

# Andragogy and Remote Executive Education: A Case Study on Live Learning for Entrepreneurs in Brazil

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**Abstract:** This paper examines the design, delivery, and participant perceptions of the G4 Journey program, a remote executive education initiative in Brazil that integrates andragogical principles, generative artificial intelligence (AI), and Visible Thinking routines. While remote learning has become increasingly prevalent, existing research often overlooks tailored approaches that address the immediate, practical learning needs of entrepreneurial leaders in dynamic environments. Using qualitative feedback gathered from six participant cohorts through post-session surveys, this study explores how mentor-led, technology-enhanced learning experiences can deliver actionable, context-specific knowledge. The analysis reveals the value of combining structured content, interactive dialogue, and AI-driven personalization to promote learner autonomy, critical reflection, and practical application. Findings demonstrate how integrating problem-based learning, expert mentoring, and technology-supported diagnostics can support adult learning principles such as relevance, authenticity, and social learning. The study contributes to the literature on remote corporate education by offering an applied case of learner-centred, technology-enhanced design, while also identifying implications for instructional design, limitations related to qualitative scope and context specificity, and directions for future research in developing scalable, adaptive learning solutions.

**Keywords:** Andragogy, Remote Learning, Executive Education, Methodology, Artificial Intelligence, Visible Thinking

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## 1. Introduction

Remote learning itself is not new, with a wealth of experience and research in this field, particularly accelerated during the pandemic. However, this paper does not follow a purely technological or access-focused perspective. Instead, it considers how entrepreneurship and business practice demand learning that is immediately applicable—knowledge and skills that can be transferred to real contexts and challenges in the short term. Unlike traditional, long-term academic programs, this approach relies on short, intensive immersions centred on dialogue with experienced mentors rather than theoretical instruction alone.

In this context, robust theoretical frameworks are indispensable for guiding meaningful learning-design decisions. Accordingly, this paper uses Visible Learning (Hattie, 2009) and Making Thinking Visible (Ritchhart, Church, and Morrison, 2011) as primary references to explore how andragogical strengths can be activated in corporate remote education. These works emphasize principles such as clear objectives, effective feedback, learner autonomy, and routines that encourage participants to externalize and reflect on their thinking processes — all critical components in adult learning.

At the same time, the increasing integration of generative artificial intelligence (AI) offers opportunities to personalize, adapt, and scale learning experiences. By leveraging AI-driven diagnostics, prompts, and validation mechanisms, remote education can provide tailored, context-specific insights that support entrepreneurial decision-making and strategy. This combination of human-centred mentoring and technology-enhanced design represents an evolving field in adult education that demands further applied exploration.

Despite the proliferation of online education research—particularly accelerated during the pandemic—there remains a limited understanding of how adult learning theory can be systematically applied in executive education contexts requiring immediate, practical outcomes. Much of the existing literature focuses on formal higher education or large-scale training initiatives, often overlooking tailored approaches for entrepreneurial

leaders who must make high-stakes decisions in dynamic environments (Brookfield, 1986; Knowles, 1984). Moreover, while generative AI offers unprecedented opportunities for personalization and scaling, its pedagogical integration in remote learning for entrepreneurs remains underexplored. Addressing these gaps is critical for designing programs that not only transmit knowledge but also build the strategic thinking and adaptive capacity essential for sustainable business growth. This paper responds to that need by analysing the design, delivery, and participant perceptions of the G4 Journey program—a structured, mentor-led, technology-supported initiative developed in Brazil—offering an applied case of learner-centred, technology-enhanced design that demonstrates how generative AI, problem-based learning, and Visible Thinking routines can deliver actionable, relevant education in remote corporate settings.

## **2. G4 Educação and the G4 Journey Program**

G4 Educação is a Brazilian organization dedicated to delivering practical, high-impact learning experiences to help entrepreneurs build sustainable businesses and reduce social inequality. Its mission includes enabling participants to generate one million jobs in Brazil by 2030, supporting inclusive economic development, and empowering small and medium-sized enterprises (SMEs).

