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ORIGINAL ARTICLE

EDUCATIONAL TECHNOLOGIES IN THE TRAINING PROCESS: DISCOURSE OF NURSING ACADEMICS

TECNOLOGIAS EDUCATIVAS NO PROCESSO FORMATIVO: DISCURSO DOS ACADÊMICOS DE ENFERMAGEM

TECNOLOGÍAS EDUCATIVAS EN EL PROCESO FORMATIVO: DISCURSO DE LOS ACADÉMICOS DE ENFERMERÍA

Marília Moreira Torres Gadelha¹, Mayara Evangelista de Andrade², Jéssica Mayara Almeida Silva³, Isaura Carolina Brandão Bezerra⁴, Andressa Pereira do Carmo⁵, Marcelo Costa Fernandes6

ARSTRACT

Objective: to analyze the discourses of nursing students about educational technologies in the teaching-learning process. *Method:* this is a qualitative, descriptive study. The data was collected through semi-structured interviews with 16 nursing students, from November 2016 to January 2017. The statements were analyzed through Discourse Analysis, presenting them by means of a you speak *Results:* educational technologies were perceived as innovative method in teaching, having the most preponderant element related to ludic practices, a situation in which games were the most relevant examples to stimulate the student's learning. It is promoted, through the application of educational games, through the teachers, a sensitizing environment, in which learning by playing reflects, in academics, innovative and challenging motivation to study. *Conclusion:* the use of educational technologies in academic formation to the initiative, as well as to the interaction between teachers, students and the university itself is linked. It is observed that the playful is a way to construct the learning, in an interactive and sensitive way, favoring the critical formation of the nurse. *Descritores:* Health Education; Educational Technology; Students, Nursing; Nursing; Models, Educational; Play Therapy.

RESUMO

Objetivo: analisar os discursos dos acadêmicos de Enfermagem sobre as tecnologias educativas no processo de ensino-aprendizagem. *Método*: trata-se um estudo qualitativo, descritivo. Coletaram-se os dados por meio de entrevistas semiestruturadas, com 16 acadêmicos de Enfermagem, no período de novembro de 2016 a janeiro de 2017. Analisaram-se os depoimentos por meio da Análise de Discurso, apresentando-os por meio de recorte dos registros das falas. *Resultados*: perceberam-se as tecnologias educativas enquanto método inovador no ensino, tendo o elemento mais preponderante relacionado às práticas lúdicas, situação esta em que os jogos foram os exemplos mais relevantes para estimular o aprendizado do discente. Promove-se, pela aplicação dos jogos educativos, por meio dos docentes, ambiente sensibilizador, no qual o aprender brincando reflete, nos acadêmicos, motivação inovadora e desafiadora de estudar. *Conclusão*: atrela-se o uso das tecnologias educativas na formação acadêmica à inciativa, bem como à interação entre docentes, discentes e à própria universidade. Observa-se que o lúdico é um caminho para construir o aprendizado, de maneira interativa e sensível, favorecendo a formação crítica do enfermeiro. *Descritores*: Educação em Saúde; Tecnologia Educacional; Estudantes de Enfermagem; Enfermagem; Modelos Educacionais; Ludoterapia.

RESUMEN

Objetivo: analizar los discursos de los académicos de Enfermería sobre las tecnologías educativas en el proceso de enseñanza-aprendizaje. Método: se trata de un estudio cualitativo, descriptivo. Se recogen los datos por medio de entrevistas semiestructuradas, con 16 académicos de Enfermería, en el período de noviembre de 2016 a enero de 2017. Se analizaron los testimonios por medio del Análisis de Discurso, presentándolos por medio de recorte de los registros de las conversaciones. Resultados: se percibió las tecnologías educativas como método innovador en la enseñanza, teniendo el elemento más preponderante relacionado a las prácticas lúdicas, situación en que los juegos fueron los ejemplos más relevantes para estimular el aprendizaje del alumnado. Se promueve, por la aplicación de los juegos educativos, por medio de los docentes, ambiente sensibilizador, en el cual el aprender jugando refleja, en los académicos, motivación innovadora y desafiante de estudiar. Conclusión: se atreve el uso de las tecnologías educativas en la formación académica a la iniciativa, así como a la interacción entre docentes, discentes y la propia universidad. Se observa que el lúdico es un camino para construir el aprendizaje, de manera interactiva y sensible, favoreciendo la formación crítica del enfermero. Descritores: Educación en Salud; Tecnología Educacional; Estudiantes de Enfermería; Enfermería; Modelos Educacionales; Ludoterapia.

