PERSPECTIVE   **OPEN ACCESS**

A Qualitative Appraisal of the Teaching Methodology Approaches in PhD Coursework

Ashish Sood,[†] Girish Sharma, [†*] Jibran Abbas,[†] Rajat Pandey,[†] and Tejas Nagvenkar[†]

Abstract

A comprehensive understanding of research methodologies is necessary to conduct relevant research. Instructing adult scholars is difficult due to their prolonged absence from formal education. To tackle this issue, the university addressed in this paper devised a 'research methodology' course specifically designed for those who are employed, including a combination of adult learning principles and traditional teaching methods. An effective evaluation methodology guarantees continuous and fruitful learning. This article provides a qualitative analysis of the technique used by the university to develop research foundations for adult scholars, demonstrating that a blend of andragogy and pedagogy leads to favourable results. Scholars employed management principles to acquire new skills and effectively manage the delicate equilibrium between their professional and personal obligations.

Keywords: Research Methodology; Professional Scholars; Adult Education; Teaching Methodology; Andragogy; Pedagogy; Assessment & Evaluation; Management; Qualitative Analysis

---

[†] Research Scholar, Jagran Lakecity University, Bhopal, India
[*] Corresponding Author, Email: g10sharma@gmail.com

Introduction

Throughout one's entire life, education is a process that is not dependent on age. At Jagran Lake City University (JLU, Bhopal), the pursuit of knowledge through a PhD became a reality for professionals already working in their respective fields. As they navigated through uncertainty and excitement, the realisation dawned that they had a university that was helpful, a culture that was favourable for such professional cohorts and faculty members who were experts in various teaching methodologies.

These scholars went on the difficult road of doctoral studies despite the fact that they were already dealing with the challenges of demanding work and personal commitment. Their motivational journeys are investigated in this study, which also provides an analysis of the approaches used by JLU. This study aims to highlight the value of research methodology for academics who continue research after a substantial hiatus, attempting to maintain a balance between their academic pursuits and employment in business. This study uses tools such as Bloom's Taxonomy and software such as NVivo for thematic analysis to identify possible theoretical underpinnings for such adult studies.

Literature Review

Andragogy and Pedagogy

The foundational work of Knowles (1970) significantly advanced the understanding of adult education theory by juxtaposing andragogy, which is dedicated to instructing adult learners, with pedagogy, which is focused on educating children. This framework is particularly relevant to a qualitative appraisal of teaching methodology approaches in PhD coursework. Knowles (1980) expanded on these concepts, emphasising the distinctive attributes of adult learners and their role in shaping educational experiences. Similarly, after over three decades, Loeng (2018) provided a comprehensive examination of andragogy, exploring its various perspectives within adult education, aligning with the focus on teaching methodologies at the PhD level. However, in

2000, Holmes and Abington-Cooper criticised the rigid distinction between pedagogy and andragogy, which aligns with the adaptable approach needed in advanced educational settings.

But Jarvis (2011) critically examined the dynamics of adult learning, probing into the transitions between pedagogy and andragogy. His work delves into the evolution of these instructional paradigms and explores the shifts from traditional teacher-centred approaches to more learner-centred strategies. He provides insights into the complexities of this transition and its implications for adult learners, offering a valuable perspective on the continuum between pedagogy and andragogy.

Indeed, Holmes and Abington-Cooper's (2000) empirical approach to examining the distinctions between pedagogy and andragogy aligns with Jarvis's exploration, emphasising the need for adaptability and a nuanced understanding of instructional strategies. Their collective insights contribute to a more comprehensive understanding of how these frameworks intersect and influence the design of compelling educational experiences, particularly in advanced academic settings.

The reviewed literature provides a robust foundation for qualitatively appraising teaching methodology approaches in PhD coursework. As discussed by these scholars, the interplay between pedagogy and andragogy forms a crucial backdrop for understanding adult learners' diverse needs and preferences and tailoring instructional methods to meet the evolving demands of advanced educational contexts.

