in the age of knowledge applied to the spaces of production, distribution and management; that revolutionize the economic, commercial, political and world cultural communication scenarios, as well as life changes in human beings and forms of consumption. This new cycle has been called the Knowledge or Information Society, which is what now governs the global economy (Argundín, 2007) [7]. Perceiving itself as the main reference of Competency-Based Education (EBC by its initials in Spanish), which in the education space; plans to respond to the needs of this prototype of society. The origin of the Competency-Based Education was and is the job needs and, which demand the educational system, to intervene effectively at work and not only in acquiring theoretical knowledge; but that these are practised and executed in the job fields since due to changes in the production modes, education is also forced to renew itself (Cabero, 2007, p. 2) [8].

Tobón (2006) [9] points out: that this means that education must contextualize knowledge in all areas, such as local, regional and international, preparing teachers, students and administrators to go beyond the simple assimilation of knowledge and move on to a dynamic of search, selection, comprehension, systematization, criticism, creation, application and transfer. It is, go from teaching to learning.

Showing us now that learning begins to be the center of education, rather than teaching. This means that as teachers instead of focusing on how to give a class and prepare the didactic resources for it, now the challenge is to establish what learning students come with, what are their expectations, what they have learned and what they have not learned, what are they their learning styles and, with them, actively involve us in their own learning. So then, from this point of view, teaching must be oriented, with goals, teaching strategies and evaluations. This corresponds to the credit approach, in which not only face-to-face teaching should be planned, but also time for theoretical knowledge, autonomous work, and practice time.

Today's scenarios are demanding that students be the protagonists of their lives and their learning process, based on the development and strengthening of their cognitive and metacognitive skills, the ability to act, knowledge and their affective processes and motivational regulation. (pp. 14-15).

Only in this way, they will be able to face the transformations that the current world is undergoing and that at the same time support the development of contemporary society. Cabero (2007, p. 2) [10].

The clinical tutor, in this approach, should be interested in looking for the pertinent procedures in terms of the

selection and integration of knowledge and does both theoretical and practical, so that in this way the students generate the necessary performances in relation to the disciplinary area referents and socially relevant problem situations, before which they are learning to integrate different types of knowledge (conceptual, factual, procedural and attitudinal), Coll (2007) [11].

Competences can't be separated from the contexts of practice in which knowledge is acquired and applied. For this reason, it is necessary for clinical tutors to teach students to be able to apply (transfer) what they have learned in a specific situation to other different situations, Cabero (2007) [12].

Authors such as Benner (2002) [13] consider: "That only through the experiences achieved in the practices, nurses learn to focus and see the main thing in each individual situation and to execute the actions that concern" (pp 1-2) . "Because in the nursing profession, the balance between theoretical knowledge and clinical practice is the basis of the teaching-learning process" Araujo et al. (2004, pp. 9-10) [14] and Rivero et al. (2007. pp.91-102) [15] Since in clinical practices, students access the social environment, interact in a multidisciplinary way with other health professionals, explore and consider the commitment that their profession encompasses (Sevilla and Ferre, 2013, pp. 109-114) [16] "With this, the students conceive the relationship between training, use and management of emotions, with the enthusiasm of clinical practices" Cabo et al. (2010, pp. 1-13) [17].

III. MATERIALS AND METHODS

We have a quantitative-qualitative investigation, because through it data were collected and analyzed, to study the association or correlation between variables. Qualitative because it reveals deep knowledge about the perception of the problems that students have in clinical fields. The design was transversal.

To determine the sample, the statistical yearbook of the Autonomous University of Guerrero 2019-2020 was consulted, where it was found that this institution has 49 higher schools (Bachelor's degrees) and a virtual university system; Among them is the Higher School of Nursing No.1 located in Chilpancingo. The student population was 1,159 students, with 5 groups per grade. To carry out this research, only students from eighth semester were considered for having concluded the total of practices, which considers the Study Plan, which were 224 students, the questionnaire was sent to all through the Google form, obtaining a response from 54%, percentage considered as the investigation simple.

The instrument applied to assess the pedagogical competence in this research was developed by the authors, based on the knowledge obtained in the theoretical framework, which supported the research. Regarding the specific or assistance competence of the profession, the items from the Montesdeoca (2019) [18] questionnaire were used. For the internal consistency and instrument reliability, the Cronbach's Alpha internal consistency test was applied, obtaining a favorable value of .902 that confirms its internal consistency and reliability; which was piloted in three groups to see its consistency and understanding of each item.

