

QUANTO TEMPO PODE UM ADULTO ILITERADO LER? uma provocação à Ciência da Educação

How long can an illiterate adult read? a provocation to the science of education

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Abstract

This article deals with the verification of a new specific teaching method for the teaching-learning process of adults based on three terms that are known separately. However, in more depth, they are placed in a different format, together and integrated into the teaching-learning process of adult education for any area of knowledge and, even more challenging, placed under the context of teaching adults to read in a shorter period of time. Under such conditions, the new method called IMAI subjects any adult to a faster and more effective learning process, mainly in the context of making an illiterate adult able to read in less than thirty days. Therefore, from what is presented in this article, it is a challenge to the Science of Education, not only for adult education in any area of knowledge, but to teach adults to read and write in a minimum time and reduce public expenditure.

Resumo

Este artigo trata da verificação de um novo método de ensino específico para o processo de ensino-aprendizagem de adultos com base em três termos que são conhecidos isoladamente. No entanto, com mais profundidade, são colocados num formato diferente, juntos e integrados no processo ensino-aprendizado da educação de adultos para qualquer área do conhecimento e, mais desafiante ainda, colocado sob o contexto de alfabetizar adultos em tempo reduzido. Sob tais condições, o novo método com o título de IMAI, submete qualquer adulto a um aprendizado rápido e mais eficaz, principalmente no contexto de fazer um adulto analfabeto conseguir ler em menos de trinta dias. Portanto, pelo que se apresenta neste artigo é um desafio à Ciência da Educação não apenas para a educação de adultos em qualquer área do conhecimento, mas, para alfabetizar adultos em tempo mínimo e redução de custos governamentais.

Palavras-chave: *Interdisciplinaridade; Metacognição; Andragogia; IMAI; Adultos.*

Keywords: *Interdisciplinarity; Metacognition; Andragogy; IMAI; Adults.*

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1. INTRODUCTION

How long does it take for a human being to be literate, that is, to learn to read?

The answer would probably be three to four years, depending on the methodology applied in the teaching-learning process, which should probably be pedagogical.

However, regarding the same question posed, would this time be for a child or for an adult?

Possibly the answer would be the same or similar.

From a child to the most senior, most of human beings, at some point, have gone through the benches of an academy, and thus learned to read over the course of a few years.

When someone undergoes a teaching-learning process, their learning path is subject to the teaching method of the one who transmits knowledge.

Overtime, mankind has been and will always be subjected to the learning-teaching-relearning process, learning even more than teaching.

Although science has evolved and continues evolving faster and faster, education, however, develops in a slower pace.

There are many theories and concepts in education, and pedagogy dominates academic spaces at all levels of education.

There seems to be something odd about the previous paragraphs. It is possible that something is ineffective for part of the population that is still in the learning process.

Who could it be? Would it be the children? Would it be the adults?

Yes! It is the adult who is still subject to methodological teaching processes that hinders them from a better learning process, in a world that walks at an accelerated pace with new technologies that are getting faster and faster.

In this context of technological advancement, adults receive everything ready-made, with little reason. Because of pedagogy is always used in the academy, the effort to think, reflect, compare, analyze, relearn is less present within this population that is about to start learning.

Is the methodology of pedagogy wrong?

No! There is nothing wrong with it. It is absolutely right and it will never be gone. However, its applicability to the context of adult education is likely to be inadequate or inefficient. The teaching-learning process for adults needs to evolve. It is necessary to explore fields not yet discovered, whose riches will be in favor of the intellectual growth of the human being. Adult education needs new ways of teaching and being learned, whereby students feel the pleasure of wanting to study and seeking for more knowledge.

However, a method can be based on one or several pillars of knowledge, so that each pillar has a concept defined by science, and the complexity of a methodology under several pillars leads to challenges to be trodden and new horizons discovered.

Thus, the Science of Education is instigated into an adventure that, once started, there will be no turning back, and the results will be better and imaginable.

2. UNDERSTANDING THE CONCEPTS

There are certain concepts that are important to be reported and understood to arrive at something that can be meaningful and relevant to what is desired, an improvement of the teaching-learning process specifically for adults, and even more, for adult literacy in the shortest time possible.

Thus, there are three pillars, whose terms are defined by their own concepts. One is well known, while the other two not so much.

From this perspective, between the most and least known pillars, less will be mentioned about the most known one so as not to take up time and space, and to present more about what is less known.