Assessments

In formative assessment, several studies have contributed valuable insights into various aspects of educational practices. While Martos-Garcia et al. (2017) delved into students' viewpoints concerning shared assessments, shedding light on collaborative evaluation methods, Srivastava et al. (2018) focused on the impact of Formative Assessment Classroom

Techniques (FACTs), specifically within medical education, highlighting the significance of varied formative assessment methods in specialised fields. The study used quizzes and exit tickets as FACTs methods. By analysing student responses, instructors could identify areas where students were struggling. In response, instructors modified their teaching approach to address these learning gaps. The results showed that FACTs led to better learning outcomes than a control group that did not use these techniques. The study implies that FACTs can be a valuable tool for medical educators to identify and address student learning challenges and enhance comprehension in pre-clinical medical courses (Srivastava et al., 2018).

In another study, Baleni (2015) investigated the dynamics of online formative assessment in higher education by expanding the exploration to online environments. The researchers found that online resources provide rapid and comprehensive feedback, fostering student engagement and participation, particularly in discussions. Additionally, they streamline the evaluation process, reducing the time required for marking and alleviating administrative burdens. However, dependable and goal-oriented online formative assessments emphasise thoughtful planning and execution (Baleni, 2015). Dascalu et al. (2017) examined the intersection of computer adaptive testing and social media in formative assessment practices. Collectively, these studies emphasise the evolving landscape of assessment methods in response to technological advancements.

However, scholars like Elmahdi et al. (2018) took a step further by exploring the influence of technology on formative assessment, emphasising its potential to enhance overall educational experiences. This technological perspective adds a crucial dimension to the ongoing discourse on formative assessment methodologies.

Zooming into language education, Estaji and Mirzaii (2018) investigated the efficacy of formative assessment in enhancing vocabulary acquisition among students learning English as a Foreign Language (EFL). This specialised study addresses the intersection of formative assessment and language acquisition, providing insights applicable to diverse educational settings. This methodology can be applied in various educational contexts where English is being learned as a foreign language, such as public schools, private language institutions for various age groups, adult education centres, online platforms, and programs for refugee resettlement. By incorporating formative assessment, these programs can effectively promote vocabulary acquisition (Estaji and Mirzaii, 2018).

Turning to the broader context of adult education, Hawe and Dixon (2016) investigated the influence of learning assessments on students' self-regulation in higher education, contributing to a deeper understanding of the factors impacting adult learners' autonomy and self-directed learning.

While these studies have contributed substantially to comprehending adult education, andragogy, and formative assessment, a significant gap becomes apparent in integrating these fields. A comprehensive exploration that integrates andragogy concepts into formative assessment practices considers technological advancements, examines the interplay of various educational frameworks, and holds the potential to yield significant insights. This research could inform the refinement of methods in adult education, paving the way for more effective and learner-centric instructional approaches.

Qualitative Research Grounded in Data

This study adopted a grounded theory approach, which aligns with the researchers' commitment to generating inductive findings from participants' textual data (Ezzy, 2002). This method is grounded in symbolic interactionism (Corbin & Strauss, 2008), a theoretical perspective that emphasizes how individuals construct their worlds through social interactions and underscore human agency. The study is particularly interested in exploring how the participants shape and influence their surroundings and how they enlist trainers and trainers' support in their learning pursuits.

The constructivist grounded theory approach developed by Charmaz (2006) was applied in this research, which emphasises constructing theory from the data rather than discovering it and recognises the researchers' role in shaping the data. This approach allows for a more flexible and less proceduralist method, reflecting the researchers' creative and reflexive nature.

Andragogy and Pedagogy Approaches in the Delivery of PhD Coursework

The sessions attended by the researchers were curated and delivered by various university faculty. The first and foremost task performed by the faculty triggered thought processes among scholars regarding the reasons for joining the programme. It helped the faculty understand the writing skills of every individual. Each participant was required to answer a simple question and provide a write-up for the same: 'Why did I decide to register for a PhD program?'Because this was a graded assignment, each scholar took this task, wrote a one-page document and shared it with the Vice Chancellor, who was supposed to assess and provide grading. This not only helped the researcher feel motivated about beginning their journey with something that was a starting step, but it also helped the university provide orientation towards learning and prepare scholars to learn.

The course outline was designed to concentrate on research methodology and included 90 hours of engagement. Table 1 lists further details of the course outline.

The university adopted a blended approach: 65% of the sessions were to happen in a classroom arrangement, and the remaining 35% through online sessions. The classroom sessions took place in January 2022 for two weeks on the university campus. The sessions included workshops, masterclasses and after-class reflections.

