

Andrology in the context of Higher Education: historical trend analysis

La Andrología en el contexto de Educación Superior: análisis histórico tendencial
Andrologia no Contexto do Ensino Superior: Análise das Tendências Históricas

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Abstract: Introduction. Faced with the demands of the knowledge and information society to oppose traditional education, Andragogy is resumed as the concept that encompasses various ideas for adult-only learning. Objective To systematically identify and evaluate scientific evidence on the origin and evolution of Andragogy and its emergence in the context of technological education. Method: The databases Scielo, Redalyc, Google Academic, Scopus were consulted. DOAJ. There was no language restriction. Articles that aimed to analyse the origin and evolution of Andragogy in technological education were included. Studies at other levels were excluded. After filtering, the total revised sources were 50. Results Andragogy is raised as a need to incorporate into higher education programs. Conclusion. Higher education centres when designing learning experiences for their students should take into account affective and cognitive aspects

Key words: Andragogy, technological higher education, adult education

Resumen: Las demandas de la sociedad del conocimiento y de la información por anteponerse a la educación tradicional se retoman a la Andragogía para un aprendizaje sólo para adultos. Objetivo Identificar y evaluar sistemáticamente las evidencias científicas sobre el origen y evolución sobre la Andragogía y su irrupción en el contexto de la educación tecnológica. Método Se consultaron las bases de datos Scielo, Redalyc, Google académico, Scopus. DOAJ. No hubo restricción de idioma. Los artículos que tuvieron como objetivo analizar el origen y evolución de la Andragogía en educación tecnológica fueron incluidos. Los estudios referidos a otros niveles se excluyeron. Luego del filtrado, el total de fuentes revisadas fueron de 50 Resultados Se plantea la andrología como necesidad de incorporar en programas de educación superior. Conclusión. Los centros de educación superior al diseñar las experiencias de aprendizaje para sus estudiantes deben tomar en cuenta los aspectos afectivos y cognitivos aplicando la Andragogía porque su interés está centrada en el proceso de aprendizaje de los adultos.

Palabras clave: Lectura crítica, aprendizaje, dinámica

Resumo: As exigências da sociedade do conhecimento e da informação para ter precedência sobre a educação tradicional são retomadas pela Andragogy para a aprendizagem apenas em adultos. Objetivo Identificar e avaliar sistematicamente as provas científicas sobre a origem e evolução da Andragogia e a sua emergência no contexto da educação tecnológica. Método As bases de dados Scielo, Redalyc, Google Scholar, Scopus. DOAJ. Não houve restrição linguística. Foram incluídos artigos que visavam analisar a origem e a evolução da Andragogia no ensino tecnológico. Foram excluídos os estudos referentes a outros níveis. Após a filtragem, o número total de fontes analisadas foi de 50. Resultados A Andrologia é proposta como uma necessidade a ser incorporada em programas de ensino superior. Conclusão.

Ao conceberem experiências de aprendizagem para os seus estudantes, as instituições de ensino superior devem ter em conta os aspectos afectivos e cognitivos, aplicando Andragogy porque o seu interesse está centrado no processo de aprendizagem dos adultos.

Palavras-chave: leitura crítica, aprendizagem, dinâmica.

INTRODUCTION

In antiquity, with Aristotle, Plato and Socrates, the first concerns for educating people were expressed, especially in the so-called "Dialogues", thus refuting traditional education.

Education is the cornerstone of Aristotelian (ethical)-political science, because from it every political regime is built and sustained, and at the same time it is indispensable for man to complete his nature (Pariz et al. 2014, p. 12). Thus, music education has a fundamental philosophical importance in his thought, as an essential part of the answers he offers to the core questions: what is the best regime and what is the best life? The Stagirite recognizes that these questions are conceptually inseparable. Thus in musical education its idle employment by citizens, presupposes that they have been habituated to virtue through its ethical use, activity whose purpose is to enjoy the beautiful melodies which conforms to the type of praxis that characterizes the *bios praktikos* Pérez-González et al. (2015) Aristotle employs mimesis to allude to gestural, vocal and behavioral imitation, that is, to the innate mimetic ability to learn. There is a connection between the recognition of the anthropological character of Mimesis in the Poetics and the function it fulfills in the educational program of the ideal state designed in the Politics. Thanks to such anthropological-political connection it becomes clear that mimesis is an essential part in the education of citizens. For Sánchez,(2014) the great

contribution of Aristotle is to have admitted the disciplinary particularity of poetics and, more broadly, of the mimetic arts.

