

# An experiential teaching-learning model for midwifery students at university level

*American Journal of Social Sciences and Humanities*

Vol. 10, No. 1, 67-75, 2025

e-ISSN: 2520-5382



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## ABSTRACT

This research aims to render a proposed pedagogical model for midwifery students training using the principles of experiential teaching and learning by presenting research data from the 4th year undergraduate course Experiential Teaching- Learning at the Department of Midwifery, University of Western Macedonia. The research design involved an experiential-based pedagogical approach to conduct semi-structured interviews about pregnant women's experiences of their daily lives. An interview protocol was developed by the students under the close guidance of the authors, and the research data collected were verbatim transcribed and analysed using interpretative phenomenological analysis. The study design facilitated data collection through the active engagement of the undergraduate midwifery students. The university course was transformed into a small model community with activities that reflect life in the larger society. Midwifery students developed skills useful in the decision-making process, such as inductive and deductive reasoning, by integrating the multivalent meaning of communication signs. This research training provided the students with experience as the cornerstone of education within a four-stage cycle of experiential learning. The interview protocol was developed in collaboration with the students following the five stages of the storming cycle. Following the interpretative phenomenological analysis methodology, the interview transcripts underwent a meticulous, systematic qualitative analysis. The theoretical framework of experiential learning and clinical semiotics enabled a communicative process between the student-researchers and the subjects of their training. Adopting the proposed educational model could facilitate a smooth transition between formal university midwifery training and real-world professional experience.

**Keywords:** Educational model, Experiential teaching-learning, Higher education training, Midwifery training, Qualitative research, Semi-structured interviews.

**DOI:** 10.55284/ajssh.v10i1.1339

**Citation |** Damaskinidis, G., & Eskitzis, P. (2025). An experiential teaching-learning model for midwifery students at university level. *American Journal of Social Sciences and Humanities*, 10(1), 67-75.

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**Funding:** This study received no specific financial support.

**Institutional Review Board Statement:** The Ethical Committee of the University of Western Macedonia, Greece, has granted approval for this study on 01/02/2024 (Ref. No. 147).

**Transparency:** The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

**Competing Interests:** The authors declare that they have no competing interests.

**Authors' Contributions:** Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.

**History:** Received: 4 November 2024/ Revised: 7 February 2025/ Accepted: 19 February 2025/ Published: 28 February 2025

**Publisher:** Online Science Publishing

### **Highlights of this paper**

- The research training provided to the students hands-on experience.
- Experiential learning and clinical semiotics enabled a communicative process between the student-researchers and the subjects of their training.
- The educational model could facilitate a smooth transition between formal university midwifery training and real-world professional experience.

## **1. INTRODUCTION**

Undergraduates with research experience have elevated grade point averages and increased acceptance rates to graduate schools (Fechheimer, Webber, & Kleiber, 2011; Webber & Bennett, 2003). Also, graduate students and teachers who supervise undergraduates on research projects indicate enhanced quality of work and life (Dolan & Johnson, 2010; Webber, Laird, & BrckaLorenz, 2013). Nonetheless, some contend that including undergraduate students in research initiatives poses difficulties for professors with constrained time and resources (Eagan, Sharkness, Hurtado, Mosqueda, & Chang, 2011; Harvey & Thompson, 2009). Also, some argue that a methodical strategy for incorporating student researchers can be highly effective (Hunter, Laursen, & Seymour, 2007; Thiry, Weston, Laursen, & Hunter, 2012).

Examining the daily routines and experiences of expectant mothers is an essential element of midwifery education at the university level. Several researchers have been interested in this topic from a research perspective, particularly in relation to sociological theories and qualitative research methods (Ferreira et al., 2014). This study presents a suggested pedagogical framework for the instruction of midwifery students, utilising the concepts of experiential teaching and learning, as it has been developed in the context of the post-doctoral research of the first author (Damaskinidis, 2024).

