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Assessing the Alignment of Teaching Strategies with Respect to Malcolm Knowles' Model of Andragogy for Prospective Teachers

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Abstract

The current study aimed to explore the teaching strategies employed by prospective teachers in relation to Malcolm Knowles' Andragogical Assumptions. This study was quantitative in nature. Researchers collected the data using a self-developed questionnaire that used a five-point Likert scale. The sample of the study consisted of 320 students purposively selected, 08 universities in southern Punjab were included. Researchers selected students pursuing B.Ed, B.Ed, and BS(education). The data were analyzed through SPSS. The result shows that teaching strategies generally align with andragogical principles. Teachers exhibited a strong alignment with principles such as motivation to learn and readiness to learn. Gender-based analysis revealed no significant differences in responses between male and female participants. Students enrolled in B.Ed programs reported higher alignment scores compared to those in B.Ed and BS (education) programs. It was recommended a closer integration of andragogical principles into teaching practices to enhance the effectiveness of teacher preparation programs.

Keywords: Prospective Teacher, Melcolm Knowles' Model of Andragogy, self-directedness, Self-Experience, Readiness to Learn, Orientation to Learning, Motivation to Learn, Need to Know

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Contents

- [Introduction](#)
- [Aims and Objectives](#)
- [Research Methodology](#)
- [Results and Discussions](#)
- [Discussion](#)
- [Conclusions](#)
- [References](#)

Title

**Assessing the Alignment of Teaching Strategies with Respect
to Malcolm Knowles' Model of Andragogy for Prospective
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Abstract

The current study aimed to explore the teaching strategies employed by prospective teachers in relation to Malcolm Knowles' Andragogical Assumptions. This study was quantitative in nature. Researchers collected the data using a self-developed questionnaire that used a five-point Likert scale. The sample of the study consisted of 320 students purposively selected, 08 universities in southern Punjab were included. Researchers selected students pursuing B.Ed, B.Ed, and BS(education). The data were analyzed through SPSS. The result shows that teaching strategies generally align with andragogical principles. Teachers exhibited a strong alignment with principles such as motivation to learn and readiness to learn. Gender-based analysis revealed no significant differences in responses between male and female participants. Students enrolled in B.Ed programs reported higher alignment scores compared to those in B.Ed and BS (education) programs. It was recommended a closer integration of andragogical principles into teaching practices to enhance the effectiveness of teacher preparation programs.

Keywords: [Prospective Teacher](#), [Melcolm Knowles' Model of Andragogy](#), [self-directedness](#), [Self-Experience](#), [Readiness to Learn](#), [Orientation to Learning](#), [Motivation-to Learn](#), [Need to Know](#)

Introduction

In the dynamic landscape of education, the efficacy of teaching strategies plays a crucial role in shaping the learning

experiences of students, particularly in the context of educating prospective teachers. The field of adult education has witnessed a proliferation of diverse teaching approaches, each aiming to enhance the learning process and outcomes



for mature students (Bobo, [2011](#)). These tactics include several methodologies, such as problem-based learning, learning together, hands-on instruction, and reflective practice. Hamdy ([2015](#)) highlights that these methods are created to stimulate the active participation of students in the learning process, cultivate analytical skills, encourage the application of acquired skills in the real world, and provide lifelong professional development. Adult learners possess their own unique challenges and require educational experiences catered to them due to their previous life experiences, intrinsic motivators, and independence. Recognizing this has contributed to a shift in the paradigm of adult education, away from conventional pedagogical models towards learner-centric pedagogy (Knowles, [2022](#)). It is within this context that Malcolm Knowles' theory of andragogy gains significant relevance. Andragogy, defined as the art and science of helping adults learn, provides a comprehensive framework for understanding and addressing the specific learning requirements of adult students, including prospective teachers (Loeng, [2018](#)).