^{1.3-5} Nurses, Federal University of Campina Grande / UFCG. Cajazeiras (PB), Brazil. Email: lila_gadelha@hotmail.com ORCID iD: https://orcid.org/0000-0001-8727-508X; Email: jesica_enf@hotmail.com ORCID iD: https://orcid.org/0000-0002-6638-5412; E-mail: andressapcarmo@hotmail.com ORCID iD: https://orcid.org/0000-0001-638-5412; E-mail: andressapcarmo@hotmail.com ORCID iD: https://orcid.org/0000-0001-5256-2169; ⁶PhD, Federal University of Campina Grande / UFCG. Cajazeiras (PB), Brazil. Email: celo_cf@hotmail.com ORCID iD: https://orcid.org/0000-0003-1626-3043

INTRODUCTION

The teaching-learning process should always be designed, according to the context of current education, in order to facilitate and streamline processes with innovative

methods.¹

For this reason, in the formative scenarios of the Higher Education Institutions (HEIs), the use of new educational methods is aimed at diversifying and consolidating the knowledge of scholars, and among these strategies as innovative methods there are special emphasis on Educational Technology (ET).

This type of technology emerged as a discourse that enunciated the use of means for teaching and then reinvigorated as a set of procedures, techniques and instruments integrated into the development of the educational system. The systemic conception has been transformed from ET into a systematic way of organizing the process of teaching and learning in terms of objectives and the combination of human and material resources to solve the problems education.2

is considered as an innovative FT methodology that allows to emphasize the process of teaching, learning and evaluation, by providing protagonism to the students, placing them as proactive agents stimulating them to seek answers to real and problems complex with freedom autonomy, thus making them jointly responsible for decision making, which leads to a break with mechanical and content learning.3

This type of education is referred to the traditional theories of teaching, comprising the students as empty deposits to be filled by content of the exclusive domain of the teacher. In the field of Education, this banking education is criticized as well as incentives for the movement of overcoming by the formulation of a liberating education that is realized as a process by which the educator invites the students to recognize and unveil the reality critically.⁴⁻⁵

It is suggested, on the other hand, that ET are useful and important tools to be used in this teaching process, since they have an innovative and facilitative philosophy in the construction of the teaching and learning process, in which its applicability provides a dialectical relation between theory and practice, the knowledge and the learning, besides the full involvement of the students in relation to the technology approached.¹

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It is added that there are means that can facilitate the production of knowledge and the understanding of the contents in the academic and scholastic spheres, which makes important the construction of spaces that associate playful ideas in the use of the ET. The process of training is based on ludicity as an alternative that provides learning in a more dynamic and differentiated way, enhancing the knowledge of the target audience and arousing the interest of the since play activities favor the construction of leisure spaces which merge with the dissemination of some content that important for the curriculum professional life of the academic.

However, it is cautioned that there are deficiencies in the use of educational technologies in higher education, especially in nursing, whether due to lack of knowledge of teachers and institutions, or lack of updates to new ways of producing knowledge in HEIs, thus limiting the reproduction of the vertical model of transmission of knowledge and alienating practices.

It becomes a significant advance, therefore, to understand the application of ET in the quality of education for the training of nurses more critical and reflexive, as well as more aligned with the reality of the community in which they are inserted. The question is: "What is the discourse of nursing students about educational technologies in the training environment?".

OBJECTIVE

• Analyze nursing students' discourses on educational technologies in the teaching-learning process.