Dewey (1938) posits that educational institutions ought to be reformed into miniature communities, engaging in activities that mirror the broader society and are influenced by the essence of art, history, and science. Consequently, learners assimilate their experiences, thereby enhancing their confidence in their learning capabilities and fostering control, which in turn facilitates social change (Weldon & Reyna, 2015). Midwifery students' active engagement in fieldwork, such as conducting interviews to simulate the history-taking of pregnant patients, could facilitate this objective. In such an experiential learning setting, the teacher does not serve as the exclusive authority or exclusive source of knowledge; instead, they cooperate with students to jointly explore and find knowledge within a framework of shared interest and comprehension. This framework emphasises an interdisciplinary-holistic approach to information acquisition, facilitated by the learners' absorption and experiential engagement, influenced by the emotions elicited during the process. Knowledge is derived by the learners themselves through observation, contemplation, and action.

This study specifically showcases research data collected during the 2021-2023 period from the Experiential Learning-Teaching course offered to fourth-year undergraduate students at the Department of Midwifery, University of Western Macedonia. The authors offered specialised training to these students, enabling them to function as semi-independent researchers and interviewers who conducted semi-structured interviews with pregnant individuals. As such, midwifery students learnt skills that helped them make decisions, such as inductive and deductive reasoning, by putting together the different meanings of verbal and nonverbal communication.

In the following study, we describe how we engaged midwife undergraduates in research. We describe the educational theories that inform the pedagogical processes, the materials and methods used, and the expectations for undergraduate researchers. We discuss fundamentals for making a university course that combines research and teaching run efficiently. Finally, we examine how significant accomplishments can be attained through diligent student researchers that prioritise collaboration, demonstrate initiative, and maintain a pleasant disposition.

## 2. MATERIALS AND METHODS

The study utilised an experiential-based instructional method (Dewey, 1938) where undergraduate midwifery students were tasked with conducting semi-structured interviews to explore pregnant individuals' daily experiences. We adapted the experiential learning cycle (Kolb & Fry, 1975) to enable the students to act as interviewers (see Table 1).

**Table 1.** The experiential learning cycle of students-interviewers.

Learning process	Description	Students activities
1. Concrete experience (Doing)	Learners encounter a concrete experience. This might be a new experience or situation, or a reinterpretation of existing experience in the light of new concepts.	Conducting pilot semi-structured interviews with pregnant. Verbatim transcription of interviews. Initial IPA of transcripts.
2. Reflective observation (Observing)	Learners reflect on the new experience in the light of their existing knowledge. Of particular importance are any inconsistencies between experience and understanding.	Considering how they performed, relating their results with those of their fellow students, and discussing the challenges they encountered. Brainstorming moments of success and further improvements.
3. Abstract conceptualisation (Thinking)	Reflection gives rise to a new idea, or a modification of an existing abstract concept (The person has learnt from their experience).	Concluding to the most successful interview practices that might improve performance. Conceptualising the proper IPA method for the transcripts.
4. Active experimentation (Planning)	The newly created or modified concepts give rise to experimentation. Learners apply their idea(s) to the world around them to see what happens.	Implementing the new interview approach in their main interviews. Planning to communicate more effectively as a single team. This new experience becomes the next cycle of Kolb's learning style.

This instructional process was a mandatory component of students' consistent participation throughout the full academic semester, for every cohort of students. In this educational setting, the authors developed specific training exercises (Kolb, 1984) to empower senior students to function as partially autonomous researchers and carry out semi-structured interviews with pregnant individuals. The focus was placed on experiential learning, practical laboratory work, field observations, problem-solving, and supervised occupational experience (Lewis & Williams, 1994).

A structured interview technique was created, and the research data obtained from pregnant individuals were verbatim transcribed and examined using interpretive phenomenological analysis (IPA) (Smith, Flowers, & Larkin, 2022). The research ethics established the criteria for the behavior of scientific researchers Tong, Sainsbury, and Craig (2007). Stringent steps were implemented to ensure that all individuals engaged in these educational endeavors strictly followed ethical principles, with the primary objective of safeguarding the dignity, rights, and well-being of the research participants (i.e., pregnant).

The location of the interviews was decided on by the pregnant woman and the students. The students also took field notes and prepared memos after conducting each interview. Each student was also instructed to obtain informed written consent from the pregnant who participated in the interview.