Table 1: Course Outline	
Research Methodology	
Topic	**Credits and Hours**
Research Methods	**Three credits – 45 Hours**
Research and Publication Ethics	**Two credits – 30 Hours**
Computer Applications	**One Credit – 15 Hours**
Source: Research Cell, Jagran Lakecity University	

Assessment and Evaluation

At times, 'assessment' and 'evaluation' were used interchangeably, but the course design ensured that both tools conjointly rendered learning meaningful. While 'assessment' is more inclined towards learning progress, 'evaluation' is more concerned with outcomes against well-defined objectives. Throughout the course, 'Formative Evaluations' were used to keep track of the researchers' continuous learning process, simultaneously giving and receiving feedback from the researchers and the faculty. To judge the programme's effectiveness in its entirety, 'Summative Evaluations' were utilised. Where assessments had been formative with a focus on the process, evaluations were summative and concerned with the outcomes of this programme. Formative assessment occurred through feedback (both to and for), quizzes, presentations, assignments, discussions on pre-readings and case studies analysis. Before initiating the coursework, the University's Vice Chancellor organised a joint seminar for the research scholars and all the academic Deans. In the seminar, the grading framework was explained and shared. Consequently, the scholars and the faculty were well-informed about the grading system and its implementation. Thus, both were on the same page about their understanding of the grading system (Table 2). The combined strategy of informal and formal assessments helped recognise all stakeholders' weaknesses and strengths in this programme.

Table 2: Grade Descriptors

Research Methods

Assignments

Descriptor	Grade
Excellent in terms of assimilation of ideas, originality in presentation and connectedness in the flow of the essay.	A+
Proof of reading and assimilation of ideas from different sources; creativity, innovation and originality in presenting ideas; different parts of the essay are well connected.	A
Proof of reading and assimilation from more than one source; some demonstration of creativity, innovation and originality in presenting ideas; reasonably good flow of ideas across the essay.	B+
Some proof of references from sources; limited demonstration of creativity, innovation and originality in presentation; some gaps in connectivity inflow of ideas.	B
Time, effort and energy should have been devoted to preparing the essay not to the level required.	B-
Limited or no references and very little proof of the creativity, innovation and originality; the essay reads as disjointed.	C
Does not meet the minimum parameters assigned for writing the essay.	D

Seminars and Presentations

Descriptor	Grade
Proof of wide reading evidenced in both text and presentation; personal narrative was excellently integrated with the broad theme; response to questions provided evidence of the depth of understanding.	A+
Evidence of having understood and reflected on the theme; presentation was effective in communicating the ideas; responded to questions with clarity	A
Proof of extensive preparation for the presentation; attempt at trying to weave the personal narrative into the broad idea; responded to most questions with clarity.	A-
The presentation provided evidence of reading and assimilating some materials; personal narrative was evident but could have been integrated better; response to questions could have been more effective.	B+
Presentation could be given proof of little more effort, reading and assimilation; could have demonstrated greater confidence and conviction about what was being spoken; responses to questions were not as effective as expected.	B
Limited proof of preparation and understanding of the theme; little evidence of the personal narrative; response to questions was not satisfactory.	C

Classroom Participation/ Presentation

Descriptor	Grade
Proactive in class; actively involved in classroom discussions; participated with enthusiasm in seminars; made an excellent summary presentation.	A+
Took the initiative in class; participated in seminars; and made an effective summary presentation.	A
Was active in the classroom and connected to the discussions; made interventions in the seminar; the summary presentation was good.	A-
Participated in-class activities and seminars once in a way; a summary presentation could have been more effective.	B+
Participated in-class activities and seminars once in a way; summary presentation did not match expectations.	B
Was rarely active in the class and seminar presentations; the summary presentation was not to the expected levels of clarity.	C

End Term Assessment

Descriptor	Grade
Excellent in terms of content, presentation and flow of ideas. The central argument of the essay/s was very well articulated.	A+
Ideas were effectively arranged; the main argument was persuasively presented; with clear proof of in-depth reading and understanding.	A
Proof of effort of reading and reflection in the essay(s); main argument well presented.	A-
Proof of reading and reflection but not integrated into the essay(s); flow of ideas not very effective.	B+
Limited proof of reading, reflection and engagement with the theme of the essay/s; ideas not cogently presented.	B
Limited or no proof of engaging with the theme.	C