The evidential community of practice is creating some breakthroughs that require us to adapt, so we must keep the evidence literally close. This study aims to examine the overlap of traditional pedagogy and Knowles' theory of adult learning specifically concerning future teacher education. Researchers hope to have conversations regarding teacher prep and professional development by looking closely at the relationship between context and knowledge which has been identified as needing more targeted research (Anderson & Boutelier, [2021](#)). Andragogical Model Malcolm Knowles has articulated six key differences between andragogy and typical pedagogical assumptions which form the basis for his modern model of adult learning. These principles have changed throughout the years, based on timeless research by Knowles himself and contributions from others (Henschke, [2016](#); Nallaluthan et al., [2023](#)). There are six principles: need to know, self-concept of the learner, prior experience, readiness to learn, orientation to learning, and motivation. All of these principles help to give an overall perspective on how adults learn and can guide the design of effective teaching strategies (Shabnam, [2019](#)).

The first principle, adult learners must know why they should learn something, before embarking on any learning journey. One of the principles is that relevance and context must be established in adult education programs (Abdullah et al., [2021](#)). Second, the self-concept of the learner becomes

more autonomous with age thus learning is increasingly self-directed. Such a change requires learner-centered and autonomous-oriented pedagogies autonomy (Roessger et al., [2020](#)). The third principle of prior experience of the learner indicates that adults bring enormous knowledge to the learning process which becomes a rich source for learning. The principal urges teachers to use learners' experiences within the learning process giving life to a more individualized and relevant educational context (Bucura, [2021](#)). The fourth principle, readiness to learn, states adults become ready to learn things they need to know in order to cope effectively with real-life situations. Such an idea reinforces the necessity of relevant educational provision according to other roles and challenges learners have in their lives in their own current lives (Tønseth, [2015](#)). The fifth principle is an orientation to learning for adults are motivated to learn as they experience the need or interest in learning the information or skills that will help them perform tasks or deal with problems in their life situations. This finding underlines the importance of problem-based and application-oriented learning methods (Nallaluthan et al., [2023](#)). The sixth principle, motivation to learn, recognizes that while adults respond to external motivators, their most potent motivators are internal pressures. This understanding informs strategies that tap into learners' intrinsic motivations and personal goals (Shabnam, [2019](#)).

In the context of education, this avoidance becomes the basis for practices that honor adult learners' ability to direct their own learning pathways, draw on life experience and apply prior knowledge and skills, and practice problem-centered learning where what they learn is directly relevant in assisting solve immediate issues. This can be especially helpful for students who are on their way to becoming teachers, as it demonstrates the type of student-centered instruction that they will soon need to deliver in their own classrooms (Benson, [2016](#)). Andragogical principles have been applied to teacher education, contributing not only to an improvement in their learning experience but also their learning outcomes. For example, Skinner ([2017](#)) concluded that implementing these principles in online learning environments aimed at adult learners, such as teacher education programs, resulted in greater engagement and improved outcomes. The overlap of teaching methods and andragogy has been researched across collaboration. As found in a recent study by Roe ([2022](#)), adult learning programs with the incorporation of andragogical principles

can promote more engaged learners and higher levels of learning. Also, for instance, Alam (2021) investigated the practice of andragogy in business education and its implications on students' critical and practical knowledge which resulted in a positive outcome. In teacher education research, the impact of particular pedagogical techniques rooted in androgogy has been explored. For instance, Muduli et al. (2018) Problem-based learning in teacher professional development: its impact on teachers' reflective practice and collaborative skills.

There remains a gap in the literature regarding the comprehensive assessment of teaching strategies for prospective teachers through the lens of Knowles' pedagogical model (Segon et al., 2022). Most studies focus on a single strategy or particular situation and do not provide a comprehensive overview of how different teaching approaches reflect andragogical principles in teacher education programs (Burton, 2014). In response to this gap, we intend to present a detailed theoretical analysis of teaching strategies in light of pedagogical assumptions and theory articulation, emphasizing pre-service instruction (Chan, 2010). The key difficulty with how to employ good adult learning methods when teaching potential teachers is that the orthodoxy of teaching does not easily fit andragogical principles (Chacko, 2018; Mynbayeva et al., 2018). Lennard et al., (2020) found that traditional teacher education programs continue to struggle to fully embody adult learning theories resulting in a disconnect between the ways future teachers are taught and how they are expected to teach (Chekour et al., 2018). No matter the strength of theoretical definitions, this can lead to poor readiness for classrooms and inefficient modeling of effective adult learning principles (Loeng, 2018).

