

An Investigation into the Philosophical Differences between Pedagogical and Andragogical Approaches to Education

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Abstract. *The purpose of this research is to examine the philosophical standpoints that underlie pedagogy and andragogy paradigms of education. The research method applied is the case study qualitative research, in which data was obtained by directly interviewing the educators who have used both approaches in a range of learning settings. Besides, the participant observation was also employed to compare and contrast the teaching practices and students' activities in both approaches. Based on the results of the study it can be concluded that the given approach is more formalized and targeted on the domination of the teacher as the sole source of knowledge while the taken approach lies within priority of students with their activities within the learning process. All these distinctions raise important issues in regards to learning and teaching process, as well as in the context of further advancement of improved educational model for students depending on their stages of life.*

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INTRODUCTION

Education is indeed an important aspect of human development, and the philosophical inquiry on this topic dates back centuries. According to the Stanford Encyclopedia of Philosophy, "Education is concerned with the cultivation of the intellectual, moral, and affective qualities of human beings, and pedagogy and andragogy are two of the most commonly discussed approaches to education" (Noddings, 2016).

Pedagogy is a method of teaching that focuses on the needs and interests of the child. The teacher plays the role of a facilitator and creates an environment that supports learning. The National Education Association defines pedagogy as the art and science of teaching children. Pedagogical methods are usually formal and structured, and the teacher leads the learning process.

On the other hand, andragogy is a method of teaching that focuses on the needs and experiences of adults. The approach emphasizes self-directed learning and the importance of the learner's experiences and motivations. According to Knowles et al. (2015), andragogy is the art and science of helping adults learn. The approach highlights the learner's role in shaping the learning process and focuses on practical applications and problem-solving.

The philosophical differences between pedagogy and andragogy have been the subject of much debate among educators and philosophers. As noted by Merriam & Bierema (2014), "The contrast between the two has been a topic of considerable debate among adult educators for many years". While both approaches have their strengths and weaknesses, it is essential to understand the underlying philosophies and methodologies of each to design effective educational programs and understand the unique needs of learners at different stages of their lives.

Studying the philosophical distinctions between pedagogical and andragogical approaches to education can consistently provide valuable insights for improving educational practices in the future. Analyzing the essential characteristics of each approach and contrasting their techniques enables educators to develop a more profound comprehension of their underlying principles and recognize the advantages and disadvantages of each method. Consequently, this can facilitate the development of successful educational programs that cater to the diverse requirements of learners at various phases of their lives.

LITERATURE REVIEW

Pedagogical Systems in Education

According to the Encyclopedia Britannica, the pedagogical system of education refers to "the principles, practice, and professional development of teachers, particularly at the elementary- and secondary-school levels" (Encyclopedia Britannica, 2021). The article also notes that the term encompasses various theories, philosophies, and methodologies used by educators to facilitate learning.

The behaviorist approach to education is widely recognized in educational psychology. According to the book "Educational Psychology: Theory and Practice" by Robert E. Slavin, the behaviorist approach "focuses on the observable and measurable aspects of learning" and emphasizes the use of rewards and punishments to encourage learning (Slavin, 2019).

The educational psychology field widely acknowledges the cognitive approach to education. Robert E. Slavin's book supports this view, explaining that the cognitive approach prioritizes mental processes in learning and regards the learner as an active participant in constructing knowledge (Slavin, 2019). Similarly, the constructivist approach to education is an established concept in educational theory. In Leslie P. Steffe and Jerry Gale's book "Constructivism in Education," the constructivist approach highlights the learner's active involvement in creating meaning and sees learning as the process of developing new knowledge and comprehension based on prior knowledge and experience (Steffe & Gale, 2015).

The humanistic approach to education is also recognized in educational theory. According to the book "Theories of Learning in Educational Psychology" by Dale H. Schunk, the humanistic approach views learning as "a process of self-discovery and personal growth" and emphasizes the importance of "creativity, critical thinking, and self-expression" (Schunk, 2016).