Source: Research Cell, Jagran Lakecity University

Methodology and Thematic Analysis

Since teaching approaches are little known from a qualitative standpoint, they are poorly comprehended. As discussed above, this study employed a qualitative approach. Strauss and Corbin's (1998) 'Grounded Theory' approach was utilised to theorise the teaching approaches used by the JLU faculty in the course for working professionals enrolled in the PhD programme. Open, axial and selective coding is the fundamental technique for data analysis utilising 'Grounded Theory' (Strauss & Corbin, 1988). In open coding, which is the first step, data are dissected into separate sections, analysed attentively and compared for similarities and differences. The subsequent coding step is axial, which involves 'linking categories to subcategories' by 're-weaving the fragmented data'. The third coding stage is selective, which is 'the process of merging and refining categories' to create a core category – a fundamental phenomenon in which all other categories are incorporated. This study selected five researchers enrolled in the PhD programme of the university. The demographic profiles of these five researchers are shown in Table 3.

| Table 3: Demographic Profiles of the Research Participants			
Age	**Educational Qualification**	**Professional Experience**	**Job Designation**
49	**MBA**	26	**Director**, **Enterprise Sales**
49	**MA, PGDBM**	26	**Additional Secretary, General Administration Department, Public Service, Management Department**
36	**Engineer, MBA**	15	**Safety & Regulatory Compliance Manager**
39	**Engineer, MBA**	15	**Manager**, **Landscape Restoration**
36	**MBA, MPed**	16	**Physical Education Instructor**

A focus-group discussion was organised, and free-wheeling interactions occurred. The topics covered during the conversation ranged from motivation to be a part of the PhD programme to the coursework, teaching methodologies and outcomes. All discussions were recorded in English, transcribed and thematically analysed. The topics discussed are as follows:

- Briefly describe your motivation for joining the PhD course. What prompted you to choose JLU?
- Joining academics while still active in professional and domestic life would be quite a juggling exercise. Briefly describe your negotiating skills with humdrum, exacting PhD coursework and other professional and domestic life routines.
- Your comments on the peer learning and teaching methodologies adopted by the course team to deliver the curriculum.
- What changes and possible outcomes do you think could have been affected by these methodologies?
- Did the coursework change your outlook and strategy with which you will conduct the research work? In what way? Please explain.
- Demands for PhD work will become more stringent in the coming days. Would you like to share your strategy for coping with this?
- What would be your suggestions for improving curriculum delivery for future batches of professionals?

The diagrammatic illustration of thematic analysis is presented in Figure 1. The findings for this study are based on a thematic analysis of the participants' interviews, with a distinct focus on the teaching methodologies applied by the university in the course work. A qualitative data analysis of the narratives relating to motivation, teaching methodologies and outcomes was conducted. Based on a thorough review of these passages, a conceptually based coding scheme was then developed and applied to the data. Figure 1 briefly outlines the analytic process.

In summary, the data analysis process sought detailed engagement with teaching methodologies to produce a nuanced account of participants' perspectives on their experiences and engagement in coursework.
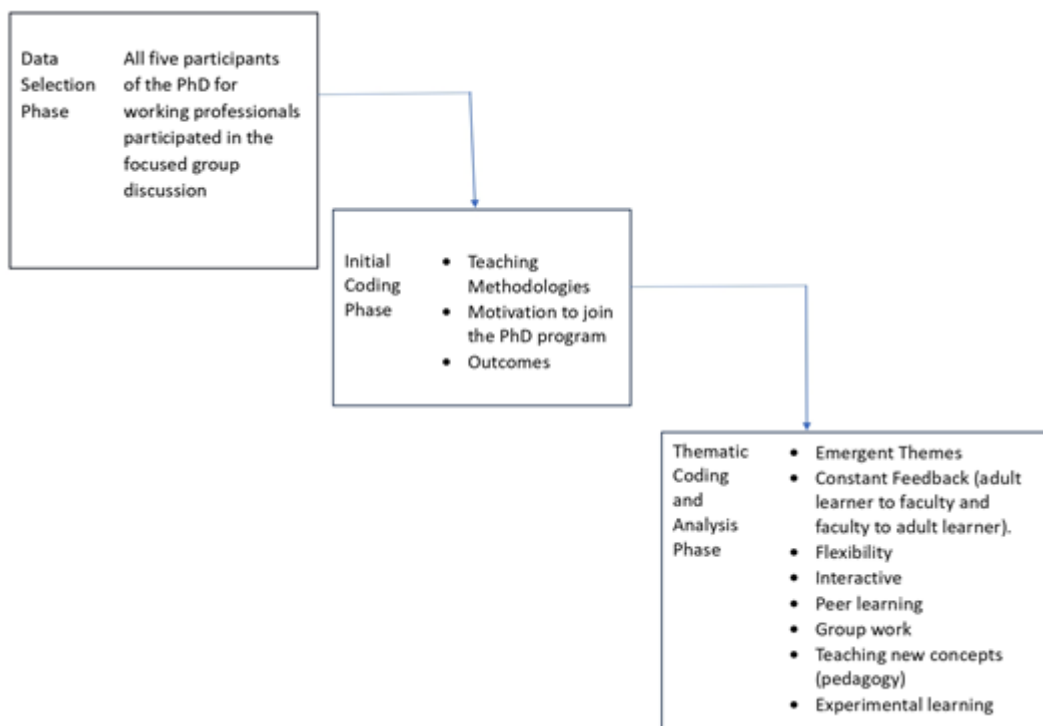
Figure 1: Thematic Analysis
Source: Prepared by the Researchers

