
Fundamentos metodológicos asociados al proceso de aprendizaje en estudiantes adultos trabajadores en una universidad chilena

Methodological foundations associated with the learning process in adult learners workers in a Chilean university

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Received: 12/02/2023

Revised: 10/03/2023

Accepted: 04/05/2023

Resumen: El artículo devela los fundamentos metodológicos asociados al proceso de enseñanza aprendizaje en estudiantes adultos trabajadores, de la carrera de ingeniería en Administración de Empresas, de la Universidad Arturo Prat en Santiago de Chile. El enfoque es cualitativo e interpretativo, desde la Teoría Fundamentada. El procesamiento y análisis de la información se desarrolló con el software Atlas.Ti. Los principales resultados arrojaron que los componentes metodológicos son el proceso de enseñanza, su preparación y un ambiente de aprendizaje. Se concluye que, formar estudiantes adultos trabajadores en carreras de las Ciencias Empresariales, requiere de un proceso metodológico acorde a sus particularidades andragógicas.

Palabras clave: Educación superior; Educación de adultos; Proceso metodológico; Andragogía; Teoría Fundamentada.

Abstract: The article unveils the methodological foundations associated with the teaching-learning process in working adult students of the Business Administration engineering career at the Arturo Prat University in Santiago, Chile. The approach is qualitative and interpretative, from the Grounded Theory. The processing and analysis of the information was developed with Atlas.Ti software. The main results showed that the methodological components are the teaching process, its preparation and a learning environment. It is concluded that training adult working students in Business Sciences requires a methodological process according to their andragogical particularities.

Keywords: Higher education; Adult education; Methodological process; Andragogy; Grounded Theory.

Introduction

Research background

In Chile, out of a total of 58 private and state universities, more than 40% offer professional programs for working adult students with multiple family and work responsibilities. Some are called executive, advance or evening programs.

One aspect that characterizes the different universities that offer programs for working adult students is their educational model. All of them place the student as the main

focus, who will achieve their integral formation and the development of specific and transversal competencies to successfully face the entry to an increasingly dynamic society in social, political, economic, etc. The different Houses of Studies will achieve the best graduation profile of their students supported by active participatory methodological tools and evaluations according to the reality of a student who works and studies. An example of this is that proposed by the Universidad San Sebastian, USS (2023).

Teaching adults who have been out of the formal system for more than 10 years is no easy task. This is evident in the continuing education plans of the Universidad Arturo Prat, in Santiago, Chile. Although the educational institution has been offering programs for working adult students for more than 30 years, it has not yet managed to bring its educational model down to the classroom. This is evident in the absence of methodological foundations for teaching in the professional career of Business Administration of the School of Business Sciences. In addition to the above, teachers conduct their classes with a pedagogical perspective and not an andragogical one, that is, from the art and science of teaching adults.

The study is based on the theories of the field of andragogy, seeking to find those models and practical methodological components of didactics, curriculum and evaluation, which contribute to the teaching and learning of adult students working in Higher Education.

The present research is developed from the position of Adolfo Alcalá, cited by Escobar and Gómez (2018, a). The author's educational model has a look towards a permanent education and that implies the actions of the entire educational institution, the learning contract, work teams, didactics and evaluation. Within this framework, he emphasizes that the educational process between teacher and student is oriented to achieve horizontality, participation and positive synergy on the part of the facilitator. Dr. Alcalá also includes in his model senior citizens who are currently attending universities to obtain a second professional degree.

Escobar and Gómez (2018, b) also propose Malcon Knowles' andragogical model. This is based on an adult who comes with a wealth of experiences and emotional charge that can be used in their training process. In addition, the motivation to learn

and the spirit of self-improvement is an essential element that the teacher must consider in order to achieve significant learning.

The main foundations of Knowles' model are factors associated with the vital context of the adult, i.e., how his or her personal life can positively or negatively influence the educational act. Cognitive factors are also added, in this sense, it is related to how the individual constructs his/her knowledge and how he/she relates it to the experience coming from his/her working world and which he/she also knows. On the other hand, affective, motivational and personal factors end up influencing adult learning.

In essence, everything that involves the ability to communicate and work collaboratively and cooperatively with others affects the adult learning process, as well as the individual's ability to learn according to his or her own rhythms.