To achieve this, G4 Educação offers programs that combine academic rigor, applied methodologies, experienced mentorship, and opportunities for immediate application in their businesses. Among these, the G4 Journey is a targeted educational response for entrepreneurs seeking structured, immediately applicable learning.

The G4 Journey is designed to:

- Address the limited access entrepreneurs face to structured, actionable learning opportunities.
- Combine practical learning phases (“learn by doing”), personalized mentoring, sector-specific checkpoints, and access to a dedicated entrepreneur community.
- Focus on critical business areas such as revenue growth, financial optimization, operational efficiency, and people, culture, and leadership.
- Produce tangible outputs, including business diagnostics, mentoring reports, and customized strategies that integrate theory with practice.

By linking immediate business needs with structured educational design, the G4 Journey demonstrates how executive learning programs can deliver practical results while also contributing theoretical insights to adult learning and remote education.

## **3. Andragogical Best Practices Integrated Into the Lived Curriculum**

The G4 Journey program integrates andragogical best practices to enhance participants’ learning experiences. A central strength is its focus on content applicability: mentors co-design exercises introduced progressively, allowing participants to connect new concepts directly to their real business challenges. Participants often remarked that these examples felt tailored to their specific situations, reflecting adult learning theory’s emphasis on relevance, immediate application, and learner involvement.

Adults are motivated to learn when they perceive that learning will help them perform tasks or address problems they face in life. They are life-centred (or task-centred, or problem-centred) in their orientation, more interested in subjects with immediate relevance to their work or personal life. Learning is enriched when they draw on their experiences, and they respond best to active, reflective experiences rather than passive memorization (Knowles, 1984, p. 14).

Participants consistently reported that connecting theory to their business contexts made the content meaningful and actionable, reinforcing these principles. Another key feature of the program is the emphasis on interaction during live sessions. Rather than relying on one-way delivery, mentors encourage dialogue, address questions in real time, and facilitate peer-to-peer exchanges, creating an inclusive atmosphere that promotes social learning.

Effective learning integrates cognitive, emotional, and social dimensions in a unified process of personal development. The cognitive provides content, the emotional ensures motivation and meaning, and the social enables interaction and shared understanding. This integration makes adult learning authentic and transformative (Illeris, 2003, p. 398).

This approach is evident in how participants remain engaged not only with mentors but with one another,

transforming learning from individual comprehension into shared insight. The mentors' storytelling approach further shapes the experience by framing concepts through relatable narratives and real-world examples. This strategy encourages learners to externalize and reflect on their thinking, reinforcing that adults learn best when new knowledge is anchored in personal experience and collaborative dialogue.

Making thinking visible allows learners to externalize, share, and reflect on their thought processes. It fosters environments where understanding is co-constructed, with learners as active participants in making sense of information. This practice supports deeper engagement, autonomy, and collaborative learning (Ritchhart and Church, 2020, p. 28).

Overall, participant feedback highlighted how these narratives felt tailored to their realities, enhancing the content's relevance and utility. The program's instructional design also deliberately balances knowledge (20%), skills (40%), and attitudes (40%), ensuring learning addresses cognitive, behavioural, and emotional dimensions simultaneously.

#### **4. G4 Methodology**

The methodology in this study is rooted in educational design research (McKenney and Reeves, 2012), where the development, implementation, and refinement of learning products occur through iterative cycles of design, evaluation, and reflection. The G4 methodology served as the guiding framework for designing and delivering the G4 Journey program. Drawing on instructional design principles, andragogical theory (Knowles, 1984), and executive learning best practices, it offers a structured process that aligns learning objectives, delivery formats, and participant needs.

Unfolding across four interconnected phases, the G4 methodology provides a systematic blueprint for designing educational programs. These phases demonstrate how relevance, practicality, and applicability are embedded throughout the learning journey.

- Discovery and Planning

The initial phase focuses on product ideation and positioning using the G4 Working Backwards template. Activities include benchmarking, interviews with clients, experts, and stakeholders, empathy mapping, and tools such as the Value Proposition Canvas, CSD Matrix, and 5W2H. Sales calls are analysed, and P&L simulations are run as needed to confirm financial feasibility. This phase culminates in defining the value proposition that guides all subsequent stages.