METHOD

This is a qualitative, descriptive study at a Public Higher Education Institution (HEI), in the city of Cajazeiras-Paraíba. The study population was represented by 315 undergraduate nursing students; Of these, 56 were the research sample, which, by inclusion and exclusion criteria, were summarized to 16 students enrolled in the eighth and ninth periods of the course. It was understood the period of conducting the research between November 2016 and January 2017.

As inclusion criteria, only those students who were regularly enrolled in the eighth and ninth periods and who were attending the subjects "Supervised Internship I - Basic Attention" and "Supervised Internship II - Rede Hospitalar", correspondent to the period

2016.2. It is necessary to choose the eighth and ninth periods as a result of these scholars having already studied all the theoretical disciplines, thus having the opportunity of contact with the ET. Students who participated in courses offered outside the university and who, as structuring axes, had contact with this teaching methodology were excluded.

The information was collected through the semi-structured interview, based on the knowledge that the academics possessed, as well as the experiences they had with the ET.

Participation in the study was initiated by signing the Free and Informed Consent Term (FICT), recording the interview in a reserved place and then having their speeches transcribed obeying the privacy of the same, using the coding " ACAD "for the speech of each academic.

This study was analyzed through the theoretical-methodological proposal of Discourse Analysis (DA), in the perspective of the French current of thought. We highlight three stages of the DA realization process and their correlations that were followed in this investigation: the first stage dealt with the transition from the linguistic surface to the discursive object; in the second stage, the passage of the discursive object to the discursive process took place, and in the third and last stage of the DA happened the passage from the discursive process to the ideological training.⁶

This type of analysis is supported for the understanding of the interconnected meanings of time and space of practices, mediated by discourse, history and its social context, and this discourse is still seen as a space of understanding between language, ideology and meaning for those who they say it.⁶

It is possible to perceive, through these methodological characteristics, that DA meets the objective proposed by the study, whose focus focuses on enunciative analyzes, besides the evidences, senses produced in historical and social contexts and circulating discourses on the use of educational technologies in the process of teaching-learning.

The research was started considering the dispositions brought in Resolution 466/2012 of the National Health Council, respecting the principles of autonomy, non-maleficence, justice and equity.⁷

It was approved by the Research Ethics Committee (REC) of the Federal University of Campina Grande, Cajazeiras campus, under Educational technologies in the training...

the number of opinion 1,823,572, on November 17, 2016, under CAAE n° 61057316.7.0000.5575.

RESULTS

ET is becoming an innovative strategy in the implementation of new pedagogical models, which provides transformations in which the student participates in the production of knowledge.

It is repeated the saying about the use of ET as an innovative method in teaching, throughout most of the speeches of the academicians, denominating itself to say paraphrastic, that is to say, in which there is always something that repeats itself, being the sayable to memory present in speech.⁶

Well, I understand the educational technologies as an innovative way of the teacher is / is causing the student to participate in the class, not only is / giving content that he programmed at home gets there and passes to the student and lets you finish, study in What house was seen in the living room, right ?! With the use of educational technologies, the student participates in the. (ACAD 02)

Precisely because of this, because it is an innovative way (the educational technologies) to teach, the students are more interested because, therefore, it is more convenient both for the teacher and for the student as well, since the exchange of knowledge It will be bigger and more interesting. (ACAD 05)

In this way, there are several possibilities for producing knowledge through educational technologies, which can be found in the speeches presented below.

Well, I think it's going to (educational technology) since, it's a kind of class, a way to teach, dialogues, or in the form of a conversation wheel or even, as I can say, devices themselves, it's like me I can say, tactile, type games, appliances, is, as well as gymkhana, competitions, some means that the professional can be using. (ACAD 13)

Well, the educational technologies, for me, will be instruments, devices that will be at the disposal of the professional, be it the nurse, the teacher, or who is in the act of teaching, in the case of the case, right?! So it's going to be a device, an instrument he's going to have to maximize, right?! To optimize knowledge, what he wants to pass on to his students or to the audience in question. (ACAD 13)

It is pointed out, for this saying that remains, for the academic who mentions the ludic activities experienced in his formative process as an expression of educational technology, as demonstrated.