In turn, Escobar and Gómez (2018, c), point out that Felix Adam's adult education model is based on the premise that the adult is a being who learns what interests him/her, is autonomous and is motivated by the process of how he/she learns. For his part, the teacher becomes a facilitator, promoting the potentials and decision making that the student is confronted with individually and in groups.

An essential characteristic of Adam's model is the horizontality between teacher and students. Seen in this way, cooperation and collaboration of all those who participate in academic activities within the classroom are privileged. Horizontality also favors self-concept, reflection, the confrontation of ideas, assuming responsibilities, making decisions, etc. It also favors the acquisition of cognitive resources that allow adults to understand the reality in which they live, discover, self-learn and enhance social, educational and technological skills.

According to Silva (2018), Manuel Castro Pereira's andragogic model emphasizes the importance of the characteristics that the andragogic teacher should have, for example, knowing what he/she teaches, applying appropriate didactic strategies, possessing the professional maturity to teach an adult. He also emphasizes group issues, pointing out that each member is a learning agent. For Silva, the environment where the formative process takes place also acquires relevance, highlighting the immediate environment where the educational activity took place. There is also the mediate environment,

which corresponds to institutional support. Finally, there is the social context, characterized by the environment in which the working adult student develops.

Duarte (2020), in his paper on the interdisciplinary nature of andragogy, states that the models applied to higher education teaching must be approached from different sciences. In this sense, he points out that biological, psychological, ergological and mainly economic sciences contribute and contribute to its doctrinal body.

However, it is also relevant that the models of higher education are applicable based on their relationship with ICTs. As a result of the Covid 19 pandemic, the importance of teaching through the use of technology is evident, but not from the point of view of the learner, but from the point of view of the person responsible for teaching. It is clear that, during the quarantine in Chile, many academics were paralyzed when faced with the use of technology and its application to teach their respective contents. At times, they were unable to process how to apply didactic strategies, let alone evaluation tools.

An interesting qualitative study of interpretative cut and under the Grounded Theory, conducted by Galarraga (2020), proposed a theoretical model of digital competencies applicable to university teachers in virtual environments. The research was carried out on a sample of 12 andragogists, concluding that their main digital competencies are classified as attitudinal (researcher, flexible, communicator and open) and technological, which include the use of technology for communication, being an expert in distance formats and knowledge in instructional design.

Galarraga's study shares the ideas put forward by Adam when he points out the importance of students learning their contents with the support of technology. It is also in line with Knowles, when he states that students learn to be collaborative and communicators to the extent that teachers develop these competencies in them.

A qualitative, interpretative epistemological research conducted by Fernández, Izarra, Izarra (2020) concludes the importance attributed to teachers and educational managers regarding planning, evaluation and adult learning. In this regard, they emphasize that today's society must adapt its educational models based on the individual who is teaching. It is a mistake to continue educating adults under the gaze of a child, because it ends up

minimizing their competencies, skills, creativity and innovation, whose elements are essential for the generation and transfer of knowledge.

The purpose of this research is to unveil the methodological foundations associated with a learning process with working adult students of the Business Administration engineering career of a continuity of studies plan at the Arturo Prat University in Santiago, Chile.

Development

Methods

The study was approached based on a qualitative approach and an interpretative paradigm. A documentary study by Montoya (2020) states that qualitative methods are based on an interpretative paradigm, mainly on theories such as symbolic interactionism, phenomenology, hermeneutics, among others. Strictly speaking, the approach and paradigm depend on a vision oriented to meaning, context, interpretation, understanding and reflection on a given phenomenon.

The research has an exploratory, cross-sectional and case study approach. Under this context, Chaves and Weiler (2016) highlight that qualitative approaches are more feasible to adapt to case studies where in-depth research can be conducted with a more real approach to the context where the phenomenon to be studied takes place.

The design used was Grounded Theory and was complemented with the constant comparative method. In this regard, Hernández and Mendoza (2020) point out the importance of this design, indicating as a characteristic its use when theories are not available or are inadequate for a given context, time, cases or sample.

The fieldwork was carried out in 2021 and used a purposive sample of 30 adult evening working students of a continuity plan, belonging to the Business Administration engineering career of the Faculty of Business Sciences of the Teaching and Liaison Center of the Universidad Arturo Prat in Santiago de Chile.