## 3. RESULTS

Within the framework of a research-educational process (Erickson, 2001) the study design enabled the gathering of data by actively involving undergraduate midwifery students. As healthcare professional trainees, they engaged in a simulated activity that involved obtaining a medical history from pregnant women. The university

course was converted into a miniature community that incorporates activities mirroring those found in the broader society, and is influenced by the essence of art, history, and science (Dewey, 1938). By integrating their experiences, learners developed confidence in their learning abilities and gained control, so fostering social change (Weldon & Reyna, 2015). The students' active engagement in fieldwork, specifically through conducting interviews to simulate the process of gathering medical history from pregnant patients, significantly contributed to the achievement of this objective. In this experiential learning setting, the teachers-authors did not hold the position of power or serve as the exclusive providers of knowledge. Instead, they worked together with the students to explore and uncover knowledge in an environment characterised by mutual interest and understanding. Regarding the learning process, the focus was on the interdisciplinary-holistic approach to acquiring knowledge through assimilation and personal experience, which is influenced by the emotions generated during the process. Indeed, learners themselves acquired knowledge through processes of observation, contemplation, and practical application.

Midwifery students acquired valuable abilities for decision-making, such as inductive and deductive reasoning, by incorporating the complex and varied meanings of communication signs (Von Uexküll, 1986). This research training offered students the opportunity to get practical experience, which is considered a fundamental aspect of education, through a four-stage cycle of experiential learning (Kolb & Fry, 1975). This process was implemented to conduct interviews as the subsequent stage of theoretical training. During the concrete-experiential stage, the students performed the interviews and provided a description of the procedure. During the stage of reflective observation-processing, individuals comprehended and analysed their experience. During the abstract conceptualisation stage, the students made connections with their previous experiences and drew general conclusions from these experiences. They also assessed the overall effectiveness of their efforts. During the active experimentation-application stage, they explored methods of incorporating the knowledge acquired from the experience into their life, with the intention of utilising it during the main interviews.

The interview methodology was created through a collaborative effort with the students, utilising the five steps of the "storming cycle" (attention, challenging action, support, feedback, and debriefing) (Joplin, 1981). Initially, the interview's scope and objectives were established, and the student-interviewers were prompted to recollect any experiences from their own clinical practice. Furthermore, their academic knowledge and practical experience shed light on the challenges that pregnant women face in their daily lives. Furthermore, they were provided with the essential feeling of safety and educational proficiency to empower them to develop the mental and emotional skills required to locate pertinent material and formulate enquiries regarding the daily experiences of pregnant women, and to then proceed with a comprehensive evaluation. Additionally, the presentation included pertinent details regarding potential arrangements for the suggested interview protocol and the methodology for conducting the interview. Furthermore, the many questions were segregated, organised, and enhanced with the interviewers' subjective viewpoints and convictions regarding the matters concerning the daily lives of pregnant women. It is important to mention that the students lacked previous expertise in conducting interviews.

The interviewers were directed to exhibit a caring and empathetic demeanour towards the participants during each session. During the interview, when it seemed that participants had exhausted their thoughts, the interviewers inquired whether they had any additional input to provide. Students conducted sixty-two interviews, each lasting between 30 and 40 minutes. The interviews were audio recorded with the explicit written consent of the pregnant women. The pregnant woman and the interviewers mutually determined the interview locations, which encompassed settings such as their residences, offices, or other workplaces. These locations were chosen to provide a comfortable and welcoming atmosphere, or to take advantage of a convenient opportunity, such as a doctor's

waiting room. Every time, only the participant and the interviewer were present. Following each interview, the interviewers documented their observations and generated memos, which the authors subsequently examined.

We subjected the interview transcripts to a thorough and systematic qualitative analysis using the IPA approach (Smith et al., 2022). The students executed this approach with the direct supervision of the authors, using a scaffolding technique throughout successive meetings. The interviewers worked autonomously under the authors' supervision and performed validity checks on the analyses and interpretations. After reaching an intercoder agreement (Kaufmann, Barcomb, & Riehle, 2016) the students evaluated the topics and removed any that were considered unimportant or redundant. The remaining topics were then organised into a comprehensive list of higher-level and lower-level themes. In the end, the students transformed the table of overarching themes into a written depiction that conveys the subjects in a lucid and comprehensive way, bolstered by examples and quotations from the interviews conducted with the participants.