Aristotle defines as Episteme the knowledge of the principles or causes of that which he knows, it is revealed to us as knowledge based on true, first, immediate, best known, previous and causal principles. In studies by El-Maaty et al. (2014) indicates that in the sense explained above, with respect to what is concluded from them, it is then by virtue of such principles, as everything that constitutes the object of knowledge in the strict sense is known by demonstration.

Being the contribution Sanchez,(2016) indicates that Socrates through the mayeutics, philosophical method of research and teaching, and consists of engaging in a dialogue on a certain topic between the teacher and the disciple with the purpose of stimulating more general and precise definitions to achieve general knowledge, accurate and rigorous Ortiz,(2013) and Fair,(2015) states that the teacher does not provide information to the disciple on the subject to be discussed, but the disciple is the one who extracts from himself the knowledge that is in his psyche, through critical analysis, generated by the timely conduction of a mediator (del Casasola,2015, p.45).

Plato, proposed ontological dualism, by affirming the existence of two elements that formed human reality: body and soul, both heterogeneous elements Jiménez,(2014) He believed that dialogue was the rational path to knowledge and the highest form of teaching, and for him, these two theses were inseparable because he argued that one teaches by guiding the other through the steps that allow truths to be deduced and that these are discovered after undergoing a dialectical exchange between provisional hypotheses and skeptical questioning (Acosta & Buendía, 2016, p.12)

Likewise, Socrates, who is considered as the first andrological teacher, whose thought product of the numerous dialogues between different people, that is,

by inquiring through questions to reach the truth by himself, and in a certain way, to help others to give birth (allusion to his mother's trade) and reach new knowledge through questioning Krainer et al., (2017). He thought that human knowledge should be grounded by experience (empiricism), and argued that education was permanent because it is a process of improvement and lasts as long as the life of the person lasts.

In the past, in the year 1833, the German Alexander Kapp, used for the first time the term Andragogy, in his book *The Educational Ideas of Plato*, when he discovered the educational practice that Plato used with his disciples. Buendía, (2016), considered the father of pedagogy, opposed Kapp's proposal, because he thought that the process of education and learning could only be applied to young people Barbón & Bascó, (2016) used the term Andragogy to refer to the didactic interaction established by him and his adult students in night schools (Sánchez, 2014, p.89)

UNESCO specifies in a clear and international way the theory of lifelong learning, adult education has a central role to play, ensuring the pursuit of equity and social justice, along with the support of democracy and human dignity Jimenez, (2014). At the World Conference on University Adult Education, Adams gave the paper "Andragogy: Science of Adult Education", which had an influence in Venezuela, his native country. In addition, Adams raised the principles of Andragogy: Participation, horizontality and flexibility. Sanchez, (2014). In 1972 in Tokyo, the importance of adult education was recognized, which should be lifelong, allowing the interpretation of reality in order to achieve sustainable social, cultural and economic development, which implies that adult education is a right for all. The Universidad Nacional Experimental Simón Rodríguez (UNESR) is a public institution in Venezuela, created in 1974, implemented as a strategy the master's and doctoral studies in Andragogy. Taking into account that the

adult is a subject developed in the physical, psychological, economic-anthropological and social planes; capable of proceeding with autonomy in the society in which he lives and of defining goals to achieve Gamboa et al., (2019) Barbón & Fernández, (2018). Their condition, therefore, is radically different from that of the child and adolescent, in all the indicated planes. This allows in the field of education to distinguish, conceptualize, design and develop an andragogical fact or process.