The information was obtained through interviews. The analysis and processing of the information was carried out using Atlas. Ti software, version 2022. Semantic networks were used to generate medium-range theories and scientific explanations to the problem posed.

Inclusion criteria were considered as inclusion criteria only students of the Business Administration Engineering program, cohort 2021. The thematic analysis, search of documents and publications in the field of higher education was carried out from the Unesco Thesaurus.

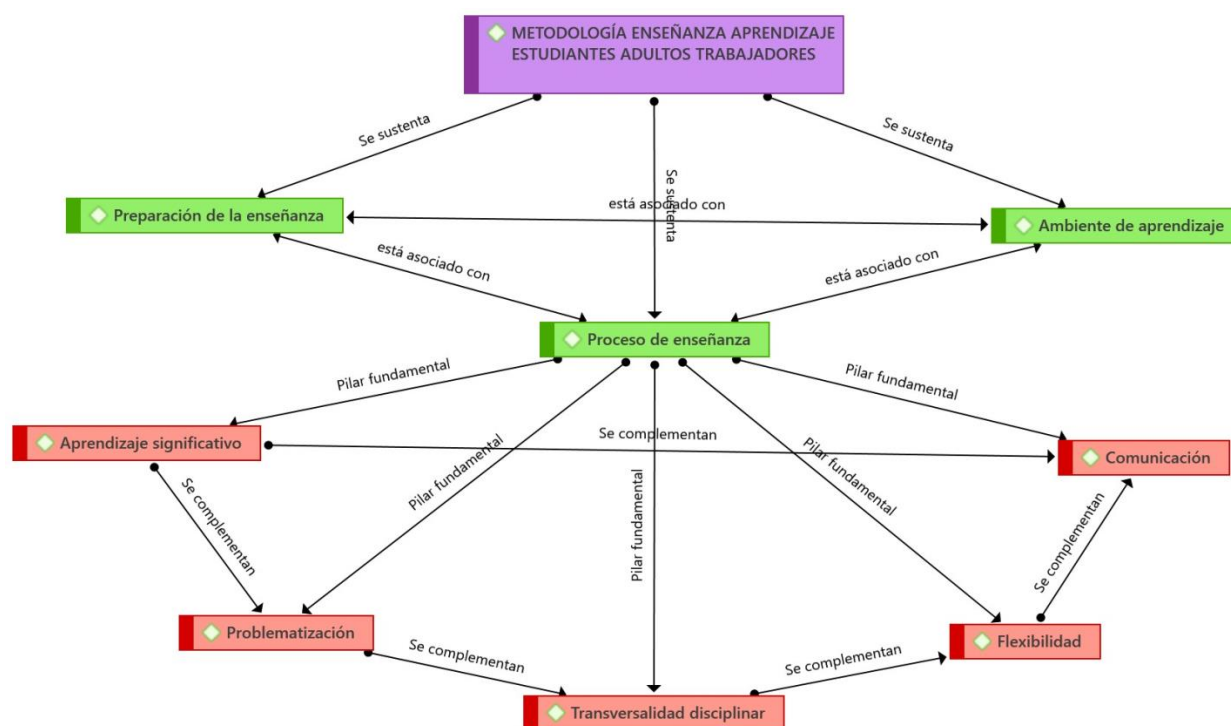
Within the exclusion criteria, students who graduated or graduated from all the cohorts of the career were excluded from the research.

For the purposes of validity of the study, the discussion was approached on the basis of a theoretical triangulation that considered empirical data sources provided by the adult working students, the theoretical current on which the study was based, in addition to the experience of the researchers in the area of higher education in various universities.

Results and Discussion

The descriptive exploration of the data yielded the following results regarding the phenomenon investigated (Figure 1).

Figura 1: Red semántica proceso metodológico



Fuente: Elaboración propia con programa Atlas.Ti, versión 2022.

The findings show that the development of a teaching-learning methodology, applied to adult working students of a continuing education plan of the Business

Administration engineering career, considers as fundamental pillars the preparation of the teaching, its process and the learning environment inside the classroom.

Teaching preparation

This category reflects that the teacher must be willing to plan the educational process, ensuring the conditions for all working adult students to learn. This, which is commonplace at any level of education, acquires special relevance in andragogical education, since it has special conditions obtained from the socio-cultural characteristics of the student, those derived from their work experience and the learning styles that are usually different for each person.