In some disciplines, I think that two or three teachers brought in this case the issue of technologies, educational technologies [...] in which people interacted very effectively, we played and learned at the same time, it was a a way of presenting a certain content in which, in addition to arousing the interest of the people, also had the question of, from this part of the same recreation, of joke, of is / interacting. (ACADO3)

It is compared in some of the discourses, in addition to approaching the ludic ideal as an innovative space, with the traditional model of teaching, mentioning the applicability of play as a way to provide a dialectical relationship between theory and practice, knowledge and learning, in addition to the full involvement of academics in relation to the technology discussed, as presented below.

They are through playful ways ... that make the understanding of the individual better, easier, more dynamic, take that model of teacher teaching in the classroom and everyone can learn together and teach together. (ACAD06)

I think they want to break that issue of traditionalism, they want more to go to Paulo Freire's theory, right ?! To follow a knowledge and teaching-learning that does not depend only on the teacher, then, it depends on the student and the teacher to build the knowledge. (ACADO9)

There is another point in the discourses of academics, in relation to play activities, which is the paraphrastic saying of educational games as the best option for an environment conducive to more dynamic education, so that they consider it as something different and that arouses an interest motivating and fostering their learning.

So when it brings this different form, these educational technologies (the games), then, kind of ends up arousing the interest of the student and ends up being more enjoyable as well, the person does with pleasure that, the person plays and also learns in a pleasurable way. (ACADO3)

When we are playing, we are getting involved and is fixing more content that was previously discussed in the theoretical lesson, there, at the time of the game, is fixing more content. (ACAD07)

The creation of games where people went, is, through this game, answering questions about the content given in the classroom. Pay attention to the methodology of the game, its rules. We focus. (ACADO1)

It is noted, however, that even with the paraphrastic discourses on the use of educational games during classes, what ends up in one of the words was polysemy, that is,

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the displacement in the processes of signification, the misunderstanding in the discourse⁶ of which is demonstrated in the fragment of the discursive corpus below.

Well, it's in classes, only the use of projections, through the Data Show, and some videotapes, but other things, not. (ACAD08)

It is related, for some academics, that focus on the use of traditional teaching technologies to the lack of knowledge of teachers about new methods that they can use to deliver certain content.

Because they, besides not having their time, right ?! One basement in relation to educational technologies is [...] they also can not pass on to people what they have not learned. (ACADO9)

Because there are many teachers who do not really know these technologies or do not think it's interesting, do not think that it has, that it serves, that*[...]. (ACAD14)

DISCUSSION

It is observed the understanding, from the paraphrastic discourses, about the educational technology being something that will innovate teaching, making the participatory subject in the construction of his learning, having, thus, dialectic relation with the teacher within the space in which is delineating the knowledge, in which the student will be active and creative in teaching-learning. It becomes the individual, then, transforming actor, which will echo positively in future practices as a health professional, and this nurse can be more critical, reflexive and creative in their care actions.8

However, it is necessary to rethink the formative scope, as well as the reflections on the use issue and the incorporation of technologies as resources for the construction of innovative and effective curricular pedagogical practices.⁹

Therefore, according to the discursive corpus of this research, there is a possibility of working with these technologies, in which ET has great dynamicity, since it can be expressed in daily teaching by means of numerous shapes, as pointed out in the above fragments. It is intended, for all these examples, the involvement of students in the construction of new knowledge, in an interactive and reflective way.

This concept is aligned on the understanding of technologies as well as concrete representations, such as object, model, prototype or physical system, as well as the understanding of technologies as

abstract representations, such as thought, idea, event or process.¹⁰

this sense, ET is understood as facilitating instruments of the teachinglearning process, used as a means of sharing knowledge, providing the student participation in the moment of exchange of experiences and, consequently, the skills, and improvement of knowledge attitudes.11

Another sense of academic discourse emerged, which was playful, which may be a consequence of the use of ET. Ludicity, evidenced through interactive and participatory techniques, is used to approximate the subjects involved in the construction of knowledge from the proposed activities.¹²