MATERIALS AND METHODS

The study was qualitative, with a historical hermeneutic perspective. The methodology used was a systematic search for information. Postgraduate theses and scientific articles published from 2000 to date were reviewed to determine the problem to be studied. The technique used was the documentary analysis of 65 sources obtained from databases such as: Google Scholar, Redalyc, Scopus, Scielo, Latindex, DOAJ, REDIB, proquest, all of them related to social sciences and humanities. Fifty sources were selected, taking as an exclusion factor those documents prior to 2000 as well as those articles that were not directly related to the topic to be developed. No filters were applied in terms of author and language. In the final phase, the most relevant and useful information was analyzed.

RESULTS

Globalization and technological progress have made it evident that production quality must be controlled and improved. Therefore, professionals are required who can face social, cultural, economic and technological problems. This implies developing a high degree of knowledge about their environment, ability to distinguish needs and opportunities for action in the

different areas of professional practice, in order to identify the most appropriate forms of intervention to influence the social problems associated with their field of performance. The professional performance of nurses, for example, shows heterogeneity in training, determining a deficit of scientific knowledge for the solution of health care conflicts.

Thus, training in schools is organized by subjects; and is predominantly oriented towards an in-hospital recuperative tendency developed over many decades in response to a predominant positivist paradigm. However, the academic demands are different and complex, so that approaches must be (re)directed, seeking to acquire better competencies that form individuals with life skills and feel satisfied with their profession. A modern concept of adult education includes all the training processes in which they participate, regardless of whether their interests and needs are personal or professional in nature; a concept that includes general training processes (from literacy to university) as well as those linked to preparation for work, carried out in a context of lifelong education throughout life.

In this context, it is necessary to refer that Anthropology, as a general theory, can be subdivided into the following particular theories: Pedagogy studies the education of boys and girls (2- 12 years), hebegogy studies the education of the adolescent, which is period of middle education with the maturation of complex cognitive processes and from the biological point of view covers the stage of puberty. Andraginecogy studies the education of adults, both men and women, up to maturity (from 20 to 65 years of age). Gerontogogy studies the education of older adults or older adulthood (after 65 years of age).

In this context, adult education is a proposal to the contemporary educational task, by proposing alternative approaches and methods to the educational world. It has been conceptualized over time as: science, science of adult education, set of assumptions, methodology, set of guidelines, philosophy,

discipline, theory, process of integral development of the human being or educational model.

Education based on the principles of Andragogy is of importance for the transmission and acceptance of knowledge in accordance with a continuous reintegration of cognitive and affective domains. They have their foundation in various empirical or scientific theories and in various axiological or philosophical theories. Andragogical training programs are directly related to learning processes in 87.27%. While andragogical principles as a characteristic of the programs is related with 86.86%, relevance in teaching adults with 89.33%, and self-directed learning with 85.60% with respect to learning processes. On the other hand, andragogic praxis is the methodology and strategies used in the process and learning that should take place in adult education. The teacher, facilitator or Andragogue is an adult who practices self-learning, learns at his own pace and speed, there is no pressure, neither academic nor personal, to advance at the pace of his peers, who concentrates on facilitating the process of orientation and learning, the adult learner who due to his experience is able to select his learning objectives that give him benefits and is dynamic, responsible for his actions, provides appropriate and timely solutions, besides being observant, critical and diligent, but must learn to investigate and produce and not only refers to know how to know, but to know how to do and know how to be, pillars of education but to its comprehensive training as human capital committed to the society in which it operates.

The purpose of adult education is not to provide knowledge for people to memorize, but to encourage an educational project that favors the overall development of the person, to adapt, comprehensively and critically, to social changes and to be able to influence their direction. Adults develop their learning in an autonomous way differing from the pedagogy that is oriented

to teaching-learning, this focuses on the orientation-learning, so the strategies are different and personalized, the adult learns considering his experiences, his life project, is responsible for his own learning, adopts new forms of learning as more participatory practices, such as group dynamics, case analysis, and has strengthened the use of the project method. Given the complex crisis that Venezuela is experiencing, which has caused a systematic desertion of university students, the need arises to structure a training plan for entrepreneurs, which allows the creation of new companies, where youth have a leading role, strengthening a culture of entrepreneurship compatible with the andragogic, participatory and flexible philosophy.