The variables were: The specific competence of the profession (assistance) and teaching competence of the clinical tutor, which is made up by three dimensions: Pedagogical domain, that assesses the professional performance of the clinical tutor, which has a favorable impact on student learning. The second dimension was the teaching-learning process, carried out by the clinical tutors; to identify the didactic act of tutor's performance, which also facilitates student learning. The third dimension, knowledge acquired by the students (product), to determine if the students acquired the necessary knowledge of the professional nursing practice

that they developed during their professional life. Also in this same instrument 15 items were included, to identify students fears at clinics, as well as the deficiencies that the institution of origin has, regarding to the practices planning.

To perform the quantitative statistical analysis of each dimension, a weighting of items was carried out for each one, which is shown in the following chart.

Table 1. Weighting chart for the two competences.

Competences	Code	Number of Items	%
Profession Specific Competence (assistance)	PSC (CEP)*	01-08	22
Pedagogical			
Dimension 1: Pedagogical Performance (clinical tutor)	PP (DP)*	09-15	19
Dimension 2: Teaching Learning Process	TLP (PEA)*	16-24	24
Dimension 3: Knowledge Acquired by Students (product)	KAS (CAE)*	25-37	35
Total			100

Source: Own elaboration.

This chart presents the two competencies to be evaluated, with their respective codes, number of items and the percentage, which were considered to assess each competency. To assess each dimension, some statistics of central tendency and dispersion were used.

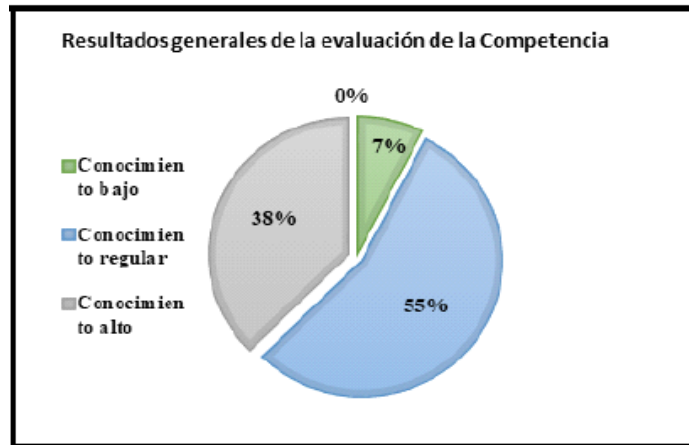
IV. RESULTS INTERPRETATION

Profession Specific Competence

For the results interpretation in this dimension, the Likert scale was considered, starting by pointing out how the minimum score of 8 (1, 1, 1, 1, 1...) in case everyone answered one and the maximum of 32 in case all answered four. Process that allowed to obtain the ranks. First we subtract 8 to $32 = 24$, then 24 was divided by 4, which is the number of assessment scales in each item of the questionnaire, giving a total of 6, so later intervals that were 6 in 6 would be made for each interval of the scale and thus obtain the number of ranges, that were 4.

To create the scale of this dimension, the quartiles that according to (Sampieri, 2018) [19] were used, obtaining established ranges that allow the correct assessment of the dimension indicators, in this case it was for the specific competence of the profession. This same procedure was carried out to make the pedagogical competence in its 3 dimensions; Pedagogical performance (clinical tutor), teaching-learning process, knowledge acquired by students (product).

Profession Specific Competence (assistance)		
Intervals	Quartiles	Scale
8 – 14	Q1	No knowledge
15 – 20	Q2	Low knowledge
21 – 26	Q3	Regular knowledge
27 – 32	Q4	High knowledge



