

THE FUTURE OF VOCATIONAL LEARNING: ADAPTING TO NEW GENERATIONS WITHOUT LOSING DEPTH.

Why generational change matters in VET

Learning itself is undergoing a profound transformation. From primary schools to vocational institutions and higher education, teachers report similar changes: learners expect quicker feedback, prefer visual and interactive materials, and struggle with long, linear explanations.

These developments do not begin in vocational education, but they strongly shape it. By the time young people enter VET, their learning habits, attention patterns, and expectations have already been influenced by a digital, fast-paced environment.

While these changes are often attributed simply to technology, research and project evidence suggest that the deeper driver is generational change in how learners engage with information, motivation, and learning environments (OECD, 2023; VET2Sustain, 2025).

Learners from Generation Z and the emerging Generation Alpha have grown up in highly responsive digital environments shaped by

algorithms, personalised content, and constant connectivity. Their ways of processing information and maintaining attention differ from previous generations (European Commission, 2022). Understanding these differences is essential: not to lower expectations, but to adapt pedagogical approaches without losing depth, high standards, or vocational identity.

This article reflects on what generational change means for VET pedagogy and how learning can evolve while remaining grounded in hands-on practice, social interaction, and professional values. The reflections draw on recent research and on the VET2Sustain project report T5.2 (December 2025) Recommendations for AI in Personalised Learning, which analyses generational learning patterns and their implications for vocational education.

Understanding new learners: What has changed?

Evidence from recent studies and from the VET2Sustain project shows consistent patterns in how younger learners approach learning. Generation Z and Alpha learners tend to:

- prefer visual and interactive content,
- expect immediate or near-immediate feedback,
- feel comfortable in digital and AI-supported environments,
- engage more effectively with shorter, modular learning units (VET2Sustain, 2025; OECD, 2023).

These characteristics do not reflect reduced ability or motivation. Rather, they point to different cognitive conditioning, shaped by constant access to information, interactive media, and adaptive digital systems (European Commission, 2022).

In VET, learning is closely linked to professional identity, employability, and transition to work. Pedagogical responses must therefore be thoughtful. The goal is not to simplify content, but to design learning processes that connect depth with engagement.

These shifts also mirror broader transformations in working life. Digital tools, automation, data-driven processes, and hybrid collaboration are increasingly part of everyday work. VET must therefore prepare learners not only for digital learning environments, but for a digitalised world of work.





Characteristic	Millennials	Generation Z	Generation Alpha
 Digital Exposure	Transition from analog to digital	Constant internet access, smartphones	Fully AI immersed, platform native
 Work/Study Values	Meaning, purpose and value	Speed, transparency and connection	Highly visual, gamified, adaptive
 Education Preferences	Balancing traditional and digital	Interactive, relevant, tech-supported	Strengthen creativity, flexibility
 Key Influences	Global job markets	Environmental concerns, social justice	Future jobs do not yet exist

Figure 1. Comparison of generational characteristics for Millennials, Generation Z and Generation Alpha across digital exposure, work and study values, education preferences and key influences (Report T5.2, VET2Sustain 2025).

The risk of misinterpretation: Speed is not superficiality

A common concern among educators is that adapting to new learning preferences may lead to superficial learning or weakened standards. Yet research suggests that depth is not determined by the speed or format of instruction, but by the quality of tasks, feedback, and reflection embedded in the learning process (OECD, 2023).

Short learning units can address complex concepts when carefully designed. Visual explanations can enhance understanding of abstract or technical processes, especially in vocational contexts. Immediate feedback can strengthen reflection and self-regulation when supported by dialogue (VET2Sustain, 2025).

The real risk lies in equating traditional formats with quality and newer formats with simplification. Depth in vocational learning emerges from meaningful practice, structured reflection, and connection to authentic working contexts, not from duration alone.

What must not be lost: The core of vocational learning

While learning methods evolve, the foundations of vocational education remain stable.

Hands-on and experiential learning are central to competence development. Practical tasks, simulations, workshops, and workplace learning create embodied and contextual

understanding that digital tools alone cannot provide (European Commission, 2022).

Social learning and relationships are equally essential. Peer interaction, mentoring, and trust-based relationships with teachers and trainers strongly influence motivation and professional identity formation (OECD, 2023).

Guided reflection and professional judgement transform activity into competence. Learners need structured opportunities to reflect on their experiences, supported by educators who can challenge and contextualise their thinking (VET2Sustain, 2025).

Adapting pedagogy should therefore reinforce these elements, not replace them

Rethinking Teacher Education and Professional Development

If learning is changing, teaching cannot remain unchanged.

Many teachers were trained within pedagogical models designed for earlier generations. Few initial teacher education programmes fully prepared educators for AI-supported environments, modular learning design, or the attention patterns shaped by continuous digital exposure.

Continuous professional development is therefore not an optional addition but a structural necessity. Teachers need:

- pedagogical training in modular and adaptive learning design,
- confidence in using AI and digital tools critically and ethically,

- strategies to support attention, motivation, and self-regulation,
- understanding of generational learning psychology.

Without systematic investment in teacher education reform, expectations placed on VET teachers risk becoming unrealistic. Adaptation requires support, time, and institutional commitment.

Technology as a response, not a driver

Discussions about the future of VET often focus on AI, XR, and hybrid learning environments. However, the VET2Sustain findings suggest that technology should be understood primarily as a response to changing learning conditions, not as the driver of change itself (VET2Sustain, 2025).

When guided by pedagogy, digital and AI-supported tools can:

- visualise complex processes,
- support adaptive and formative feedback,
- improve accessibility for diverse learners,
- complement hands-on and workplace learning (European Commission, 2022).

Implications for VET teachers and trainers

The technological transformation of work including AI, automation, and hybrid collaboration requires new competences from both learners and teachers.

For practitioners, generational change calls for pedagogical confidence rather than constant reinvention. Teachers do not need to abandon their expertise. What they need is support to translate it into formats that resonate with today's learners (VET2Sustain, 2025).

Effective responses include:

- clearer and more modular learning structures,
- thoughtful integration of visual, digital, and practical elements,
- frequent formative feedback
- maintaining high expectations and clear learning outcomes.

Importantly, learners still need structure, boundaries, and guidance. Personalisation does not mean learning alone. It means learning with appropriate pedagogical and social support (OECD, 2023).

Implications for VET leaders and policymakers

At organisational and system level, generational change has strategic consequences. Institutions need flexible curricula, assessment models that recognise formative processes, and long-term investment in teacher competence development (European Commission, 2022).

Policy frameworks should encourage innovation while safeguarding quality, inclusion, and equity. Supporting teachers in adapting to generational change is not a peripheral innovation activity. It is central to

building sustainable VET systems (VET2Sustain, 2022).

Conclusion: Adapting without losing what matters

The future of vocational learning is not about choosing between tradition and innovation. It is about understanding learners deeply and responding thoughtfully.

Generation Z and Alpha learners bring new expectations and habits, but they still need what vocational education has always offered: meaningful practice, social learning, guidance, and purpose.

Technology can support this transition but only when guided by pedagogy, professional judgement, and human values.

At the same time, vocational education must recognise that artificial intelligence is becoming part of everyday professional practice. In many future occupations, AI will not be an external tool but an integrated element of workflows, communication, and decision-making.

Preparing learners for working life therefore means not only using AI in teaching, but also developing the skills needed to use AI responsibly, critically, and effectively in their future professions.

Adapting pedagogy is less about following trends and more about ensuring that vocational education continues to form competent, resilient, and ethically grounded professionals in a rapidly transforming

society. That requires courage from teachers, leaders, and policy makers alike.

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