Starting from the most known term, “interdisciplinarity”, it is a widespread theme in the literature, whether presented under the theoretical context or the procedures regarding its applicability.

The knowledge acquired by humanity evolved and expanded over time. For this reason, it was necessary to divide it into blocks by areas of knowledge. Hence disciplines were created. Multidisciplinarity, interdisciplinarity, and transdisciplinarity are correlated terms to discipline, whose signifiers have meanings under concepts of their own and, through them, provide guidance of how to work knowledge for students in a teaching-learning process.

In this context, the term multidisciplinary refers to a set of disciplines worked at the same time and at the same level of human understanding, in which are elaborated and organized individually in closed modules, and periodically carried out on a half-yearly or annually basis, constituting, therefore, the curriculum of the courses. Quoting a definition about curriculum for school tracks:

The curriculum definition applies to these tracks. Individuals must fit the objectives defined for their track and accept the pre-defined contents, taught with a methodology that has been tested and considered good. Those who do not meet the evaluation criteria are rejected, or marginalized, or subject to a contradictory policy, that of automatic promotion (D'Ambrosio, 1997, p.73).

In a realistic view of the term multidisciplinary, “[...] the subjects are taught without any articulation between them. The great challenge would be to lead students and teachers to understand knowledge again as unique” (Moll, 2004, p. 31).

The context of interdisciplinarity in the teaching-learning process in adult education is evident in the teacher's praxis, especially when taking into account the students' life experiences, which are not in the textbooks but enriches the school environment.

The term interdisciplinarity deals with working and interacting knowledge between two or more disciplines. It is a study that results in a richer and more effective learning relative to the way of working with knowledge in a multidisciplinary context. Thus, there is a connection between the knowledge of various disciplines, which interact and complement each other in order to achieve something that can be used in practice.

Therefore, the implementation of interdisciplinarity in the construction of a curriculum under the observation of the content objectives, must be placed in all stages, connecting them with other spheres of knowledge, otherwise, “the curriculum turns out not to be configured as a set of guidelines and working hypotheses, originating from a reflective process on the part of everyone who makes up the school context” (Azevedo, 2007, p. 261).

Although it is not the focus at hand, it is important to observe under the term transdisciplinarity, by which knowledge is worked on in a macro universe, where many disciplines of different natures are connected, being the last stage of the curricular process, because, “Transdisciplinarity, as a possibility, would be the last stage, in which all disciplines would merge, without any supremacy of one over the others” (Moll, 2004, p. 31)

A counterpoint of interdisciplinarity to multidisciplinary is that the first leads students to think, reason, and question, making them exercise the ability to analyze data in line with other knowledge that will result in an application or construction of something as opposite to the latter, which deals with the condition of memorizing a loose, isolated, unconnected content, likely to happen by memorizing.

It is noticeable that both students and teachers are more engaged when a curriculum is interdisciplinary, because, although the disciplines are loose, the classes continue. Therefore, what changes are the methods of providing information, transferring the same knowledge through another perspective.

So are we done with classes? We must not finish classes. But each class should be a unique opportunity to hear what is not in the books, what is not recorded on audio or video, and what is not repeated. This justifies going to attend a class (D'Ambrosio, 1997, p. 100).

The beauty of results of the practice of interdisciplinarity is visible when worked together with the reality of students. The knowledge absorbed in classroom taken to the reality of everyday life at the same time that they are allowed to present their life experiences in the classroom, favors a more solid and realistic learning.

Also, when working on the production of texts, the teacher asked the students to tell facts that occurred in their neighborhood, in their daily lives. It invoked notorious historical and geographical events so that the student could produce texts based on their own experiences and the experiences of their families.

Through this strategy, she managed to make the students break through the barrier of fear and manage to write, making the logical chain of ideas. As students progressed in writing, she introduced formal aspects of the Portuguese language and students learned with ease (Pereira & Akaichi, 2013, p. 8).

Understanding the concept of interdisciplinarity and observing that its practice contributes to more promising results for the teaching-learning process, we get to the second term hereby discussed: metacognition.

Metacognition was a term defined by the American psychologist John H. Flavell in the 1970s, a specialist in cognitive development for children and, through studies on memory, perceived cognition about cognition, that is, the self-regulation of knowledge of the individual himself.