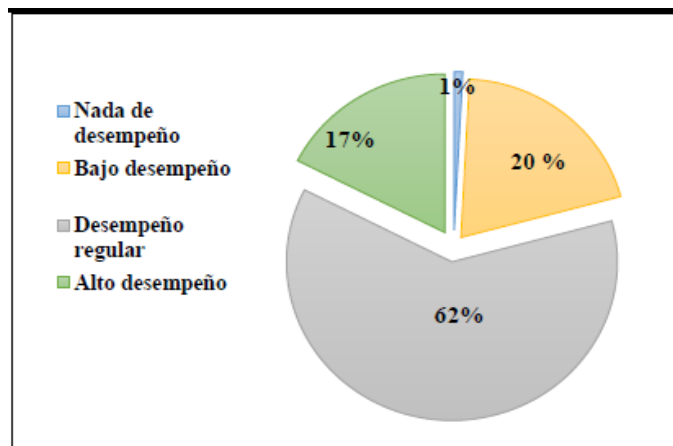
Graphic 1. Evaluation general result of the profession specific competence.

Source: Own elaboration.

Graphic one shows results of the assessment of the specific competence of the profession (assistance) of the clinical tutors; 55% of students value the knowledge of clinical tutors as regular, because they don't always have skills and attitudes to teach or manage to communicate what they know with students; 38% evaluate them as high, because they recognize that they have knowledge, skills and attitudes with patients and students, by providing advice and confidence with practices.

Pedagogical Competence/Performance

Pedagogical Performance Clinical Tutor Intervals		
Dimension: Pedagogical Performance (Clinical Tutor)		
Intervals	Quartiles	Scale
7-12	Q1	No Performance
13-17	Q2	Low Performance
18-23	Q3	Regular Performance
24-28	Q4	High Performance

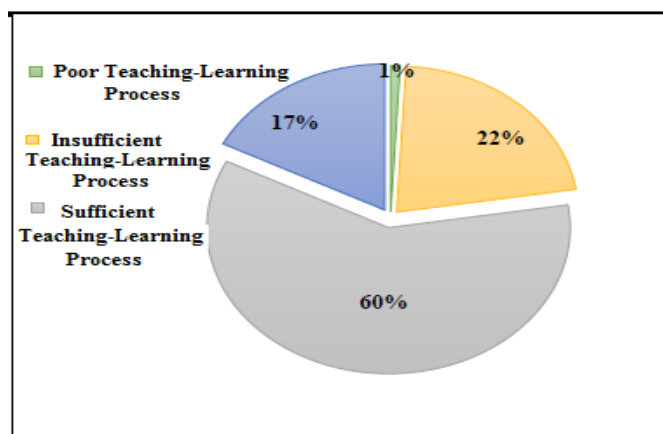


Graphic 2. Evaluation general result of the dimension: Pedagogical Competence/Performance (clinical tutor).

Source: Own elaboration.

Graphic 2 shows the evaluation results of the pedagogical performance of clinical tutors, 62% of students think that they have a regular performance, since the methodology and strategies are not always adequate to promote learning, they do not identify the advances and limitations of the practitioners and the conditions are not always optimal for their learning. 20% assume that they have low pedagogical performance. Considering these two percentages, it is observed that clinical tutors have great problems in pedagogical performance, an alarming aspect for actual and future generations, which must be amended.

Teaching-Learning Process Intervals		
Dimension: Teaching-Learning Process		
Intervals	Quartiles	Scale
9-15	Q1	No Teaching-Learning Process
16-23	Q2	Insufficient Teaching-Learning Process
24-30	Q3	Sufficient Teaching-Learning Process (Regular)
31-36	Q4	Great Teaching-Learning Process (Excellent)

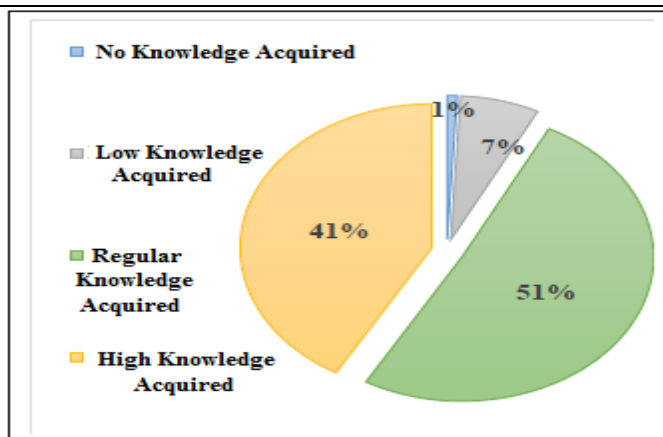


Graphic 3. Evaluation general results, dimension: Teaching-Learning Process TLP (PEA).