It is provided, through playful space, the disconnection with the traditional method of teaching, that is, with vertical and banking education, being based on a hierarchical and authoritarian position, in which the teacher is the one who knows everything and the student has nothing to do with add. Therefore, the critical spirit, freedom, autonomy and responsibility of the individual are withdrawn and, consequently, a professional is alienated to the space where he will be inserted.⁸

This autonomy was provided to the students through the use of these innovative methodologies, so that in the discourses of the academics, experiences with the ETs emerged, especially the educational games used by the teachers, and as a result, social interaction greater with the teacher and the class, besides making the knowledge more practical and easy for the students, because, with play and leisure, new knowledge is learned by the Nursing students in an interactive way.

Even with the experiences mentioned during the study about the contact with ET and leisuretherapy, such as polissemia, emerged, in this research, the absence of teachers' use of the same was observed in this study, and the focus on the vertical model mentioned above.

It is observed, with this polysemy, the rupture in the discourse, being the use of ET still focused on the traditional teaching tools, in which the academic only perceives the use of physical and digital technological means as the only alternatives chosen by their teachers to teach the classroom.

For this situation, the teaching staff of this HES is conditioned to the ambivalent practice, since they are aimed at presenting classes with innovative methods, such as educational

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games, while other teachers are still focused on vertical teaching methods; the polysemical saying still provides the investigator with a reflection on the possible ignorance of the student about the concept of ET, as well as the different types and forms how they can be used within the academic setting.

It is inferred, in spite of this current tendency, historically, that the teachers, for the most part, were the target of training based on conservative, fragmented and reductionist teaching-learning methodologies, restricting the process to the reproduction of knowledge, exempting criticism reflection this and the of methodological course, to the detriment of meaningful learning. 13

It is therefore necessary to appropriate new methods for such meaningful learning by providing the use of technologies, in particular games, for teaching through the incorporation of technological tools for teaching purposes in learning environments, understanding that, in Nursing, the teacher-student relationship goes beyond the academic panorama, as it also happens in the nurse-patient relationship, as well as in the health work process. 14-17

Finally, based on the discussions held, the interesting thing about the use of technologies in teaching is the educational questioning that the teacher provides and not only the technology itself, since the technological tools are able to qualify through a view of coparticipation among participants mediated by interactivity and creativity.

CONCLUSION

The objective of the study was to analyze the nursing students' discourse on the use of educational technologies in the teaching-learning process, which allowed, in addition to the observation of the said one, to relate to the not said by academics and how the saying was elaborated.

In the search for this new approach, academics, ideas of technologies, in which the playful one can be used to construct the learning, and that the same one is mutual between the teacher and the student, since games are effective alternatives for the pursuit of this knowledge by academics, a situation where they show affinity with fun and learning, so that they are actively involved in this process.

It is also considered that, due to educational practices having a large dimension in their teaching process, in addition to considering the context of

education in Brazil, both at the middle and higher levels, where the teacher is inserted, if generalization of these results for the other regions of the country, since the research was delimited to a higher institution in the interior of Paraíba, not considering the results as a present reality for the other institutions present in the national territory.

Based on what was found in this study, the importance of new research in Nursing that can modify the reality of teaching in the education of this profession, in which it is possible to expand in the way of producing and sharing teachings mediated by the ET, so that the practice of Nursing goes through the path that this tool provides, by fostering mutual learning, generating more efficient care production.