- Syllabus and Structure Definition

At this stage, the syllabus is developed with clear guidelines for organizing modules, topics, and objectives. Mentors are selected, and the program structure—covering format, duration, and delivery methods—is finalized. A presentation and pitch are then prepared to communicate the proposal clearly and effectively.

- Content Development

Lesson plans, activities, and materials are developed using structured models that account for the target audience's expected knowledge, skills, and attitudes (KSA). All content aligns with the defined value proposition and syllabus to ensure coherence and relevance.

- Continuous Learning Flow

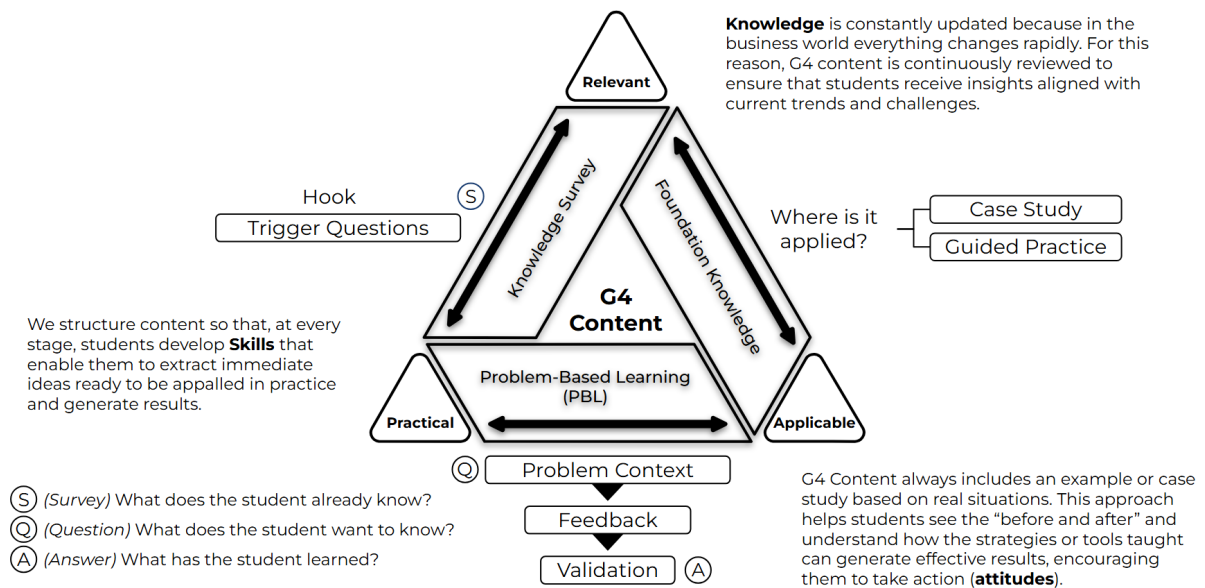
Finally, the methodology incorporates a Next Best Offer (NBO) approach, adding activations, complementary content, and supporting materials that promote continuous learning and deepen engagement within the G4 ecosystem.

##### **4.1 Application of G4 Content Within the Methodological Framework**

G4 Content is designed to deliver more than information; it creates a complete learning experience where each participant plays an active role and remains engaged. Grounded in three core principles—Relevance, Practicality, and Applicability—it ensures learning is immediately useful and tailored to real business challenges. By embedding these principles, G4 fosters trust, empathy, personal connection, and genuine value by placing the learner at the centre.

This framework represents the G4 Methodology in practice, visually summarizing how these principles and

design elements integrate into a cohesive approach (see Figure 1).



**Figure 1: G4 Methodology framework**

The figure shows G4 Content with Problem-Based Learning (PBL) at its core, supported by Relevance, Practicality, and Applicability. It also emphasizes Knowledge Survey and Foundation Knowledge as supports for learning transitions. Applicability is strengthened through Case Studies and Guided Practice, helping learners see how concepts apply in real scenarios. Feedback and Validation processes support learning cycles.

A key component is the SQA Framework:

- S (Survey): What does the student already know?
- Q (Question): What does the student want to know?
- A (Answer): What has the student learned?