His work on memory, learning strategies, the function of recall, training in reflective reading, and developing the ability to spot reading errors were responsible for the development of metacognition theory (Portilho, 2012, p. 183).

Although the term metacognition comes from psychology, its applicability is well seen in the context of the teaching-learning process. “Metacognition is a pedagogical rather than a psychological concept” (Anne-Marie, in Grangeat, 1999, p. 56).

Since studies on metacognition are recent and originated from psychology, it is gradually confirmed in other areas of knowledge, especially in teaching, varying the construct according to the researcher's thinking. “It is a broad term, used to describe different aspects of the knowledge we build about how we perceive, remember, think and act. An ability to know about what we know” (Peixoto, 2007, pp. 69-70).

In the internalization of knowledge, “the essence of the metacognitive process seems to be in the very concept of self, that is, in the capacity of human beings to be aware of their actions and thoughts” (Jou, 2006, p. 177).

Observing the applicability of the term in the teaching-learning process for students' motivation, “[...] it is assumed that the practice of metacognition leads to an improvement in cognitive and motivational activity and, therefore, to a potentialization of the learning process” (Ribeiro, 2003, p. 110).

Under the aspect of students' awareness, “[...] metacognition is all the movement that the person performs to become aware and control their cognitive processes” (Portilho, 2012, p. 183).

Metacognition refers to a person's ability to predict their own performance on various tasks (for example, the extent to which they are able to remember various stimuli) and to monitor their current levels of mastery and understanding (Bransford, 2007, p. 30).

From the perspective of the practice of metacognition for students' stimulation and reflection, “[...] certainly, teaching should encourage people to stop, reflect on their own way of being, thinking, acting and interacting, as well as inviting her consciously to change when it is necessary to improve her learning” (Portilho, 2011, pp. 105-106).

It is likely that the academy needs to rediscover the means that favor better learning for students, teach them to learn to learn, and perhaps the adoption of the metacognition process is a path to new horizons, since their outcomes showcase a better learning of students.

Under the context of learning to learn, “[...] metacognition can, then, be seen as the key ability on which learning depends, certainly the most important: learning to learn, which sometimes has not been contemplated by the school” (Ribeiro, 2003, p. 115).

Complementing the meaning of the metacognition process on actions in the teaching-learning process, its results are significant, which are not only regulated but also multiplied in many ways. “This idea of reflexive regulation aims to establish lasting learning that incessantly gives the pleasure of sharing knowledge better” (Grangeat, 1999, p. 170).

Theorizing is not enough but applying the concept, since, “[...] it is clear, therefore, that, when making use of metacognition, the subject becomes a spectator of his own ways of thinking and of the strategies he employs. To solve problems, seeking to identify how to improve them” (Davis, 2005, pp. 211-212).

For a better learning process in the context of developing students skills, “[...] metacognition is related to strategies used by individuals to monitor, test, order and control their cognitive abilities in individual efforts to learn” (Peixoto, 2007, p. 70).

An important and relevant aspect for better student learning is their cognitive base, their life history, because “[...] learning is understood as the process through which meaning is removed from experience based on prior knowledge that the adult himself possesses” (Barros, 2011, p. 52).

Lastly, we reach to the third pillar: andragogy.

What does this mean in the teaching-learning process for adults?

At the beginning of the 20th century, shortly after the end of the First World War, the scientific academy awakened to the study of different conceptions about the teaching process for children and adults, which have peculiar characteristics.

Eduard C. Lindeman was the American precursor of studies on adult learning. Publishing the book “The Meaning of Adult Education” (In Knowles, 1984) in 1926.

Later on, in the early 1970s, his ideas were retrieved by Malcom Knowles who published the book “The Adult

Learner: A Neglected Species” about adult education. Adults, in which he describes a theory for adult learning called andragogy.

Five key assumptions proposed by Lindeman have formed the cornerstones of modern adult learning theory.

- 1- Adults are motivated to learn as the experience needs and interests that learning will satisfy; therefore, these are the appropriate starting points for organizing adult learning activities.
- 2- Adults’ orientation to learning is life-centered, therefore, the appropriate units for organizing adult learning are life situations, not subjects.
- 3- Experience is the richest resource for adults’ learning; therefore, the core methodology of adult education is the analysis of experience.
- 4- Adults have a deep need to be self-directing; therefore, the role of the teacher is to engage in a process of mutual inquiry with them rather than to transmit his or her knowledge to them and then evaluate their conformity to it.
- 5- Individual differences among people increase with age; therefore, adult education must make optimal provision for differences in style, time, place, and pace of learning.