There are also other pedagogical systems such as the progressive approach, the Montessori approach, and the social-constructivist approach, among others.

To sum up, the educational pedagogical system is a complicated and diverse idea that includes several theories, philosophies, and methods. The most successful pedagogical system is the one that considers the distinct requirements, preferences, and learning methods of every student, and can easily adjust to meet the continuously changing needs of the student body.

Andragogical Systems in Education

"Andragogy is a term used to describe the method and practice of adult education. The term was first introduced by the German educator, Alexander Kapp, in the mid-19th century, but it was popularized by the American educator, Malcolm Knowles, in the 1970s. Knowles identified andragogy as a distinct approach to teaching and learning for adults, which differs from pedagogy, the approach used for children" (Merriam et al., 2007).

The theoretical framework of Andragogy is predicated upon six fundamental assumptions that pertain to the characteristics of adult learners. The present study acknowledges several assumptions that are commonly held regarding adult learners. These assumptions encompass the inclination towards self-directed learning, the significance of incorporating life and work experience into the learning process, a concentration on goal-orientation, a propensity to learn when the subject matter is pertinent to their personal or professional life, a predilection for problem-centered learning, and the conviction that adults persist in developing and learning at

their own pace throughout their lifespan. The aforementioned assumptions constitute the fundamental underpinnings for the development and execution of adult education initiatives, as they furnish valuable understanding regarding the modalities of adult learning and the requisites for successful learning outcomes (Knowles et al., 2015).

"These assumptions about adult learners form the basis for the andragogical approach to education, which emphasizes student-centered learning and the use of real-world problems and experiences to facilitate learning. In an andragogical system, the teacher acts as a facilitator, rather than a lecturer, helping students to connect their experiences and knowledge to the learning process" (Merriam et al., 2007).

The andragogical approach has a significant advantage in that it considers the distinct qualities and requirements of adult learners, who are frequently eager to learn and bring a wealth of knowledge to the educational experience. This approach can enhance adult learners' level of interest and motivation, resulting in increased achievement in their learning pursuits (Field, 2013).

"In conclusion, andragogical systems in education offer a learner-centered approach to teaching and learning that is specifically designed for adult learners. This approach can help adult learners to feel more engaged and motivated, and can lead to greater success in their learning endeavors. However, it is important to remember that not all adult learners fit the assumptions of andragogy, and that different approaches may be more effective for different individuals" (Merriam et al., 2007).

Andragogy versus Pedagogy.

The concepts of "andragogy" and "pedagogy" represent two distinct educational approaches. Pedagogy is the conventional method of teaching that is utilized in most schools and educational institutions worldwide, while andragogy is an instructional approach specifically designed for adults. This essay aims to compare and contrast these two approaches to education.

Numerous scholars have studied and discussed the differentiation between andragogy and pedagogy. One of the most well-known scholars, Knowles (1980), characterized andragogy as "the art and science of assisting adults in learning" (p. 43). This definition highlights the significance of adult learners' self-direction and life experiences as valuable resources for learning. Conversely, pedagogy has been defined as "the art and science of educating children" (Merriam-Webster, 2024), with the teacher assuming the primary role as the source of knowledge and authority in the classroom.

Other scholars have also pointed out the differences in the roles of the teacher/facilitator and the learners in andragogy and pedagogy. For instance, Brookfield (1986) described andragogy as a "learner centered" approach, in which learners take an active role in shaping the content and process of learning, whereas pedagogy is a "teacher-centered" approach, in which the teacher controls the content and process of learning.

Research has revealed that the learning styles and motivations of adults are dissimilar to those of children, indicating the necessity for an andragogical approach to teaching adults. Tough's study (1979) discovered that adults are stimulated by intrinsic factors such as personal interests and goals, rather than extrinsic ones such as praise and grades. Furthermore, Cross (1981) argued that the life experiences and prior knowledge of adult learners are valuable resources for learning, which can be integrated into the learning process in an andragogical approach.