The main principles in adult education are: Participation of their learning, sharing with their peers and facilitator experiences that contribute to the construction of their own learning, the other is the Horizontality in which both adult and facilitator at the time of learning and teaching are in identical contexts, in condition of equality, and finally flexibility, the adult is a human being with emotions work, family responsibilities, so it requires elasticity to develop their training process, that is why adult education, transcends the simple action of sharing information in academic environments. Therefore, the teacher plays a fundamental role in the formation of adults, adapting his andrological strategies according to their ages.

The adult person is involved in some form of learning throughout his or her entire life. Learning is a necessary part of adjusting to changing conditions of existence. Adult education was recognized in 1972, in Tokyo, and became an opportunity to complement Andragogy at the higher level. Hence, many countries have taken on the task of designing and carrying out programs that contribute to the improvement and cultural updating of adults. Such as the Universidad Nacional Experimental Simón Rodríguez in Venezuela,

Universidad del Valle in Mexico, Interamericana de Educación a Distancia in Panama, among others, with the purpose of achieving better learning.

However, andragogy has a marked difference in its praxeological dimension and in the concept of the subject receiving education. The child is an evolving being and the adult is an evolved being whose motivations and needs require a different teaching and learning model. The praxis of the Andragogic teacher is based on traditional pedagogical situations, with a teaching-learning process centered on a vertical relationship, disjointed, unconnected, self-sufficient, of imposition, power of the facilitator towards the participant, it could be attributed to Andragogy as a science, because the development of the disciplines is in its beginnings, as well as the theory of adult education as an academic subject. Constructivism has developed from the work of Kelly, Paiget and Vygotsky, who agree that students construct meaning or knowledge based on their interaction and reaction to life experiences. As a result, knowledge is constructed based on one's previous experiences and new learning through their perceptions.

In Andragogy, the teacher or andragogue or facilitator is a fundamental element in the learning of older adults because he/she is the key to participate in an active dialogue (Socratic learning). In addition, the facilitator translates the information to be learned into a format appropriate to the current state of understanding of the student, and above all to achieve as a learning resource his experience (Prada, 2010), must be emotionally balanced, empathetic and respectful with his student, moderator in discussions and induce self-learning, the foundations of andragogic theory are given only to some extent in teacher training. Learning takes place based on the existence of a learning need in the adult, unquestionably the need to know about the use of computer resources is present in teachers. However, for some it is not a priority in their

professional training and those who show interest in appropriating them do not necessarily take them to their classroom practice.

This marks a break in the process of linking ICTs to the educational field by the hand of those who manage the teaching-learning processes, since the same policies state that teachers should not only be trained in the field, but should also bring this knowledge in favor of educational transformation.

The fact that the educator is a facilitator and encourages group participation is very motivating for the student. The educational process focused on individual and cooperative learning and that encourages research is very significant. That the contents are selected according to the interests and needs of the student. The adult student learns with the help of another highly trained adult who facilitates the process.

CONCLUSIONS

Universities train teachers specialized in Early Childhood Education and Basic Education, to serve children and adolescents, but there is a big gap in the training of teachers specialized in Higher Education, that is, facilitators of adults, both young, mature and seniors. The basic difference between the andragogical facilitator and other groups of education professionals is that he/she has direct responsibility in education, which entails the exercise of teaching tasks; but we insist once again that teaching, the task of teaching, is only one of the tasks necessary to achieve the integral education of the learners.

It is necessary that higher education institutions in designing learning experiences for their students should take into account the affective and cognitive aspects by applying Andragogy because its interest is focused on the adult learning process. Teaching and learning have moved primarily

online and the use of videoconferencing has become commonplace. These changes have also affected adult education programming, much of which is based on face-to-face activities.

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