Source: Own elaboration.

Graphic 3 shows the results of how the TLP (PEA) was, 60% conceived that it was sufficient (regular), because the communication and the clinical tutor-student relationship were not enough, the tasks were poorly reviewed, and what students learned was not always related to their unit of learning. 22% mentioned that for them TLP was insufficient.

Students knowledge acquired Intervals		
Dimension: Students knowledge acquired (product)		
Intervals	Quartiles	Scale
11-18	Q1	No knowledge acquired
19- 26	Q2	Low knowledge acquired
27- 35	Q3	Regular knowledge acquired
36- 44	Q4	High knowledge acquired



Graphic 4. General results about the students knowledge acquired.

Source: Own elaboration.

Graphic 4 presents the self-assessment that students make, in terms of the knowledge acquired, 51% consider that the knowledge learned in the clinical practices was regular, because they consider that, most of the time they can solve problems, supporting on solid knowledge, to evaluate evidence and assess its applicability, to be able to integrate theory with practice. While 41% believe they have obtained high knowledge to perform in their professional life.

Identify the Intervention Degree of one Competence with another, the following Crossing of Variables was Carried Out

Table 2. Variables crossing, specific competence of the profession with variable knowledge acquired from the students.

		Students knowledge acquired				Total
		No Knowledge Acquired by Students	Low Knowledge Acquired by Students	Regular Knowledge Acquired by Students	High Knowledge Acquired by Students	
Profession specific competence	Low knowledge		33.3%	66.7%		100.0%
	Regular knowledge	1.5%	6.1%	54.5%	37.9%	100.0%
	High knowledge		2.2%	42.2%	55.6%	100.0%

Source: Own elaboration.

In the chart 2 crossing shown, it was observed that students believe that the clinical tutor has a low knowledge in the specific profession, 66.7% acquired a regular knowledge and 33.3% had a low level of knowledge. From students who believed that tutors have a regular knowledge, 37.9% of them acquired a high knowledge, likewise of students who thought that the tutors have a high knowledge, 55.6% acquired a high knowledge.

Table 3. Chi-square test.

	Value	df	Asymptotic significance (bilateral)
Pearson's Chi-square	19.128 ^a	6	.004
Likelihood ratio	18.787	6	.005

	Value	df	Asymptotic significance (bilateral)
Linear by linear association	12.735	1	.000

It can be observed in chart 3 that the asymptotic significance (bilateral) is in a percentage of .004 with respect to the Pearson Chi square, this means that both variables influence each other in a significant way.

Table 4. Variables Crossing. Pedagogical performance with students knowledge acquired.

		Students Knowledge Acquired				Total
		No Knowledge Acquired By Students	Low Knowledge Acquired By Students	Regular Knowledge Acquired by Students	High Knowledge Acquired by Students	
Pedagogical performance	Insufficient pedagogical performance (Low)		12.5%	75.0%	12.5%	100.0%
	Sufficient pedagogical performance (Regular)	1.4%	8.5%	56.3%	33.8%	100.0%
	Excellent pedagogical performance (High)			27.3%	72.7%	100.0%

Source: Own elaboration

Chart four shows that students who believed that clinical tutors have insufficient pedagogical performance (low), 75% of them acquired regular knowledge. Students who thought that tutors have a regular pedagogical performance, 33.8% acquired a high knowledge and students who thought that tutors have a high pedagogical performance, 72.7% acquired a high knowledge.

Table 5. Chi-square test.

	Value	df	Asymptotic Significance (Bilateral)
Pearson's Chi-square	22.293	9	.008
Likelihood ratio	25.240	9	.003
Linear by linear association	17.086	1	.000

The chart shows that the asymptotic significance (bilateral) is in a percentage of .008 respect to Pearson's Chi-square, this means that both variables influence to each other significantly.

Students Problems Result, During Clinical Practices and with the Origin Institution

Regarding the problems that students have in clinical practices, 60% point out that the groups that carry out the same practice are large, and is difficult to carry out all the actions, consequently learning is incomplete and it is also difficult for the clinical tutor control, when they perform procedures, they are afraid to do them because there is no adequate security due to the scarcity of materials in the institutions, fear of going to practices because they don't have enough preclinical knowledge; 42% consider incorrect the assignment by the clinical tutor to services that don't correspond to the practice planned in the semester by the school, the practice time is insufficient, responsibility to perform procedures on patients without being supervised by the clinical tutor, lack of feedback and communication.