The previous point makes sense with the quote of a student when he says: "well, I think that university professors are prepared to...(E4)" The academics who teach in evening programs have the adequate preparation to teach working adults, the experience acquired in their working world and the specialization in their disciplines accredits them to teach this type of students.

Apart from the conditions of time, space and resources to be considered by the teacher, two essential inputs are needed in the preparation of teaching. The first is related to the teacher's knowledge of the students he/she is going to teach. Although the institution can provide information in this regard, the andragogical teacher must carry out a diagnosis that considers not only previous knowledge and experience in relation to the contents he/she intends to teach, but also the theoretical and practical knowledge derived from the student's status as a worker.

In addition to the above, it should inquire into their motivations, expectations and fears, as well as knowing, as far as possible, their learning styles. The other fundamental element is the mastery of the contents of the disciplinary field or respective area of specialization in which he/she must teach.

It is here where the teacher must consider the use of a diversity of teaching strategies according to the composition of each course in relation to their learning styles and makes a planning open to possible adjustments according to the evolution of the course. This diversity is only possible with an open and flexible attitude, capable of

playing with time, space and resources, reflecting in the planning diverse teaching styles that complement the learning styles of the students.

Teaching process

This category combines the relationship between disciplinary knowledge and andragogy. It is in the classroom where the intentions set forth in the planning are translated. It considers the conceptualizations about teaching, the strategies designed to teach, the creation of environments for the learning of all, the sense and purpose of the evaluative processes and the permanent clarity of the goals that have been proposed to be achieved. Along with this, the teaching process considers the support that the teacher can give to the students in their particularity.

In this process, the teacher considers the handling of general or instrumental aspects considered important for teaching, particularly information and communication technologies, methods of inquiry and problematization and understanding of group learning processes. The quote from a student contributes to the issue in question when he says: "as students who work and study we do not have much time, hence we expect our teachers to use some software or work with tools such as Canva or Excel in their classes, this helps us to clearly understand what they transmit to us and also to apply what we have learned in our work (E8)".

The new redesign of the degree program considers the use of ICTs and software appropriate to each subject in the different classes. An example of this is what happens in the curricular activities of computational tools, finance, accounting, project evaluation and people management, among others. In these classes, the academics reinforce the contents through the use of computer packages that they use in their workplaces, additionally they approach activities through the application of Microsoft Office Excel, simulating situations and applying the diverse tools and formulas of different disciplines of knowledge that the software incorporates.

The teaching process incorporates a series of subcategories:

Subcategory meaningful learning: It considers meaningful learning as a process by which the working adult student learns, assimilates and understands new knowledge, transforming himself in cognitive, affective, social and cultural terms with his

surrounding reality (Arias, 2020), giving sense and meaning to what he learns (Miranda-Núñez, 2022). The following quote reflects a very relevant situation for a working adult student regarding this topic: "for me it is important that what I have learned in class can be applied quickly in my work activity...(E14)".

Working adult students require teachers to teach them practical tools that they can apply to their working world. This occurs in some subjects of the career such as Business Administration and Finance, where the different activities of the professors are directly related to what the student knows and does in the workplace.

However, the evaluative processes are also linked to the fulfillment of each of the tasks. In this sense, the student commits himself to finish his activity and be evaluated, not only by the academy, but also by his boss. In this way, theory, work experience and knowledge of the subject being studied are related.

Subcategory problematization and inquiry: It incorporates research as a privileged form of learning in the classroom and outside it. The development of inquiry skills that lead students to problematize reality and formulate hypotheses that guide learning becomes a methodological priority. Problem solving is part of this didactic concern because it installs transversal skills such as teamwork, the use of ICTs, communication and leadership, all of which can be put into practice in different study and work scenarios of the student.

Subcategory cross-disciplinary transversality: It is understood as the situation of interconnection between the different disciplines of the curriculum that are integrated for the achievement of a global understanding of knowledge in a dimension crossed by theory and work experience, in which values such as freedom and personal responsibility are combined to collaborate in the cognitive, affective and moral development of working adult students (Mata, Uribe, Beltrán, & Valenzuela, 2019).