This approach ensures learning remains connected to prior knowledge, personal goals, and clear outcomes.

#### 4.1.1 Relevance

Knowledge must be highly useful and tailored to the target audience. Content is continuously updated to reflect the rapidly changing business environment. Through active listening and ongoing diagnostics—during design, delivery, and improvement cycles—G4 identifies what learners know, what they need, and the problems they aim to solve, keeping material current and market-aligned.

#### 4.1.2 Practicality

Content is structured so that at every stage, participants develop skills enabling them to extract actionable insights for immediate application. A PBL approach introduces theoretical principles through real problems, stimulating critical thinking and driving implementation.

#### 4.1.3 Applicability

Theory becomes transformative only when put into practice. All sessions are led by experienced mentors who share real-world lessons and case studies. This approach helps learners see results clearly and encourages immediate action.

The G4 Methodology, with its structured phases and integrated content design, illustrates how educational product development can align with adult learning principles (Knowles, 1984; Brookfield, 1986) and executive education. It reflects a design-based research orientation (McKenney and Reeves, 2012), where iterative cycles of design, implementation, and reflection drive continuous improvement.

By combining rigorous planning, learner-centred design, and ongoing refinement guided by feedback, diagnostics, and engagement metrics, this methodology ensures programs are well-conceived, dynamic, and responsive to real-world challenges. It demonstrates how technology-enhanced education can bridge theory and practice, fostering relevance, practicality, and applicability in remote learning for entrepreneurs.

Together, these elements show how G4 Educação integrates instructional design and andragogical theory to create dynamic, learner-centred experiences.

## **4.2 Program Structure and Implementation of the G4 Journey**

The G4 Journey is structured as a twelve-month developmental framework to foster sustainable learning and business transformation among entrepreneurs. It comprises four sequential thematic pillars, each addressing critical areas of organizational growth through an iterative, problem-centred methodology (Merrill, 2002):

- Quarter 1: Revenue Growth.
- Quarter 2: People, Culture, and Leadership.
- Quarter 3: Financial Optimization.
- Quarter 4: Operational Efficiency.

Each module begins with a diagnostic assessment to identify organizational strengths and gaps, followed by an intensive series of six live, synchronous sessions. Participants receive a strategic dossier summarizing recommendations based on these activities. The program also includes additional learning mechanisms designed to maintain engagement and encourage reflective practice:

- Biweekly sector-specific checkpoints.
- Monthly group mentoring sessions (Illeris, 2003).
- Quarterly one-on-one coaching sessions for feedback (Hattie and Timperley, 2007).

To support personalized learning and operational planning, the program incorporates generative AI tools aligned with Visible Thinking principles (Ritchhart and Church, 2020). It concludes with an in-person session aimed at consolidating learning through peer exchange.

### *4.2.1 Target Audience and Value Proposition*

The G4 Journey is designed for founders and presidents of small and medium-sized enterprises (typically 5–50 employees, annual revenue above BRL 500,000) in early growth stages where scaling depends on strategic planning and operational discipline.

The program integrates structured diagnostics, guided mentoring, and feedback processes to support participants in developing practical strategies and applying learning outcomes directly to their business contexts.

Key components of the program include:

- Quarterly thematic focus to manage cognitive load and build mastery (Paas and Sweller, 2012).
- Customized business diagnostics and strategic dossiers.
- Live, mentor-led immersion sessions.
- Access to expert guidance and collaborative problem-solving.
- Peer communication channels for ongoing discussion.
- On-demand support for implementation challenges.

### *4.2.2 Generative AI Integration Across the Program Pillars*

A distinguishing feature of the G4 Journey is its use of generative AI to enhance both learning activities and diagnostic processes. The proprietary digital platform functions as a learning management system (LMS) and interactive space for AI-assisted planning and reflection.

Each thematic module begins with a Business X-ray diagnostic that captures company details such as operating model, maturity stage, customer profiles, and structure. These inputs inform personalized learning paths and strategic planning.