The Practices Problem in Relation to the Institution

66% of students consider that the theoretical and practical knowledge embodied in the learning units of the nursing programs, are not completed in the classrooms, 61% mention that teachers responsible for the Learning Units of the school, abandon 100% to students during the period of clinical practices, leaving full control of teaching-learning and evaluation to the clinical tutor; 50% indicate that the teacher doesn't have communication with the clinical tutor for the assignment of services, to ensure that the service is assigned according to the Learning Unit that is being developed in the semester; 48% observe that the preclinical practices taught in laboratories don't respond to the hospital context.

V. DISCUSSION

Facing students to put theoretical knowledge into practice in health institutions, it is normal, that they feel afraid to go to practices, considering that they don't have enough knowledge and preclinical skills, insecurity of performing procedures on patients without being accompanied and supervised by the clinical tutor, lack of feedback on what they do, and poor communication with the clinical tutor.

Given the concern of the students, the clinical tutors must provide the necessary tools, so that they assume an active participation in the health care process, provide the experiences and the reflection, cooperate with them in the scaffolding of their own education.

Accompany them on this path finding strengths and weaknesses, anticipating difficulties. To do this, teaching strategies and different methodologies must be proposed, which allow to prevent and even cushion these perceived difficulties since in the first instance they may seem unimportant, but they can be relate to failures in the learning process itself. (Tessa, 2014, p.41) [20].

"In clinical fields the student learns to do, to live together and to be. It is important that in this environment you also develop the ability to learn to think with innovation. Through these foundations the student would develop a comprehensive professional profile", Escayola (2005, pp. 69-73) [21].

It is worrying to see in these results that, on average, clinical tutors have regular or insufficient competencies, an aspect reflected in the students' responses when they express having acquired regular knowledge, which means that the planned objectives were not achieved in practices and insecurity will continue to persist about what they know to face the labor market. The results of this research were similar to those found by Tessa (2014) in Uruguay and Sánchez (2017), in Habana Cuba.

It can also be considered that the lack of compliance by the clinical tutors is due to the big number of large groups sent by the educational institutions to practice, the lack of support by teachers responsible for the school groups, by abandoning students 100% during internships plus the amount of responsibilities of their work, these are situations that can be a new investigation subject.

VI. CONCLUSIONS

A. The results obtained in this research provide antecedents that help both the clinical tutors of the health institutions, as well as the institution that offers the studies in Nursing, contributing in the reorientation of the clinical tutoring, being the main teaching-learning process operators.

- B. The domain of the specific competences of the profession in Nursing, such as the pedagogical of clinical tutors, have a high incidence in the optimization of learning. In health students, clinical practices are essential in the learning process to acquire, apply, develop knowledge, skills, learn to learn, modify attitudes, make decisions, be autonomous, work interdisciplinary to complete their academic training, successfully, to face the future uncertain work life.
- C. The educational center teachers, responsible for groups that carry out practices must accompany the students in the practice process, to transmit security and confidence in students, detect fear emotions facing the unknown, identify weaknesses, predict problems, so that in coordination with the clinical tutor, different strategies and methods are sought to avoid failure during the teaching-learning process.
- D. The large groups, total abandonment of students in the internship periods by the school teachers, designation of students to other services that don't correspond to the Learning Unit during clinical stays, were the main factors that hindered learning and the students achievement is insufficient. Very important data in the results of this research.