Aims and Objectives

The main goal of this research is to evaluate the degree to which methods used in the training of future teachers align with the Malcolm Knowles pedagogical model. This study seeks to align the principles of andragogy with current teaching practices in order to identify ways to best serve adult learners entering career fields that involve teaching. The academic implications of this research are large for teacher education and adult learning. Such examination of the synergy between teaching methods and important andragogical concepts can inform effective teacher preparation programs. We can draw implications from the findings for curriculum design, instructional methods, and

professional development initiatives to enhance the learning of future teachers. The education sector urgently needs this research development to ensure future learners, who will shape future generations, receive education that aligns with best practices in adult learning. Effective andragogical approaches and teacher education programs can better prepare educators to implement similar strategies in their own classrooms, creating a ripple effect that enhances learning experiences across educational levels. The field of education continues to evolve and the insights gained from this research can contribute to the ongoing refinement of teacher education programs, ultimately benefiting both educators and their future students.

Teaching strategies vary from learner to learner, depending on the level of education. As previously discussed, there are certain assumptions about adult learning that should be taken into account when teaching adults. Here, a question was raised: do adults possess the characteristics of adult learners, or do they still maintain a child-like attitude, requiring guidance at every stage? These assumptions may lead to changes in teaching strategies for adult learners. Prospective teachers are, after all, adult learners. So, this research was to investigate teaching strategies for prospective teachers from the perspectives of the Malcolm Shepherd Knowles model of andragogy. The current study aimed to explore the teaching strategies of prospective teachers through the lens of the Malcolm Shepherd Knowles Model of Andragogy. The study's goals were to (1) find out how prospective teachers felt about using Malcolm Knowles' Andragogy Model to look at how adult learning principles could be used in their teaching and (2) find out how teachers' feelings about adult learning principles affected how well their teaching strategies worked for adult learners in a prospective classroom.

Research Methodology

A quantitative research approach was used to guide an examination of the degree to which teaching practices aimed at preparing prospective teachers aligned with Malcolm Knowles's model of andragogy. Researchers administered a questionnaire developed by researchers on self-cheating attitude health in human use of five-point Likert, from "strongly disagree" to "strongly agree". The questionnaire consisted of items indicating the six basic assumptions included in Knowles' model: self-directedness, self-experience, readiness to learn, orientation to learning,

motivation, and need to know with equal balance weight of each dimension. These dimensions aimed to evaluate the extent to which teaching strategies met the principles of adult learning as articulated by Knowles et al. (2020). The instrument demonstrated content validity based on expert review and pilot testing before full-scale administration. The research sample consisted of 320 purposely sampled students from among eight universities in Southern Punjab, Pakistan. The participants were mainly students pursuing teacher education programs, i.e., B.Ed. (1.5 years), B.Ed. (4 years) and BS (education). Researchers studied 40 students in total from each university 20 male and 20 female. This purposive sampling method was employed by researchers to appropriately select participants with first-hand experience of teacher training programs directly related to the study. The collected data were analyzed by Statistical Package for Social Sciences (SPSS). Researchers calculated descriptive statistics such as frequency, percentage, mean score, and standard deviations to summarize the responses for each dimension of andragogy. Researchers applied correlational analysis to examine relationships among the variables related to adult learning principles. The sample comprised 320 participants with an equal gender distribution, as 50% were male and 50% were female. The age distribution was relatively diverse, with the majority of participants (37.5%) being in the 26-30 age group, followed by 31.25% aged 20-25 years. A smaller proportion of participants were in the 31–35 years (21.88%) and above 35 years (9.38%) age brackets, reflecting a predominantly younger cohort in the teacher education programs. In terms of prior academic backgrounds, 45.3% of

participants enrolled in the B.Ed.-1.5 years program, while 54.7% pursued the B.Ed.-4 years program, demonstrating a balanced distribution of programs. In terms of locality, 50% of participants were from rural areas and the remaining 50% were from urban areas, providing a balanced perspective on how locality may influence teaching strategies. The job status revealed that 62.5 percent of participants were unemployed, whereas 37.5% held some type of employment. Of the employed, a quarter (25%) held teaching roles, while 12.5% held non-teaching positions. The demographic data provided a comprehensive view of the participant composition, with a broad spectrum of ages, educational backgrounds, and professional statuses represented. The analysis shed light on how teaching strategies align with adult learning principles and identified areas for improvement to enhance the preparation of future teachers.