Prompt engineering principles shape AI responses by structuring inputs based on user context and goals (Liu et al., 2023), delivering tailored, actionable feedback. To ensure quality, an AI-driven validation layer scores responses for clarity, completeness, and alignment with objectives while suggesting refinements. Throughout

the six-session immersions, participants engage with AI-generated prompts linked to session topics and company-specific challenges. This process culminates in a Strategic Dossier synthesizing:

- Content frameworks delivered in live sessions.
- Best practices and case-based knowledge relevant to the sector.
- Diagnostic insights and AI-supported reflections.

By applying principles from Visible Learning and Visible Thinking (Ritchhart and Church, 2020; Hattie, 2009), this approach supports participants in externalizing thought processes, receiving structured feedback, and refining understanding in authentic business contexts.

### 4.3 Visible Thinking and Visible Learning as emerging pillars of the G4 Methodology

As part of its ongoing focus on evidence-informed practice, G4 Educação has integrated principles from Visible Thinking and Visible Learning, drawing on work from Project Zero at the Harvard Graduate School of Education. Founded in 1967 by philosopher Nelson Goodman, Project Zero has developed frameworks and tools over six decades to foster deep learning, critical thinking, and creativity across disciplines.

Among these frameworks, Visible Thinking (VT) stands out for addressing a practical question: *What happens inside students' minds as they learn, and how can this process be made visible so they can reflect on it?* Adopting VT aligns with G4's goal of combining content and process, promoting metacognition, and providing instruments applicable in both in-person and online environments.

G4 applies these principles through specific routines. For example, *See–Think–Wonder* encourages observation, interpretation, and questioning during module introductions and case exploration. *I Used to Think... Now I Think...* supports learners in articulating shifts in understanding during post-activity reflection and mentoring.

When thinking is made visible, it helps students develop and extend their thinking while allowing teachers to assess understanding and plan for future learning. Visible thinking routines offer structures that guide students in engaging with ideas in new, deeper ways. Through this process, learners become more metacognitive and reflective about both the content they learn and how they learn it (Ritchhart and Church, 2020, p. 11).

These routines function both as tools supporting specific kinds of thinking and as structures shaping learning culture.

Routines serve as tools to support specific kinds of thinking and as structures that shape the culture of the classroom and the learning that takes place within it. They help teachers foster patterns of thinking that, over time, become habits of mind. By making these thinking processes explicit, opportunities are created for students to engage, reflect, and deepen understanding in a sustained way (Ritchhart and Church, 2020, p. 12).

By incorporating these routines, G4 aims to build a reflective learning culture where thinking processes are made visible, discussed openly, and collaboratively refined.

**Table 1: Visible thinking routines applied at G4.**

Visible thinking at G4		
Routine	Purpose	Application at G4
See – Think – Wonder	Stimulate observation, interpretation, and questioning.	Module introductions, case exploration.
I Used to Think... Now I Think...	Promote reflection on evolving understanding.	Post-activity reflection, mentoring sessions.
Think – Pair – Share	Encourage dialogue and collaborative reasoning.	Group tasks, cohort discussions.

By embedding visible thinking practices into its methodology, G4 emphasizes learner-centred design and promotes reflective, actionable learning that fosters critical thinking and deeper engagement.

## 5. Microteaching in the Continuous Improvement Process of the Mentor

After adopting Visible Thinking and Visible Learning principles, G4 Educação incorporated microteaching into its mentor development cycle to ensure these practices are applied effectively. In each session, mentors deliver brief, focused lessons to peers or supervisors and receive structured feedback for refinement.

A standardized observation rubric guides each session, enabling systematic reflection and formative feedback. The rubric includes:

- Context details (date, number of students, lesson theme).
- Student highlights (what students did well).
- Student growth areas (what students could improve).
- Mentor highlights (what the mentor did well).
- Mentor growth areas (what the mentor could improve).
- General comments on the lesson.

This structure promotes critical observation and reflection on teaching practice and student engagement. It supports the development of consistent, learner-centred facilitation aligned with reflective teaching principles.

Combining feedback with deliberate reflection is essential for improving teaching practice (Hattie and Timperley, 2007). Microteaching thus offers a practical, iterative mechanism for mentors to refine clarity, engagement strategies, and alignment with the program’s educational objectives, ensuring that learning remains visible and actionable.