Subcategory flexibility: It focuses particularly on teaching, learning and evaluation strategies and methods, in a permanent search for a response to the different styles and intelligences developed by each student. The conditions of flexibility allow each student to experience diverse situations that allow him/her to learn better and to choose the way he/she will account for his/her learning.

However, fatigue, boredom, the various inconveniences, travel time, absence due to prioritizing their work and the multiple activities that students must perform during their presence in the institution, require greater flexibility on the part of the teacher, for the fulfillment of the graduate profile of the career. This translates into longer deadlines for the delivery of assignments, group work, co-evaluations, greater presence and application of visual representation strategies, seminars, forums, among others. The learner's quote: "I hope that teachers are conscious with us in terms of their methodologies... (E22)" reinforces what is stated in this subcategory.

Subcategory communication: It considers that teaching, learning and development activities occur in a context of dialogue among all those who participate in the educational situation, where reflection with others, in small operational groups (Foladori and Ruiz, 2022) is a key element for learning. It is a matter of creating communication conditions that allow the transit of each and everyone from their real development level to their potential development level with the mediation of others, teachers and students (Salas, 2001).

The previous paragraph is evidenced by the quote from a student when he states: "we are all adults and I hope that communication with my teachers and classmates... (E17)". What the learner raises is the concept of cross-cutting communication. The students expect to be treated as adults by their academics and also by their peers, not only from the point of view of what happens inside the classroom, but also from the administrative point of view.

Those who are part of this learning adventure are people with similar ages, workers, with managerial and managerial positions, workers with multiple responsibilities, fathers, mothers, widows, widowers, widowers, separated, separated, etc.. Strictly speaking, people with the same rights and duties before society who are looking for opportunities to continue advancing in life.

The subcategories of the teaching process integrate the vision of andragogical education and become the common reference with which the institution and, particularly, the teaching teams, face the tasks of preparing the educational act, its implementation in the classroom and the evaluation of learning.

Learning environment

The learning environment category indicates that the teacher is called upon to create the conditions for everyone to learn and, beyond the planning of teaching, these conditions, in the case of working adults who study, cannot do without them.

The socio-affective classroom environment is, in this case, a collective construction in which all adults have a role to play. An important aspect is the rules that govern relationships and academic work. Beyond the general institutional norms, whose meaning should be shared with the students, the nature of the discipline being taught determines classroom norms generated by the group in an action coordinated by the teacher. Students participate in their generation, as well as in their control.

The above is evidenced by a quote from a student who states the following: "it matters a lot to us that they respect us and teach us as adults, this helps us to accept that we are in a pleasant and reliable learning environment, where we are all peers and with identical family, academic and work responsibilities, including the teacher... (E19)".

Since there is a concern for learning in collaborative groups, both in the planning and in its development, moments should be considered for the evaluation of the group process through the permanent review of roles, functions and the vectors of communication and cooperation that, among others, determine group functioning and favor the work environment among all the actors participating in the educational act.

This approach is reflected in the following quote from a student: "working as a team brings us closer to what we do in our jobs, although it is true that many of our colleagues are subordinates and others are bosses, here in the classroom we are all equals. Teamwork helps us communicate our ideas and learn to develop better leadership skills and how to deal with other people with different personalities and characters, I really like learning from this every time I attend classes, I feel more confident and committed to my learning and to my future... (E29)".

Conclusions

The research concluded that the adult working students of a continuity of studies plan, of the Business Administration engineering career of the Universidad Arturo Prat in Santiago de Chile, require a particular methodological teaching process, their

preparation and a learning environment according to what it means to be an adult student with multiple academic, family and work responsibilities. This process also implies that their teachers have the necessary academic and specialized competencies to face an educational process from an andragogical point of view.

The research showed the importance of achieving meaningful learning that connects theory with the immediate practice of the student and his or her world of work. At the same time, the study concluded that students should reach instances of problematization and inquiry through deductive and inductive thinking appropriate to their cognitive, emotional, social and evolutionary reality.

This will be possible to the extent that the learning environments allow a horizontal and participatory dialogue between teacher and adult working students from the perspective of communication, the transversality of content between subjects and the flexibility of the strategies and methods applied, with a view to achieving the graduation profile of each curricular activity and in accordance with the educational model of the institution.

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Conflicto de interés

Los autores declaran que no existen conflictos de interés.