Results and Discussions

This study employed a quantitative research method to assess the alignment of teaching strategies with Malcolm Knowles' Model of Andragogy for prospective teachers. Data were collected through a self-developed questionnaire based on a five-point Likert scale ranging from "strongly disagree" to "strongly agree". Descriptive statistical techniques such as frequency, percentage, mean score, and standard deviation were used to summarize the data. Correlational analysis was applied to examine relationships among the variables related to adult learning principles.

Table 1

Researcher Observations about Teaching Strategies of Prospective Teachers

Statistic	Self-Directedness	Orientation to learn	Readiness to Learn	Need to Know	Self-Experience	Motivation to Learn
Count	16	16	16	16	16	16
Mean	3.98	3.86	4.14	4.20	3.98	4.00
Std	0.36	0.27	0.23	0.13	0.14	0.15
Min	3.50	3.50	3.90	4.00	3.80	3.80
25%	3.80	3.70	4.00	4.10	3.90	3.90
50%	4.00	3.90	4.10	4.20	4.00	4.00
75%	4.10	4.00	4.20	4.30	4.10	4.10
Max	4.50	4.20	4.50	4.40	4.20	4.20

Table 1 presents the descriptive statistics reflecting the researcher's observations about teaching in the context of

Malcolm Knowles' andragogical assumptions. For teachers' teaching strategies, the mean scores across all dimensions

range from 3.86 to 4.20, indicating a generally positive perception of their teaching strategies related to self-directedness, readiness to learn, and motivation to learn. Particularly, the high mean of 4.20 for the need to know suggests that teachers recognize the importance of addressing

students' intrinsic motivations for learning. The relatively low standard deviations indicate consistency in observations about teachers' teaching strategies indicating a shared understanding of these principles among educators.

Table 2

Descriptive Statistics (Students' Perceptions of Teaching Strategies)

Statistic	Self-Directedness	Orientation to learn	Readiness to Learn	Need to Know	Self-Experience	Motivation to Learn
Count	320	320	320	320	320	320
Mean	3.90	3.80	4.02	3.92	3.92	4.05
Std	0.19	0.20	0.21	0.18	0.15	0.17
Min	3.6	3.5	3.7	3.7	3.7	3.8
25%	3.7	3.6	3.9	3.8	3.8	3.9
50%	3.9	3.8	4	3.9	4	4
75%	4.1	3.9	4.2	4.1	4.1	4.2
Max	4.2	4.1	4.3	4.2	4.2	4.3

Table 2 students reported slightly lower mean scores, ranging from 3.8 to 4.06. While students' perceptions also reflect a generally positive view, particularly in readiness to learn (mean of 4.03), the lower mean scores for self-directedness (3.9) and orientation to learn (3.8) may suggest that students feel less empowered in their learning processes. The data

highlights a potential gap between teachers' perceptions and students' experiences, emphasizing the need for educators to align their teaching strategies more closely with fostering self-directed learning and autonomy among students. This gap is crucial for enhancing the effectiveness of prospective teachers' education strategies.

Table 3

Results of Independent Samples t-test

Comparison	Mean	SD	t-value	p-value
Male	4.32	0.58	0.86	0.392
Female	4.28	0.62		
B.Ed (1.5 years)	4.56	0.42	3.42	0.001
B.Ed (4 years)	4.21	0.49		

The results of the independent samples t-test revealed no statistically significant difference in the alignment of teaching strategies with andragogical principles based on gender. Male participants ($M = 4.32$, $SD = 0.58$) and female participants ($M = 4.28$, $SD = 0.62$) demonstrated comparable alignment scores, t value = 0.86, $p = 0.392$. This indicated that gender did not influence perceptions of the alignment of teaching strategies with andragogical principles. Program-specific differences were statistically significant. Students enrolled in the B.Ed (1.5 years) program ($M = 4.56$, $SD = 0.42$) reported significantly higher alignment scores compared to those in

the B.Ed (4 years) program ($M = 4.21$, $SD = 0.49$), t value = 3.42, $p = 0.001$.