## 6. Results and Analysis of Participant Feedback

The results of this study are based on qualitative feedback collected from participants during and after their engagement with the G4 Journey program. Feedback was gathered through post-session surveys in which participants reflected on relevance, clarity, applicability, and overall impact. Analysis of responses from six participant cohorts reveals consistent patterns that align with adult learning principles, while also offering critical insights for refining the program.

**Table 2: Key themes in participant feedback on the G4 Journey program.**

Participant Feedback on the G4 Journey	
Theme	Feedback
Clarity and relevance of content	“I loved objectivity, practical examples, and dynamic class.”
Applicability and usefulness	“Helped a lot, it seems the tools will really improve our planning.”
Interactivity and learner engagement	“Class management and interaction were great.”
Mentor role and personalization of learning	“Provocations encourage deeper reflection.”
Challenges and areas for improvement	Material could have been shared beforehand”; “Addressed a topic that seemed simple but was difficult to apply.

A deeper analysis of participant feedback reveals that these themes were not isolated observations but often reflected interconnected dimensions of learning design. For example, participants who praised clarity and relevance also emphasized applicability, suggesting that well-structured content facilitated transfer of learning to business contexts. This supports Merrill’s (2002) principle that authentic tasks and clear instructional sequences enhance adult education. Additionally, the emphasis on interactivity and peer exchanges highlights the program’s success in fostering social learning environments, aligning with Illeris’ (2003) multidimensional model where cognitive, emotional, and social elements must be integrated to produce meaningful change.

The mentor's role emerged as critical in personalizing learning and prompting reflection, demonstrating how expert facilitation supports learner autonomy (Knowles, 1984) while scaffolding critical thinking through structured routines such as See–Think–Wonder (Ritchhart and Church, 2020). Participants valued both human-centred mentoring and AI-assisted diagnostics, suggesting that these elements can be complementary rather

than competing. This points to the potential of hybrid designs that blend relational mentoring with scalable, context-sensitive technology—a concept underexplored in existing corporate learning research.

Such insights emphasize that effective remote executive education must address multiple dimensions simultaneously: clarity and applicability in content, interactivity and social learning in delivery, and personalization through both human and technological means. These findings underscore the importance of intentional design that aligns pedagogical strategies with the complex, real-world challenges entrepreneurs face, offering valuable guidance for educators, program designers, and researchers seeking to optimize adult learning in remote contexts.

The following sections unpack each of these themes individually, providing more detailed insights into participant perspectives and their implications for instructional design.

### **6.1 Clarity and Relevance of Content**

Participants consistently valued the program's clear explanations and focus on real-world examples. This feedback reinforces the importance of authentic tasks in adult learning (Merrill, 2002) and validates the choice to integrate problem-based learning. It suggests that well-structured content with clear objectives effectively reduces cognitive load (Paas and Sweller, 2012), helping learners focus on application rather than rote memorization. For instructional design, this highlights the need to maintain clarity and relevance as core priorities to support transfer of learning into professional practice.

### **6.2 Applicability and Usefulness**

Participants emphasized the immediate applicability of tools and frameworks, noting their usefulness for planning and decision-making. This aligns with andragogical principles (Knowles, 1984) that adult learners are motivated by content that solves real problems. The feedback suggests the program successfully supports work-based learning (Boud and Solomon, 2001) by bridging theory and practice. However, it also implies a need to ensure that all tools remain adaptable to diverse business contexts to maximize perceived value.

### **6.3 Interactivity and Learner Engagement**

Comments about interactive elements, discussions, and peer exchanges point to the program's success in fostering social learning. This reflects the value of communities of practice (Lave and Wenger, 2000) where learning emerges through dialogue and shared problem-solving. Encouraging peer engagement not only sustains motivation but also deepens understanding by making thinking visible (Ritchhart and Church, 2020). For remote education design, these results support prioritizing collaborative formats even in online settings.

### **6.4 Mentor Role and Personalization of Learning**

Participants highlighted the mentors' use of provocative questions and tailored guidance. This underscores the critical role of expert facilitation in adult learning (Eraut, 2007), enabling learners to externalize thinking and reflect on personal challenges. The feedback supports the program's inclusion of Visible Thinking routines, such as See–Think–Wonder, which encourage metacognitive awareness. For designers, this suggests maintaining a strong mentorship component with structured opportunities for reflection.