To avoid misrepresenting the participants' intended meaning, perception, or experience, we directed the students to suspend their own ideas and a priori assumptions and bracket their presuppositions. This bracketing enabled them to acknowledge and temporarily set aside their personal judgments and prejudices while performing the qualitative study of the subject matter. This bracketing enhanced the rigour of the findings and diminished the probability that the students' personal perspectives would influence their comprehension of the participants' ideas.

During each weekly lesson, students alternated in their presentations. Student presentations facilitated a more profound comprehension of the theoretical framework, methodologies, and research findings. Additionally, this course instructed students in the essential ability of effectively conveying their scientific results to others (Brownell, Price, & Steinman, 2013). These presentations provided excellent practice for this challenging yet essential skill. We urged students to consider the wider ramifications of their endeavours. What implications could interviewing pregnant individuals have for pregnancy education and policy? What is the significance of obtaining the medical history of pregnant individuals, and what insights may it provide to their decision-making processes? The ability to address these enquiries and participate in intellectual discourse is an invaluable skill for emerging midwives and healthcare professionals.

Despite the students not being professionals, their lack of expertise was mitigated by the specialised training they got under the guidance of the authors. Despite the potential difficulties (Erickson, 2001) including students in the research process provided a highly valuable chance for undergraduates to conduct supervised empirical research. From a pedagogical perspective, the utilisation of the theoretical framework of experiential learning (Dewey, 1938; Kolb, 1984; Kolb & Fry, 1975) and clinical semiotics (Von Uexküll, 1986) facilitated effective communication between the student-researchers (midwife trainees) and the pregnant women who were the focus of their training.

#### **4. DISCUSSION**

The primary goals of the study is to provide a concise overview of the outcomes of an experiential teaching-learning program designed for senior midwifery university students. The study found out that by actively engaging midwifery students in activities that simulate an aspect of their would be professional routine the teaching-learning process became relevant both for the students and the teachers alike. This implies that the more the students are engaged with meaningful educational activities, the degree of specialised knowledge gained also increases. This further implies that students' education engagement is significantly connected with basic students need satisfaction for educational research.

Implementing this research-based strategy in teaching was more feasible due to the small class size, as opposed to a larger one. Research-based instruction may require a slightly higher commitment from the faculty, especially during the initial stages. This argument is valid because students invariably dedicate a significant amount of time to establishing a foundation for impactful research contributions. Transitioning from lecture-based to research-based courses necessitates significant adaptations for both professors and students. For instance, certain students resist assuming greater responsibility for their own education and favour the more passive, non-research-orientated atmosphere of their prior high school experiences.

The material addressed in this research-orientated course was comprehended more effectively, kept more efficiently, and applied with more ease by students. This holds true in the context of medical education (Erickson, 2001). It is essential to acknowledge that undergraduate research, like many other educational methodologies, may not be optimal for every student or all forms of knowledge acquisition. Ericson produced evidence about medical education, demonstrating that students engaged in problem-based learning perform comparably on standardised assessments encompassing a broad spectrum of content (Erickson, 2001).