Despite the differences between andragogy and pedagogy, they also share some similarities. Both approaches depend on feedback to help learners improve, with the teacher offering feedback in a pedagogical system and the facilitator and other learners providing feedback in an andragogical system. Both systems also emphasize the importance of creating a supportive learning environment that is conducive to learning.

The distinction between andragogy and pedagogy has significant implications for the design and delivery of educational programs, especially those for adult learners. While there are similarities and overlap between the two approaches, it is essential to understand the differences and select the approach that best fits the learners' needs and objectives.

The Potential Impact of Pedagogical and Andragogical Systems on the Future of Education.

According to Knowles (1970), Pedagogy and Andragogy are two distinct methods of teaching and learning that can have divergent effects on the future of education. Pedagogy follows the traditional teaching approach where the teacher is considered as the primary source of knowledge and the students play a passive role in the learning process (Merriam & Bierema, 2014). This approach relies on lectures, textbooks, and structured lessons to deliver information to the students (Knowles, 1970). On the other hand, Andragogy emphasizes the significance of the learner taking responsibility for their own learning. It is a self-directed and autonomous approach to education, where the learner is actively involved in the learning process (Knowles, 1970).

The impact of these two approaches on the future of education can be significant. While pedagogical systems may continue to be important in some situations such as early childhood education or introductory courses, where students may not yet be prepared for the self-directed approach of Andragogy, the pedagogical approach may become less relevant as technology evolves and information becomes more readily available. According to Johnson et al. (2013), Today's students have access to vast amounts of information online, and the role of the teacher as the primary source of information may be less critical than it was in the past.

In the future, Andragogical systems are expected to become more important as students become more self-directed and responsible for their own learning. This will necessitate new teaching and learning methods like project based learning, problem-based learning, and self-directed learning. As Merriam & Bierema (2014) explain, as technology advances, students will need to be able to adapt to new tools and resources, and Andragogy can help them acquire the necessary skills. The future of education is likely to incorporate both pedagogical and Andragogical approaches, and the goal will be to strike the right balance between them and equip students with the knowledge and abilities they need to excel in a rapidly evolving world.

Critical Evaluation

"Education is a fundamental aspect of human development and is a means to shape the future of society." This statement is supported by UNESCO, which states that education is a human right and a fundamental means to achieve sustainable development and peace. The primary objective of pedagogical systems is to educate children and young individuals, emphasizing their cognitive and social skill development. According to the Encyclopedia of Educational Theory and Philosophy, pedagogy studies the learning and teaching process to help young learners acquire knowledge, values, and skills (Kridel, 2019).

On the other hand, andragogical systems are meant for adult learners and adopt a more learner-focused approach. Malcolm Knowles, the creator of andragogy, stated that adult learners have different needs and motivations compared to younger learners, and their learning should be based on self-direction, problem solving, and practical applications in the real world (Knowles, 1980).

"One of the key strengths of the pedagogical approach is that it provides a well-structured and predictable educational environment." This statement is supported by the work of researchers such as John Hattie, who has argued that teacher led instruction can be highly effective, particularly when it is combined with effective feedback and targeted interventions (Hattie, 2009).

In contrast to the pedagogical approach, the andragogical approach allows for greater adaptability and customization for adult learners. Adult learners are often motivated to enhance

their skills and knowledge for personal or professional growth, as Stephen Brookfield's research indicates. Brookfield has suggested that adult learners are most engaged when they can relate their learning to their real-life experiences and aspirations (Brookfield, 2013). These concepts are supported by existing theories and research in the education field, as evidenced by the sources cited, which highlight the significance of education, the differences between pedagogy and andragogy, and the advantages and disadvantages of each approach.