### **6.5 Challenges and Areas for Improvement**

Participants also identified limitations, such as pacing issues and material overload. Requests for advance sharing of materials point to cognitive load concerns (Paas and Sweller, 2012) and the importance of scaffolding content delivery. These comments highlight the balance needed in remote education between content richness and manageability (Garrison and Vaughan, 2008). This feedback is essential for iterative program improvement, suggesting the need to revisit session design to allow more time for reflection and learner questions.

### **6.6 Interpretation and Implications**

Overall, the feedback reveals that the G4 Journey effectively integrates problem-centred learning, mentor-guided dialogue, AI-enhanced personalization, and visible thinking routines to create an environment that is applied, relevant, and reflective. The findings suggest that combining these elements supports adult learners in

developing practical skills while also fostering critical thinking. Importantly, the feedback also surfaces tensions common in remote learning, such as balancing interactivity with content pacing. Addressing these will be crucial for optimizing learner experience and ensuring sustainable engagement. Beyond this program, the results offer insights for the design of other remote executive education initiatives aiming to balance personalization, relevance, and collaborative learning.

The qualitative feedback was collected using structured post-session surveys applied digitally at the end of each live immersion. Each survey contained a consistent set of open-ended questions such as: “What part of today’s session was most useful for your current business challenges?”, “Was there any concept or tool that you feel requires more clarification?”, and “How do you plan to apply what was discussed today in your company?”. Additionally, participants were asked to score each session across dimensions such as clarity, relevance, interactivity, and applicability using a 5-point Likert scale. This combination of open responses and structured ratings enabled thematic coding and pattern identification across six different cohorts, supporting triangulation and depth of analysis in alignment with design-based research methodologies.

## **7. Conclusion**

This study examined the design, implementation, and perceived impact of the G4 Journey program, a remote executive education initiative that integrates andragogical principles with evidence-based methodologies such as Visible Thinking and generative AI. Participant feedback demonstrated alignment with adult learning principles, including clarity, relevance, immediate applicability, and engagement through interactive, reflective practices. The findings show how carefully designed remote education can support entrepreneurial learning by delivering actionable knowledge that addresses real business challenges in real time.

### **7.1 Theoretical Contribution**

This research advances adult learning literature by providing an applied case of integrating generative AI, problem-based learning, and Visible Thinking routines in remote corporate education. It demonstrates how principles such as learner autonomy, authentic tasks, feedback, and social learning can be operationalized in mentor-led, technology-enhanced formats. The study also contributes to understanding how hybrid models—blending human facilitation and AI-supported personalization—can enrich learning design for complex, rapidly changing contexts.

### **7.2 Practical Applications**

The results highlight the value of combining structured diagnostics, mentor facilitation, interactive learning strategies, and AI-driven personalization to support entrepreneurs. For educators and program designers, these findings emphasize the need to balance clarity and relevance with interactivity and cognitive load management. They also suggest the importance of embedding reflective practices and visible thinking routines to promote metacognition and critical reasoning. These insights can inform the development of more effective, learner-centred remote education experiences tailored to small and medium-sized business leaders in diverse sectors.

### **7.3 Study Limitations and Future Directions**

While this study offers valuable insights, it is limited by its qualitative scope and its focus on Brazilian SMEs in the early growth stage. Reliance on participant self-report through post-session surveys may also introduce response bias. Future research could use longitudinal methods to examine sustained behaviour change and business outcomes. Additionally, exploring the model’s adaptability across cultural, sectoral, and regional contexts would strengthen its generalizability. Researchers might also investigate how advances in AI prompt engineering and personalization can further support reflective, context-sensitive learning in executive education.

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### Ethics Declaration

This study was not subject to formal ethical clearance requirements, as it involved the analysis of anonymous participant feedback collected through standard program evaluation procedures.

### AI Declaration

Artificial intelligence tools were employed to assist with text editing, consistency checking, and formatting. All content, interpretations, and conclusions remain the sole responsibility of the authors.

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