In the context of the methodological process of teaching children and adults, the differences are evident in the terms pedagogy and andragogy, whose origins are different.

Thus, while pedagogy was defined as “the art and science of teaching children”, since this word derives from the Greek words *paid* (meaning child) and *agogus* (meaning leader of); andragogy is conceptualized as the art and science of facilitating adult learning, derived from the Greek words *anēr* with the conjugation *andr-* (meaning Man, not boy or adult) (Nogueira, 2004, p. 3).

Hence, until recently, the teaching process was common for all people under a model known as the pedagogical method. “[...] the pedagogical model was applied both to teaching children and to adults, indiscriminately” (DeAquino, 2007, p. 11).

Nowadays, children and adults education have different connotations. While pedagogy is a practice aimed at children, andragogy is directed to adults.

It is noticed that, even in the face of so many transformations in human life, traditional education systems continue to be structured as if the same pedagogy used for children should be applied to adults. However, adult education already has a body of knowledge based on principles, which can guide the educational process differently from traditional early childhood education (Vogt, 2005, p. 196).

In the learning environment, differences are presented due to the peculiarities between the child and the adult.

‘Pedagogy’ literally means the art and science of educating children. More precisely, pedagogy represents teacher-centered education. In the pedagogical model of learning, teachers take full responsibility for making decisions about what will be learned, how and when it will happen. This science is based on the assumption that students or apprentices are not yet mature enough to prepare for life and make the right decisions and, therefore, should only learn what is decided and taught by teachers. [...] This was capable of hindering some characteristics present in many adults, such as independence and responsibility for their own actions, since adults, in large part, are motivated to learn by the opportunity to better solve the problems that arise in their lives and, because of this, want to control the content of learning (DeAquino, 2007, pp. 10-11).

The pedagogical teaching process, which places teachers at the center of pre-established disciplines and students as supporting elements, differs from the andragogical teaching process, which presents itself in a completely reverse way, because, “in conventional education, a student is expected to conform to an established curriculum; in adult education, the curriculum is built around the needs and interests of the learner” (Noffs, 2011, p. 285).

When andragogy is present in a teaching-learning process for adults, the centerpiece of this process must be the students and give them full attention, leaving the teacher only as a mediator of the actions so that everything goes towards the desired objectives.

In this context, there are various scenarios to observe, such as the climate of the teacher-student relationship, where everyone's mindset must be established in a pleasant way among all participants, because “the educational environment that can lead to a more successful learning is characterized by its informality, comfort, safety, respect and trust” (Nogueira, 2004, p. 8).

Under the context of mutual trust, “the educator must demonstrate that he believes in the ability of students to learn” (DeAquino, 2007, p. 20).

However, the common panorama found in the teaching-learning process places teachers on one side and students on the other, as opposed to what andragogy proposes. Since both individuals have some knowledge, they must be seen as on the same side, partnering to intellectual growth towards a prime objective, not only for the student's learning, but also for the teacher's, in which, even different from each other due to the formal condition of the process, as adults, they are always capable of learning more, therefore, "the learning facilitator must assume two basic assumptions in adult education as true: adults are very different from each other and adults are capable of learning" (Nogueira, 2004, p. 14). The pedagogical model in the teaching-learning process is the best known, not only because it is applied in an integral way to everyone, from the child to the most adult, but also because it has existed for a longer time. However, the andragogical model still moves at a slow pace, requiring more dissemination of its principles, as well as more research, especially regarding its applicability, since its practice is even less known.

In this way, the global purposes for adult education, as well as andragogy, need to be more widespread in academia and society in general, to encourage the production of knowledge in the area and the participation of the adult population in the learning locus. What can be seen is that, in practice, there are few examples of educational actions with adults based on andragogical principles and methods, but they are not identified or recognized as such (Vogt, 2005, p. 210).

An important and relevant aspect for the adult teaching process is the preparation of professionals who will deal with adult learners, whose reality to lack of opportunities will last for a long time. "[...] therefore, we consider the trainers' lack of preparation to deal with the different life and learning situations of adults, a weighty factor in their educational style" (Fernandes, 2012, p. 51).