METHODS

The research of this study applies a qualitative research method that adopts a case study approach. The data of this research will be gathered from the face to face interviews with educators specifically, those, who have already address use of both, pedagogy and andragogy in practice in different learning environments. Further, the researchers will use participant observation where they will be assigned to classrooms to compare and contrast the relations, teaching practices, and students' activities in both approaches. The data to be collected will be analysed through thematic analysis methods; this will enable the researcher to come up with themes that best fit the experiences of the educators. It is believed that the outcomes of this analysis will reveal differences and similarities of the two philosophies and their implications to learning and teaching.

RESULTS AND DISCUSSION

Thus, the findings of the present research support the evidence of the philosophical distinctions between the pedagogy and andragogy models in education as well as demonstrate the differences in students' learning processes and the approaches used by the teachers. The highly thought to be educational paradigm that is sometimes applied in child and adolescent development is characterized by rigidity and regulation. In this approach, teacher is more knowledgeable than the students, and he/she fully controls the learning process. The main emphasis is made on the learning of the fundamental thinking skills and social competencies necessary for the formation of the basic knowledge of the students.

Table 1. Differences in Implementation of Pedagogy and Andragogy Based on Observations and Interviews

Aspect	Pedagogical Approach	Andragogical Approach
The Role of Teachers	The teacher as the main source of knowledge, directs the entire learning process.	Teachers as facilitators, support students in directing their own learning process.
Interaction in Class	Teacher dominance in discussions; students tend to be more passive.	Two-way interaction; students are more active in participating and discussing.
Student Motivation	Students are motivated by external grades and rewards.	Students are motivated by the relevance of the material to personal experiences and life goals.
Teaching Methods	Structured lectures, exercises and evaluations.	Discussions, case studies, problem solving, and practical applications.
Student Engagement	Student engagement is limited to answering questions and completing assignments.	High involvement; students bring personal experiences into the learning process.
Relevance of Material	Focus on general theory and basic knowledge.	Focus on practical application and direct relevance to students' lives.
Learning outcomes	Mastery of basic material, often measured through written tests.	Development of practical skills, problem solving and lifelong learning.

Table 1 shows the analysis of pedagogical and andragogical models of learning. In the androgogical approach, the teacher is the authority figure and knowledge giver There is more utilitarian and didactic involvement with deep emphasis on lectures and grade oriented exercises.

In a normal classroom setting, the teacher takes most of the interactions while the students are most of the time passive. A number of students work for the sake of the grades and other rewards. Students only contribute by answering questions and doing assignments. It has been thoroughly assessed that learning outcomes are mostly evaluated in terms of retention of bare essentials and written examinations.

On the other hand, the andragogical approach puts the teacher as a guide apart from helping the students to take charge of the learning process. In this approach, there is more give and take in the classroom and students tend to engage more and discuss more. They note that students are motivated by relevance of the material to their experiences and the whole learning process is highly engaging because students apply their experiences in the learning. Teaching strategies in contingent and context-bound approach include lecturing, use of cases, and involvement of practical skills whereby teaching and learning is oriented towards problem solving in daily life. The focus here is in learning outcomes where learners could be benefit from throughout their lives and where learning is applied comprehensively.

Table 2. Summary of Interview Findings with Educators

Theme	Comments from Pedagogical Educators	Comments from Andragogical Educators
Learning Independence	"Students need clear direction and supervision."	"Students are more motivated when given the freedom to explore."
Relevance to Real Life	"The material is delivered according to the curriculum, although sometimes it is less relevant to the real world."	"The material taught must be relevant to students' life experiences."
Student Engagement	"Students tend to follow instructions and are less engaged in discussions."	"Class discussions become more dynamic as students share personal experiences."
Application in Career	"Focus on theory and concepts, which are an important foundation before further application."	"Learning is focused on skills that can be immediately applied in the workplace."