Discussion

Some studies have listed the strategies adopted in adult learning and mapped their outcomes against each other. These studies were scanned and matched with the strategies adopted—formative and summative—in formal, informal, and non-formal settings in the PhD programme (see, Tables 4 and 5).

Table 4: **Distilled Knowledge From Research Studies On Adult Learning**			
Research Methods: Three Credits (45 Hours)			
Modules	**Topics Covered**	**Hours**	**Teaching Methodologies**
1	**What is Research? Why Research? Steps in the Research Process, Choosing a Research Topic, Research Across Disciplines**	**8**	**Scholars submitted individual write-ups on their motivation for research, Interactive presentations, and assignments.**
2	**Research Design – its Features, Types of Research – Theoretical and Applied; Methods of Research: Qualitative and Quantitative; Historical, Comparative, Ethnography, Phenomenological Methods, Case studies, Co-relational studies, Experimental Methods, Quasi-Experimental Method, Observation as a Method; Developing a Hypothesis**	**15**	**Pre-readings, Interactive presentations, discussions on caselets**
3	**Data Collection – Primary vs. Secondary Data, Steps in the Process of Data Collection, Foundations of Data Analysis**	**12**	**Pre-readings, Interactive presentations, discussions on caselets, assignment**

4	Review of Statistical Tools for Research (Availability of an option for researchers in Languages/ Law and Journalism)	10	Pre-readings, Interactive presentations, applying statistical tools for analysis of a given data set, assignment
Research and Publication Ethics: Two Credits (30 Hours)			
5	Philosophical Foundations of Research, Ethics of/ in Research, Developing a Research Culture, Scientific Conduct	10	Pre-readings, Interactive presentations, discussion on case studies, assignment
6	Ethics of Publication, Publications Misconduct - Plagiarism and its Challenges	10	Pre-readings, Interactive presentations, and hands-on software to check plagiarism
7	Open Access Publishing, Databases and Research Metrics, Research Writing Protocols	10	Pre-readings, interactive presentations, hands-on databases, assignment
Computer Applications: One Credit (15 Hours)			
8	Use of MS Excel and MS PowerPoint for Research	4	Interactive presentations, hands-on
9	Use of SPSS	9	Interactive presentations, hands-on
10	Use of the Internet for Research Work	2	Interactive presentations, hands-on
Source: Research Cell, Jagran Lakecity University			

Table 5: Research and Skill Development (30 hours)		
Workshop 1	Effective Presentation Skills for Research	Group presentations and discussions moderated by the faculty
Workshop 2	Imbibing a Research Culture	Group presentations, discussions moderated by the faculty, assignment
Workshop 3	Fundamentals Skills of Research Writing	Group presentations, discussions moderated by the faculty, assignment
Source: Research Cell, Jagran Lakecity University		

Teaching Methodologies and Outcomes

For the interventions applied in this coursework, 'outcomes' are listed from the distilled knowledge from these research studies on adult learning: enhanced self-regulated learning, collaborative tasks engage learners in high-order thinking, increased classroom participation, greater benefits of divergent questioning (Jiang, 2014); enhanced student understanding and success, improved self-monitoring, provision of important feedback about students learning (Baleni, 2015); deeper and integrative understanding, immediate feedback on performance and course, sharpened skills and understanding (Dascalu et al., 2017); improved metacognition, useful feedback(Hawe & Dixon, 2016), effective peer assessment (Martos-Garcia et al., 2017); identified areas of misunderstanding and improved understanding (Aycock et al., 2018); provided individualised learning (Elmahdi et al., 2018); improved application of knowledge (Estaji & Mirzaii, 2018); easy integration into class (Srivastava et al., 2018).