**Table 2.** Quotes from the undergraduate students-interviewers.

Topic	Comments from midwifery students
General	<p>“The educational process provides direct, first-hand experience with research methodologies and analysis, together with an inherent mentorship framework.”</p> <p>“Serving as an interviewer-researcher has been a pinnacle of my undergraduate education.”</p>
Skills acquired	<p>“As an undergraduate, I have engaged in multiple aspects of qualitative research, encompassing data collection, data analysis, research participant recruitment, and scientific presentations.”</p> <p>“As an undergraduate in this experiential teaching-learning course, I have been afforded significant opportunities to acquire and apply qualitative methods, conduct data analyses utilising interpretative phenomenological analysis, and enhance my public speaking abilities through collaborative presentations.”</p> <p>“I have acquired competencies in scientific communication, project management, professional growth, and the practical application of midwifery.”</p> <p>“My engagement in this course has significantly enhanced my understanding of qualitative analysis and research methodologies. I have also acquired the ability to conduct semi-structured interviews, perform interpretative phenomenological analysis, and engage in qualitative research—skills that are advantageous in any domain.”</p>
Mentorship in interviewing	<p>“I have acquired substantial knowledge regarding the research process due to the comprehensive mentorship I have received during the course.”</p> <p>The instructor has established a distinctive educational atmosphere that has been akin to "home" for me this semester.</p> <p>“I am quite at ease in approaching both the teacher and my fellow students with inquiries.”</p> <p>“The advantage of participating in this course is the access to diverse counsel from the instructor, the faculty within the department, and peer-learning from fellow students and undergraduates from different courses.”</p>
Future plans	<p>“I am confident that these skills will significantly benefit me during and after my university experience.”</p> <p>“I intend to apply to post-graduate programs (Masters of public health, medical schools, clinical and corporate positions), and for each application, a pivotal aspect is my experience in interviewing and obtaining medical histories from pregnant individuals.”</p> <p>“While my resume includes various volunteer and leadership roles, the framework of student leadership under my teacher, along with the diverse tasks and specific achievements associated with it, renders it consistently the most pertinent.”</p> <p>“This project has equipped me for advanced vocational medical training by imparting essential problem-solving and critical thinking skills.”</p>

We assert that students achieve greater success in the research environment when entrusted with increased responsibility. We promote active learning by engaging in data collection and analysis, rather than merely reading articles and absorbing information passively. Active learning methodologies generally result in increased student satisfaction (Johnson, 2011). Consequently, it is essential for each student to possess a sense of commitment to the research topic and to engage with all facets of the research process. Our undergraduate students participated in the recruitment of research participants and the collection of qualitative data for our experiential teaching-learning

course. They participated in semi-structured interviews, which entail acquiring qualitative data analysis skills. We also advocate for the theoretical interpretation of outcomes and the discussion of how our findings align with existing research. Students must comprehend the significance of their particular contribution to the overall accomplishment of a research project. The course presents challenges, but we also anticipate it to be rewarding, as evidenced by remarks from our undergraduate students, who indicate that the project provides a positive and constructive experience (see [Table 2](#)).

We urge students to identify their specialty in qualitative research and pursue their genuine interests. This may correspond with their academic pursuits and professional trajectory, or our research may stimulate their interest in a completely novel area. Our effort to prepare undergraduate researchers forms a significant component of the experiential teaching-learning curriculum, and we endeavour to ensure their educational experience is joyful, productive, and intellectually enriching.

## 5. CONCLUSION

This study asserts that research and undergraduate education are not antagonistic but rather mutually reinforcing ([Erickson, 2001](#)). The educational model presented here suggests that the process is cyclical and involves the learner's initial attention, contact with the phenomenon being studied, reflection on the experience, development of generalisations, and subsequent assessment of those generalisations. Experiential learning takes place inside a framework that is determined by four factors: the level, the duration, the intended consequence, and the location. These results also indicate that this methodology could facilitate the transition from formal university midwifery training to real-world professional practice. This study enabled us to provide personalised attention and practical experiences to our undergraduate students. We consider it beneficial to augment the quantity of research possibilities available to students and motivate a greater number of students to utilise these chances. It is aspired that these encounters will significantly impact their lives. Engaging undergraduates in the research process may present specific problems; nonetheless, we are assured that adherence to certain criteria will yield success ([Fechheimer et al., 2011](#)). Implementing a comprehensive screening process will ensure that the match is suitable for both the student and the researcher [Webber et al. \(2013\)](#). The initiative must explicitly delineate expectations for the undergraduate researchers. The allocated tasks must be explicit and highly specific. We must emphasise the importance of both collaboration and initiative, and we should promote and exemplify a positive attitude. Regular weekly and monthly meetings must be arranged to assess progress, identify obstacles, and acknowledge achievements. Students should be motivated to set ambitious goals. We wish to inform university educators that these tactics should be effective irrespective of the type of midwifery course. The associated project may either be integrated into the course or serve as the primary focus of instruction and learning. This course may include either junior or senior students. Additional attributes of the course or student population may pose distinct issues. Despite these disparities, we hold out hope for the implementation of these recommendations in research across diverse midwifery academic institutions.

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