REFERENCES

- 1. Silva DML, Carreiro FA, Mello R. Educational technologies in nursing assistance in health education: integrating review. J Nurs UFPE on line. 2017;; 11(Suppl 2):1044-51. Doi: https://doi.org/10.5205/1981-8963-v11i2a13475p1044-1051-2017
- 2. Nespoli G. Os domínios da Tecnologia Educacional no campo da Saúde. Interface comun saúde educ. 2013 Oct/Dec; 17(47):873-84. Doi: http://dx.doi.org/10.1590/S1414-32832013005000028
- 3. Mendonça ET, Cotta RMM, Lelis VP, Carvalho JPM. Paradigms and trends in higher education: the action research methodology as a teacher education strategy. Interface comun saúde educ. 2015 June; 19(53): 373-86. Doi: http://dx.doi.org/10.1590/1807-57622013.1024
- 4. Freire P. The politics of education: culture, power, and liberation. Westport: Bergin and Garvey; 1985.
- 5. Menezes MG, Santiago ME. Paulo Freire's thought on the critical-emancipatory curriculum paradigm. Pro-Posições. 2014; 25(3):45-62. Doi: http://dx.doi.org/10.1590/0103-7307201407503
- 7307201407503
- 6. Orlandi EP. Análise de Discurso: princípios e procedimentos. 11th ed. Campinas: Pontes Editores; 2013.
- 7. Ministério da Saúde (BR), Conselho Nacional de Saúde. Resolução nº 466, de 12 de dezembro de 2012 [Internet]. Brasília: Ministério da Saúde; 2012 [cited 2018 June 15]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/cns/2013/res0466 12 12 2012.html

- Educational technologies in the training...
- 8. Freire, P. Pedagogia da autonomia: saberes necessários à prática educativa. 36th ed. São Paulo: Paz e Terra; 2016.
- 9. Moran JM, Masetto MT, Behrens MA. Novas tecnologias e mediação pedagógica. Campinas: Papirus; 2012.
- 10. Ferracioli L, Gomes TS, Silva RMA, Mulinari MH, Oliveira RR, Camilleti GG, et al. Ambientes de modelagem computacional no aprendizado exploratório de física. Cad Bras Ens Fís. 2012 Oct; 29 (Spe): 679-707. Doi: https://doi.org/10.5007/2175-

7941.2012v29nesp2p679

- 11. Afio ACE, Balbino AC, Alves MDS, Carvalho LV, Santos MCL, Oliveira NR. Analysis of the concept of nursing educational technology applied to the patient. Rev RENE. 2014 Jan/Feb; 18(1):158-65. Doi: http://dx.doi.org/10.15253/rev%20rene.v 15i1.3108
- 12. Pereira FGF, Pinheiro SJ, Caetano JA, Ataíde MBC. Characteristics of nursing students' health education practices. Cogitare enferm [Internet]. 2016 Apr/June [cited 2017 June 27];21(2):01-6. Available from: http://docs.bvsalud.org/biblioref/2016/07/63 7/44209-177498-1-pb.pdf
- 13. Aragão MN, Soares IG. (Trans)forming and daring teaching method in nursing in mental health care. Rev port enferm saúde mental [Internet]. 2014 Dec [cited 2017 July 11]; (12): 59-64. Available from: http://www.scielo.mec.pt/pdf/rpesm/n12/n12a08.pdf
- 14. Salvador PTCO, Rodrigues CCFM, Lima KYN, Alves KYA, Santos VEP. Use and development of teaching technologies presented in nursing research. Rev RENE. 2015 May/June;16(3):442-50. Doi: http://dx.doi.org/10.15253/2175-6783.2015000300018
- 15. Verkuyl M, Romaniuk D, Mastrilli P. Virtual gaming simulation of a mental health assessment: A usability study. Nurse Educ Pract. 2018 July; 31: 83-87. Doi: 10.1016/j.nepr.2018.05.007
- 16. Boyd CA, Warren J, Glendon MA. Gaming the System: Developing an Educational Game for Securing Principles of Arterial Blood Gases. J Prof Nurs. 2016 Sept/Oct; 32: 37-41.Doi: 10.1016/j.profnurs.2016.05.001
- 17. Albu M, Atack L, Srivastava I. Simulation and gaming to promote health education: Results of a usability test. Health Educ J. 2015 May;74(2):244-254. Doi: https://doi.org/10.1177/0017896914532623

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Corresponding Address

Marcelo Costa Fernandes Universidade Federal de Campina Grande Unidade Acadêmica de Enfermagem Rua Sérgio Moreira de Figueiredo s/n - Casas **Populares**

CEP: 58900-000 - Cajazeiras (PB), Brazil