REFERENCES

- [1] M.I. Lopez y C.V. Sanchez. Stress. Perception in nursing students of clinical practices, in Elsevier, Vol. 15. Num. 6, 2005, pp. 307-313. In: <http://www.elsevier.es/es/revistas/enfermeria-clinica-35/percepcion-estres-estudiantes-enfermeria-las-practicas-clinicas-13082986-originales-2005>
- [2] R.A. Vollrath, M.M. Angelo, y L.A. Gonzalez. Nursing students' experience of the transition to professional practice: a social phenomenological approach Text context-nursing; 20(spe) 2011, pp 66-73 In: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-07072011000500008&lng=en. <http://dx.doi.org/10.1590/S0104-07072011000500008>
- [3] P. Freire, (1983). Pedagogy of the oppressed. Mexico: Siglo XXI, Editores, 1983, p. 6. In: <http://bit.ly/1ePFc4u>
- [4] C.M. Sevilla, G.C. Ferré. Anxiety about death in nurses of Social and Health Care: data and meanings. Magazine Gerokomos, Vol. 24. Num. 3, 2013, pp 109-114. In: http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1134-928X2013000300003&lng=es. <http://dx.doi.org/10.4321/S1134-928X2013000300003>
- [5] M.M. Pulido, L.J.M. Augusto, y Z.E. Lopez (2016). Nursing students in clinical practices: the role of emotional intelligence in occupational stressors and psychological well-being. Nursing Index Journal, Vol. 25. Núm 3, 2016, pp 215-219. In: http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S113212962016000200020&lng=es&tlng=es
- [6] R. Tessa. Difficulties perceived by nursing students in their insertion to the practice of Clinical Medical Surgical Nursing. Ibero-American Journal of Education and Research in Nursing; Vol. 4. Núm 4, 2014, pp 35-43.
- [7] Y. Argundin. Competency-based education, in Trillas, México, 2007.
- [8] J. Cabrero. New technologies applied to education. Madrid: Edit. McGraw-Hill, 2007, p. 2. In: <https://uogestiondelaprendizaje.files.wordpress.com/2015/03/5-libro-nuevas-tecnolog3adas-aplicadas-a-la-educac3b3n-julio-cabero.pdf>
- [9] S. Tobón. Basic Aspects of Competency-Based Training. Talca: Proyecto Mesesup. 2006. In: <https://www.uv.mx/rmipe/files/2019/07/Aspectos-basicos-de-la-formacion-basada-en-competencias.pdf>
- [10] J. Cabrero. (2007). New technologies applied to education. Madrid: Edit. McGraw-Hill, 2007, p. 2. In: <https://uogestiondelaprendizaje.files.wordpress.com/2015/03/5-libro-nuevas-tecnolog3adas-aplicadas-a-la-educac3b3n-julio-cabero.pdf>
- [11] C. Coll. Competencies in school education: something more than a fad and much less than a remedy. Educational Innovation Magazine, Vo. 161, 2007, pp 34-39. In: http://cefire.edu.gva.es/pluginfile.php/573925/mod_resource/content/3/BL1%20Lectura%20-%20Las%20competencias%20en%20la%20educac3b3n%20escolar.pdf
- [12] J. Cabrero. New technologies applied to education. Madrid: Edit. McGraw-Hill, 2007 p. 2. <https://uogestiondelaprendizaje.files.wordpress.com/2015/03/5-libro-nuevas-tecnolog3adas-aplicadas-a-la-educac3b3n-julio-cabero.pdf>
- [13] P. Benner. From novice to expert: excellence and power in clinical nursing practice. Commemorative Edition. London Prentice Hall, 2002, pp 1-2.
- [14] S. Araujo., N. Jaimes y R. Scarsi. Students attitudes of the Nursing Faculty of the National University Center of Peru (U.N.C.P by its initials in Spanish) towards the gender approach. 2004. In: https://www.monografias.com/trabajos89/lcdo-enfermeria/lcdo-enfermeria.shtml#google_vignette
- [15] M. Riveros. H. Hernández y J. Rivera. Depression and anxiety levels in students from Metropolitan University of Lima. Magazine Investig Psicol Vol.10. Num 1 2007, pp. 91-102. In: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1609-74752007000100005&lng=pt
- [16] C.M. Sevilla & G. C. Ferré. Anxiety about death in nurses of Social and Health Care: data and meanings. Magazine Gerokomos, Vol. 24 Num. 3, 2013., pp 109-114. http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1134-928X2013000300003&lng=es. <http://dx.doi.org/10.4321/S1134-928X2013000300003>
- [17] C. A. Cabo. A. C., Rodríguez. D. Sánchez. O.I. Vivo. G. R. Carbonell & R. R.M. Castellanos. Nursing students stressors and anxiety in their first clinical practices. Magazine NURE. Inv; Vol.7. Num. 49, 2010. pp. 1-13. In: http://www.fuden.es/FICHEROS_ADMINISTRADOR/INV_NURE/NURE49_proyecto_estresores.pdf
- [18] R.D. Montesdeoca., M.C. Castellano & F.C.N. Hernández. The teaching-learning process of the Nursing student in the clinical practice context. Student opinion. VI Ibero-American Conference on Educational Innovation in the Field of ICT (TIC) and TAC Las Palmas de Gran Canaria, November 14th and 15th. 2019. In: https://acceda.cris.ulpgc.es/bitstream/10553/58070/2/Proceso_ensenanza-aprendizaje_estudiante_Enfermeria.pdf
- [19] R. Hernández. & C. Mendoza. Investigation methodology. The quantitative, qualitative and mixed routes. Editorial Mc Graw Hill. México. 2018