Thematic analysis corresponds to teaching methodologies applied in the case of adult learning (andragogy) and methodologies used in teaching children (pedagogy). While delivering

coursework, certain new concepts were introduced to professionals and required a delivery methodology equivalent to those applied in a class of children. Thus, the university applied a hybrid of andragogy and pedagogy in the course, although all participants were adults; this helped them better grasp the concepts and their application in the research process without any roadblocks. The evaluation methodology was a hybrid approach, which included standardized tests, quizzes, assignments, projects, presentations, and faculty observations to assess factual knowledge and basic understanding. This was complemented by self-directed learning, problem-solving, applying knowledge, peer review, and encouraging learners to take ownership of their progress.

The thematic analysis not only corroborates various studies by Jiang (2014), Baleni (2015), Dascalu et al.(2017), Hawe & Dixon (2016), Martos-Garcia et al.(2017), Aycock et al. (2018), Elmahdi et al. (2018), Estaji & Mirzaii (2018), and Srivastava et al. (2018) but it also endorses Holmes and Abington-Cooper (2000), who argued that pedagogy vs andragogy is a false dichotomy. Holmes and Abington-Cooper (2000) believed the two approaches were not necessarily opposing. However, they existed on a spectrum, suggesting that effective teaching can incorporate elements of both, tailoring the approach to the specific learners and learning goals.

The thematic analysis of the teaching methodologies and outcomes, as outlined in Tables 4 and 5, sufficiently demonstrates that a properly designed curriculum, defined outcomes, and well-articulated teaching methodology can benefit the institute and course participants. The definitional problem of hybrid methodology can be resolved by terming it *peda-andragogy* or *andra-pedagogy,* depending on the prominence of one specific teaching methodology.

When compared against the desired learning process dimension defined in Bloom's Taxonomy (Krathwohl, 2010), outcomes are illustrated in Table 6. Benjamin S. Bloom, Associate Director of the Board of Examinations at the University of Chicago, developed the educational objectives taxonomy. Its purpose was to classify the intended student learning outcomes of instruction and facilitate the exchange of test items among faculty members at various institutions. The aim was to reduce the labour associated with creating annual comprehensive examinations. The final draft of the taxonomy, commonly referred to as Bloom's Taxonomy, was published in 1956 and has since become a widely recognised framework for categorising education objectives (Karthwohl, 2010).

Table 6: Outcome (Cognitive Process Dimension)						
The Knowledge Dimension	1. Remember	2. Understand	3. Apply	4. Analyse	5. Evaluate	6. Create
A. **Factual Knowledge**	√	√	√	√	√	√
B. **Conceptual Knowledge**	√	√	√	√	√	√
C. **Procedural Knowledge**	√	√	√	√	√	√
D. **Metacognitive Knowledge**	√	√	√	√	√	√
Source: The Placement in the Taxonomy Table (Karthwohl, 2010: 216) adapted to the Learning Outcomes of the Coursework						

Coursework plays a vital role in the learning process of working professionals. The university adopted various strategies that helped professional scholars cope with the need to learn research methodology.

Furthermore, the faculty's academic expertise and the university's research culture helped the researchers understand the coursework while

adequately juggling their work and domestic life. This would help working professionals plan for the future and pave the way for them to embark on their research journey.

Additionally, the interviewees demonstrated an understanding of several management principles, including motivation, goal setting, balancing roles, diverse learning strategies, adaptability, coping with challenges and continuous improvement. Their responses indicate a thoughtful and reflective approach to managing their academic, professional and personal lives.

Limitations

One limitation is the sample size of the study, which was constrained because the cohort consisted of only five professionals who participated in this coursework. A thematic analysis of the interviews and theoretical outcomes would require further exploration. The generalisability of the outcomes requires research with a much larger sample.