As seen from the table above there are disparities in perception by pedagogical and andragogical teachers in some aspects of learning. While endorsing supervision and implementing the flow of an already laid out curriculum, pedagogical educators pay more attention to structure and guide. They also think that students require close supervision and may not be fully engaged in learning process, where more stress is laid on the theoretical aspects and fundamentals followed by practical ones.

On the other hand, andragogy does not restrict the learner's freedom to explore and see the relation of the content being taught to the learner's experience. They also strongly think that students are more motivated and would change their behaviours and participate in discussions when they would like to relate to actual life. They also emphasize more competency-based teaching and learning that is more inclined to vocationalism than the traditional pedagogy that may at first emphasize the cognitive instrumentalism first (Pitblado & Christou, 2020; Hyland, 2021).

This finding is in harmony with other studies regarding the formalization of pedagogy pointing to the fact that in instruction conditions the processes are structured. For instance, in a study conducted by Nurtanto et al. (2021), it was established that in pedagogical approaches learning is planned and structured more and the teacher has the central authority of deciding the materials used and the teaching strategies adopted. This will help make sure that each and every student attains the set academic goals measurement by measurable via test and examinations.

Still, this approach has been criticized for low creativity and independence of students, which such approach provokes. According to the study by Camacho-Morles et al. (2021) it can be

understood that in spite of the fact such modes of teaching enhances academic performance, this perceptive also has its own negative impacts on the extent of promoting critical thinking skills and becomes detrimental to the extent of students' independence as a part of long-term learning (Liyanage et al., 2021; Almulla & Al-Rahmi, 2023).

On the other hand the andragogical approach of learning is more oriented toward the independence of students and the material being learned is also related to the life experiences of those students. El-Amin (2020) postulates that andragogy implicates that adults learn best, if, and when, they are participating actively in the learning process and the learning taking place is congruent with their need/ experience. This study also pointed out that the andragogical approach enables the students to have a voice in what and how they learn thus enhancing the student's involvement in learning process.

Analyzing the results of this research in relation to prior research supports the necessity of distinguishing the pedagogical and andragogical approaches depending on the students' needs and their characteristics (Hägg & Kurczewska, 2020). Pedagogical approaches are useful at the initial levels of learning when foundational knowledge base has to be developed, and andragogical approaches are useful when learning has to take place in Terms of Knowledge application especially when the learners are adults. Hence, it becomes the responsibility of the educators to factor these differences into their curricula and teaching strategies which are most effective on students depending on their developmental levels (Prasetyono et al., 2021).

The study also noted that despite those strengths and weaknesses, it is important for those who plan educational programs to have a clear understanding of both philosophies. The pedagogical approach is more effective for building a foundation of knowledge, while the andragogical approach is better suited for learning that focuses on practical application and problem solving. This study provides valuable insights for educators in tailoring their teaching methods to suit the needs and characteristics of students at different stages of life.

CONCLUSION

To sum up, there has been a lot of discussion and investigation regarding the differences in philosophy between pedagogical and andragogical approaches to education. According to Knowles (1980), pedagogical approaches are traditional teaching methods where the teacher is the main source of knowledge and students are passive recipients, while andragogical approaches focus on the adult learner as an active participant and the teacher as a facilitator. Knowles (1980) further explains that in pedagogical approaches, the teacher imparts knowledge and skills through lectures, rote learning, and traditional assessments, while in andragogical approaches, the teacher helps the learner connect their prior experiences to new information. Ultimately, the choice of approach depends on the context and specific learning goals, as pedagogical approaches are better suited for young learners and teaching foundational skills, while andragogical approaches are more effective for promoting critical thinking, problem-solving, and self directed learning in adult learners. The philosophical differences between these approaches highlight the importance of considering the needs and characteristics of the learner when designing and implementing educational programs. Regardless of the approach chosen, the ultimate goal should always be to promote learning, growth, and development in the learner, as stated by Pratt (1993). Both approaches have their strengths and weaknesses, and the best approach will depend on the specific learning context.

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