- [20] R.Tessa. Difficulties Perceived by Nursing Students in their Insertion to the Practice of Clinical Medical Surgical Nursing. Ibero-American Journal of Education and Research in Nursing. Vol 4. Num. 4. 2014, pp 35-43
- [21] A. M Escayola & M.A.Vila. The change doors in University Education. Educ Med Sup. Revista Educ. Méd. Vol. 8. Num.2. 2005, pp. 69-73. In: https://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1575-18132005000200004

AUTHOR'S PROFILE



First author

Leonila Román Fernández, Mexican, doctor in Pedagogical Sciences, Master in educational research graduated, Central Institute of Pedagogical Sciences, Havana Cuba. Professor-researcher at the Autonomous University of Guerrero. Holder of learning units of Thesis Seminar, Communication of Ideas. Publications: Article and book, Modification of learning styles during professional training. Nursing students. Employer opinion on professional performance in nursing graduates No. 1 Generic competences in higher level teachers, State of Guerrero. Follow-up of graduates, nursing academic unit No.1, cohorts 1999-2010. Communicative competence in nursing professionals, public hospitals: SSA, ISS

TE and IMSS, user perception. Implementation of the EFI Institutional Training Stage with a competency approach. Methodological guidelines for UAGro. In 2014. Coordinator of the Curriculum, Degree in Nursing 2019. Status of Research and Teaching Perception, at the Autonomous University of Guerrero, 2020. Communicative Teaching on the Nursing Professional Training Process and its Manifestation in the Work Field, 2020.



Second Author

Erick Gerardo Leyva Roman, Mexican, Doctor in Governance and Public Management at the Autonomous University of Baja California, Mexico. Master in Administration, graduated from the Southern University Institute, Chilpancingo de los Bravos, Guerrero. Professor-Researcher at the Autonomous University of Guerrero. Publications: Article and book, Modification of learning styles during professional training. Nursing students. Employer opinion on professional performance in nursing graduates No. 1 Generic competences in higher level teachers, State of Guerrero. Follow-up of graduates, nursing academic unit No.1, cohorts 1999-2010. Communicative competence in nursing professionals, public

hospitals: SSA, ISSTE and IMSS, user perception. Implementation of the EFI Institutional Training Stage with a competency approach. Methodological guidelines for UAGro. In 2014. Coordinator of the Curriculum, Degree in Nursing 2019. Status of Research and Teaching Perception, at the Autonomous University of Guerrero, 2020. Communicative Teaching on the Nursing Professional Training Process and its Manifestation in the Work Field, 2020. email id: 20436067@uagro.mx



Third Author

Lucio Diaz Gonzalez, Mexican, doctor of Mathematical Sciences, graduated from the University of Havana, Cuba. Teacher-Researcher of the Faculty of Mathematics. He has taught several courses in the Bachelor of Mathematics and the Masters of Applied Statistics, Applied Statistical Method, Masters in Natural Resources of the Autonomous University of Guerrero, Mexico. Publications: author: 1) Selection of models under the Bayesian approach: an application to the cognitive state of older adults in the warrior state. 2) Bayesian approach to the logistic regression model using Monte Carlo markov chains. 3) Use of the BMA in the logistic regression model and its comparison with other model selection

criteria. As co-author in the articles: 1) Opinion of employers, on the professional performance of nursing graduates, Universidad Autónoma de Guerrero (Autonomous University of Guerrero). 2) Generic competences in teachers of the higher level, State of Guerrero. email id: luciodiaz@uagro.mx