Conclusion

Returning to academics was a significant decision, and working professionals made a major decision in their lives that needed a robust and well-thought-out plan from the university. The methodology adopted by the university, wherein the concepts of research methodology are ingrained into the mindset of the working professionals, seems to work well and would help these professionals embark on the research journey with support from their guides and the university. The thematic analysis of the participants' discussions highlights that focusing on completely separate teaching methods for adults and children is not helpful. This rigid "either/or" approach does not contribute anything new to our understanding of education. This research attempts to bridge the definitional divide by suggesting peda-andragogy or andra-pedagogy depending on the prominence of the method of delivery to the stakeholders, and it highlights that a hybrid is more meaningful for teaching and learning outcomes and serves the intended purpose. On the supply side, doctoral scholars proficiently apply a range of management principles to achieve optimal equilibrium between their professional and personal spheres.

References

Aycock, D. M., Hayat, M. J., Helvig, A., Dunbar, S. B., & Clark, P. C. (2018). Essential considerations in developing attention control groups in behavioral research. *Research in Nursing & Health, 41*(3), 320–328. https://doi.org/10.1002/nur.21870

Baleni, Z. G. (2015). Online formative assessment in higher education: Its pros and cons. *Journal of E-Learning, 13*(4), 228–236. https://academic-publishing.org/index.php/ejel/article/view/1730 accessed on 12/5/23.

Charmaz,K.(2006). *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. London: Sage.

Corbin, J., and A. Strauss. (2008). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 3rd ed. ThousandOaks, CA: Sage.

Dascalu, M.I., Nitu, M., Alecu, G., Bodea, C.N., & Moldoveanu, A. D. (2017). Formative assessment application with social media integration using computer adaptive testing techniques. *12th International Conference on e-Learning (ICEL 2017).* Florida Orlando, USA: Research Gate.

Elmahdi, I., Al-Hattami, A., & Fawzi, H. (2018). Using technology for formative assessment to improve students' learning. *The Turkish Online Journal of Educational Technology, 17*(2), 182–188. http://www.tojet.net/ accessed on 10/4/23.

Estaji, M., & Mirzaii, M. (2018). Enhancing EFL learners' vocabulary learning through formative assessment: Is the effort worth expending? *Language Learning in Higher Education, 8*(2), 239–264. https://doi.org/10.1515/cercles-2018-0015

Ezzy, D. (2002). *Qualitative Analysis: Practice and Innovation*. Crows Nest, Australia: Allen &Unwin

Hawe, E., & Dixon, H. (2016). Assessment for learning: a catalyst for student self-regulation. *Assessment & Evaluation in Higher Education,*

42(8), 1181–1192.
https://doi.org/10.1080/02602938.2016.1236360

Holmes, G., & Abington-Cooper, M. (2000). Pedagogy vs. andragogy: A false dichotomy? *JOTS, 26*(2).
https://doi.org/10.21061/jots.v26i2.a.8

Jarvis, P. (2011). Adult learning: Andragogy versus pedagogy or from pedagogy to andragogy. *The Routledge International Handbook of Learning* (pp. 154–163). Routledge.

Jiang, Y. (2014). Exploring teacher questioning as a formative assessment strategy. *RELC Journal, 45*(3), 287–304.
https://doi.org/10.1177/0033688214546962

Knowles, M. S. (1970). *The modern practice of adult education: Andragogy versus pedagogy.* Association Press.

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy.* Association Press.

Krathwohl, D. R. (2010). A revision of Bloom's Taxonomy: An overview. *Theory Into Practice, 41*(4), 212–218.
https://doi.org/10.1207/s15430421tip4104_2

Loeng, S. (2018). Various ways of understanding the concept of andragogy. *Cogent Education*, *5*, 1.
https://doi.org/10.1080/2331186X.2018.1496643

Martos-Garcia, D., Usabiaga, O., & Valencia-Peris, A. (2017). Students' perception on formative and shared assessment: Connecting two universities through the blogosphere. *Journal of New Approaches in Educational Research, 6*(1), 64–70.
https://doi.org/10.7821/naer.2017.1.194

Srivastava, T. K., Mishra, V., & Waghmare, L. S. (2018). Formative Assessment Classroom Techniques (FACTs) for better learning in pre-clinical medical education: A controlled trial. *Journal of Clinical and Diagnostic Research, 12*(9), JC01–JC08.
https://doi.org/10.7860/JCDR/2018/35622.11969