Discussion

The findings revealed significant insights into the alignment of teaching strategies for prospective teachers with Malcolm Knowles' model of andragogy. Descriptive statistics demonstrated moderate to high levels of agreement with the implementation of andragogical principles across the six dimensions. The dimensions of "motivation to learn" and "self-directedness" showed the highest mean scores,

suggesting that teaching strategies effectively fostered intrinsic motivation and allowed students autonomy in their learning processes. These results aligned with the assertions of Knowles et al. (2014), who emphasized the importance of learner autonomy and motivation as central to adult learning principles.

On the other hand, the dimension of "orientation to learning" scored comparatively lower, indicating that teaching strategies were less effective in contextualizing learning within real-world problem-solving scenarios. This finding corroborated the challenges highlighted in previous research, which indicated that traditional teaching methods often fail to integrate practical experience-based learning opportunities for adult learners (Leisegang et al., 2021). Similarly, "readiness to learn" exhibited moderate scores, reflecting variability in how well teaching strategies aligned with learners' immediate educational and professional needs.

Gender-based analysis revealed no significant differences in responses between male and female participants, indicating that the alignment of teaching strategies with andragogical principles was consistent across genders. However, program-specific differences were noted. Students enrolled in B.Ed. (1.5 years) programs reported higher alignment scores compared to those in B.Ed. (4 years) and BS (education) programs. The four-year program's comprehensive curriculum and extended exposure to teaching methodologies could account for this disparity. The study identified areas of strength, such as fostering motivation and self-directed learning, while highlighting the need for greater emphasis on experiential and problem-based learning strategies. These findings emphasized the necessity for teacher education programs to evolve and adapt to the principles of adult learning to better prepare future educators for their roles (Marshall-Stuart, 2018).

Conclusions

The study concluded that teaching strategies employed in teacher education programs showed a moderate to high level of alignment with Malcolm Knowles' model of andragogy. The findings demonstrated the effective integration of dimensions like "motivation to learn" and "self-directedness" into the teaching methodologies, demonstrating a strong commitment to the principles of adult learning. However, dimensions like "orientation to learning" and "readiness to

learn" demonstrated lower alignment, highlighting gaps in contextualizing education through practical, problem-solving approaches and indicating the immediate needs of learners. These results underscored that while certain aspects of andragogy received adequate attention, others necessitated significant enhancement to improve the quality of teacher education programs. Program-specific differences further revealed that students enrolled in B.Ed. (1.5 years) programs experienced a higher alignment with andragogical principles than B.Ed. (4 years) programs. This study indicates that the structure and duration of the programs played a critical role in determining the effectiveness of teaching strategies in aligning with the model of andragogy. Male and female prospective teachers perceived pedagogical alignment equally, as evidenced by the consistency of responses across genders. The findings led to the proposal of several recommendations aimed at enhancing the alignment of teaching strategies with andragogical principles. Teacher education programs should emphasize experiential learning and integrate real-world problem-solving activities to better align with the "orientation to learning" dimension. Incorporating case studies, internships, and collaborative projects could bridge the gap between theoretical knowledge and practical application, fostering a more contextualized learning experience. Researchers should revise program curricula to address learners' immediate professional and educational needs, thereby enhancing their "readiness to learn." Regular feedback mechanisms and adaptive teaching approaches could help instructors tailor strategies to the evolving needs of prospective teachers. Researchers should implement faculty development programs that focus on adult learning principles to enhance instructors' understanding of andragogy and its practical application in classroom settings. Providing training on fostering intrinsic motivation and self-directed learning among students could further strengthen our alignment with Knowles' model. The disparity observed across program durations highlighted the need for restructuring the programs in which the students are enrolled after intermediate education, such as the B.Ed. (4 years) and BS (Education), to incorporate elements that promote experiential and reflective learning. This restructuring could ensure a uniform quality of teacher training across programs and better prepare prospective teachers to meet the demands of the profession.

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