In summary, the moment of learning for each adult student can happen through different pathways and methods, and it is up to the teacher to be attentive to the conduction of knowledge throughout all possible experiences available, either practical or theoretical.

Andragogy, however, although not yet widespread for various reasons and lacking scientific studies, has demonstrated how much more efficient it is in relation to the traditional pedagogical model applied to the same level of students. "[...] thus, and in view of the above, we consider that andragogy constitutes a model of adult education, clearly more suitable for these students than traditional pedagogy" (Nogueira, 2004, p. 19).

2.1. Integrating concepts into adult education

In a brief analysis of the concepts observed by several authors for the context of adult education, we have the following:

It is understood that the practice of interdisciplinarity is a well-known and appropriate pillar for any area of knowledge when, at the time of the teaching-learning process, the classroom. From the point of view of several authors, the concept of metacognition is presented in different terms. However, they all converge to a single conceptual focus, whereby it tries to make students work on their own cognitive, that is, stimulating them to think, seek, reflect, compare, analyze, reason, etc., turning them into active students. Although this pillar in adult education is not yet universally applied, it is easy to implement and practice.

As for the concept of andragogy, even though in the view of various authors this pillar is presented through different approaches, they all converge to the assumptions that have defined this concept as being appropriate for adults and, in the same way that it is not so well known and much less applied, it is the most suitable way for adult education and easy to be deployed and applied.

Therefore, it is noticed that the three analyzed concepts are applicable for adult education, and under a new methodological vision for the teaching-learning process, they can probably be integrated.

Hence, a model called IMAI emerges, that is, a method specifically designed for the adult teaching-learning process, whose acronym is presented by the initials of each of the three pillars and integrated: Interdisciplinarity, Metacognition Andragogy Integrated.

This method is not only little known, but quite unknown because it emerged from studies in 2017 and published in 2020.

This method, in addition to being specific for adult education, is applicable to any area of knowledge, such as Medical Science, Engineering, Philosophy, Arts, Pedagogy, Law, Economics, Administration, Religion, Military, and so on. In short, any field of study and with significant results with students who went through such a methodological process, dealing, however, with a change of paradigm.

A paradigm shift is complicated, however, according to the results that were presented in a significant way, the meaning for the teaching-learning process in adult education lies in a meaning that is expressed in more qualified students for society, for the world of work, and for them even that is the most important in the context (Albuquerque Netto, 2022, pp. 179-180).

Not only is IMAI applicable to any area of knowledge, but also possible to apply to adult literacy, as it was recently proven that an illiterate adult using this method, together with some instruments created for literacy work, can learn to read in less than thirty days.

Yes. In less than thirty days an adult will be able to learn to read, or not, because the adult, and the very adult, that is, the elderly, has many different peculiarities and specificities, and it does not mean to say that each and every adult will learn to read in that time.

A teaching method in a teaching-learning process depends on many contexts, which are the characteristics of a people, a region, in short, a culture. How long each individual will be literate, whether in hours or days, or months, is relative, since the progress until the moment of being literate through the applied methods, the IMAI, the MSS together with instruments that facilitate the understanding of the construction of the words, depends on intrinsic factors of each adult learner (Albuquerque Netto, 2023, pp. 167-168).

Furthermore, using the IMAI method, which has already been proven to be effective in teaching adults to read and write, even with elderly students, it will not only be possible to reduce the number of illiterate adults in the population, but also to reduce public expenditure for this purpose.

For those who have already gone through such an experience, it is exciting to observe in a short period of time the joy, the happiness of an illiterate adult when they manage to perceive through words the meaning they convey.

The vision of an illiterate adult, when already literate, is when he not only sees, but, with the same eyes as before, sees another world through letters, and with a different look he manages to see the magical universe hidden in words, in the texts (Albuquerque Netto, 2023, p. 168).

3. CONCLUSION

Therefore, the proof of the IMAI method for several areas of knowledge, more specifically for adult literacy, is a demonstration of this possibility that presents itself under a paradigm shift which poses a great challenge for the Science of Education to apply it in all spheres of adult education, including adult literacy in a short time, which was the motivation for this article. Hence, the purpose of this article is to instigate the Science of Education and to seek improvement in adult education through research on the three terms, in a collectively, integrated, and applied way, when one realizes that they are conducive to offering and resulting in a significant improvement in the teaching-learning process in adult education in a larger way.

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