VTE VOCATION, TECHNOLOGY & EDUCATION

THEMATIC PAPER: APPRENTICESHIP

From classroom to workplace: Leveraging best practices in teacher training for apprenticeship curriculum design

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ABSTRACT

This study examines how integrating deliberate practice, a spiral curriculum, and structured theory-to-practice alignment can improve apprenticeship outcomes, based on a model from the Level 5 learning and skills teacher (LST) apprenticeship. Using a mixed-methods approach, the research compares two cohorts: one following a traditional curriculum and another engaging with a redesigned model emphasizing scaffolded learning and retrieval practice. Findings indicate a significant improvement in end-point assessment (EPA) success rates, with distinctions rising from 25% to 100%. Apprentices in the revised curriculum reported increased confidence, deeper learning, and greater workplace adaptability. The study highlights the value of Rosenshine's Principles of Instruction and Cognitive Load Theory in structuring learning experiences to enhance skill acquisition and assessment performance. Despite a small sample size, external validation from Ofsted supports the findings. The study suggests that a well-structured curriculum can strengthen vocational education and calls for further research into its application across apprenticeship programs.

Key words: apprenticeship curriculum, deliberate practice, spiral curriculum

INTRODUCTION

Apprenticeships serve as a crucial bridge between academic knowledge and industry skills, enhancing learner confidence, progression, and end-point assessment (EPA) success (Fuller & Unwin, 2011). However, many apprenticeship programs struggle to effectively integrate theory with practice, limiting their overall impact on learner outcomes. This disconnect is often rooted in traditional models that prioritize theoretical knowledge over practical application, leading to superficial learning that fails to translate into workplace readiness. This study critically examines how the integration of deliberate practice, a spiral curriculum, and structured theory-to-practice alignment can improve apprenticeship outcomes, with a particular focus on the learning and skills teacher (LST) apprenticeship.

The 18-month LST program, which combines synchronous and independent learning, aims to prepare educators for the further education and skills (FES) sector. The externally assessed EPA, which includes a lesson observation, professional dialogue, and a 90-minute discussion, is mapped to 51 knowledge, skills, and behavior (KSB) standards (IfATE, 2024). Despite the promise of such a comprehensive assessment, one must question whether these assessments adequately reflect the diverse challenges faced by apprentices in real-world settings, particularly given that formal assessments are often divorced from the messy, unpredictable nature of classroom teaching. This research aims to explore the following question: How can deliberate practice, a spiral curriculum, and structured theory-to-practice alignment enhance apprenticeship outcomes and EPA success rates?

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Received: 27 March 2025; Revised: 17 April 2025; Accepted: 8 May 2025
https://doi.org/10.54844/vte.2025.0922

Theoretical framework

Deliberate practice ensures that structured, goal-directed activities facilitate skill acquisition through repetition, feedback, and incremental challenges (Christodoulou, 2017; Ericsson *et al.*, 1993). Unlike rote learning, which may promote surface-level recall, deliberate practice fosters deep learning and prepares apprentices for the practical demands of the EPA (Billett, 2016). However, its success is contingent on the quality of feedback and mentor support, both of which can vary significantly across different apprenticeship settings.

The spiral curriculum, as proposed by Bruner (1960), emphasizes revisiting concepts at increasing levels of complexity, which aids retention and skill refinement. Traditional linear models, by contrast, often lack sufficient opportunities for skill reinforcement, which can hinder long-term knowledge retention (Schmidt & Bjork, 1992). While the spiral curriculum provides a theoretical basis for reinforcing concepts, it is crucial to examine whether its application is flexible enough to accommodate the diverse needs of apprentices, especially those with varying levels of prior knowledge and different learning paces.

A central challenge in many apprenticeships is also the disconnect between classroom learning and workplace application (Fuller & Unwin, 2011). Kolb's Experiential Learning Theory highlights that effective learning is grounded in application and reflection, yet many apprenticeships lack structured opportunities for critical reflection in real-world contexts (Kolb, 1984). While the study offers evidence that structured theory-to-practice alignment improves outcomes, it is essential to critique whether this alignment fully addresses the inherent tensions between theoretical learning and the unpredictable demands of actual teaching environments.

Finally, Rosenshine's Principles of Instruction emphasize guided practice and frequent review, which further supports knowledge retention (Rosenshine, 2012). Apprentices are often required to balance the cognitive demands of work and study, and managing cognitive load (Kirschner *et al.*, 2018; Sweller, 1988) is crucial for optimizing learning.

This study compares two cohorts—one following a traditional model and another engaging with a redesigned curriculum—offering critical insights into how structured curriculum reform can improve confidence, skill acquisition, and assessment outcomes. The findings suggest that integrating deliberate practice and a spiral curriculum can significantly enhance apprenticeship design, but it is also important to question how these models can be adapted and scaled to meet the diverse needs of learners across sectors.

METHODOLOGY AND ANALYSIS

This mixed-methods study evaluated the impact of a redesigned apprenticeship curriculum integrating deliberate practice, a spiral curriculum, and structured theory-to-practice alignment. Two cohorts of teacher training apprentices were examined: Cohort 1 (n = 12) followed a traditional curriculum, while Cohort 2 (n = 9) engaged with a revised model incorporating retrieval practice and scaffolded learning. Apprentices worked across diverse sectors, including healthcare training, alternative provision, and Special Educational Needs and Disabilities (SEND) settings. Data collection included tripartite progress reviews, semi-structured interviews, and quantitative analysis of EPA results.

Thematic analysis (Braun & Clarke, 2006) identified patterns in learning experiences and professional development. Externally assessed EPA outcomes showed Cohort 2 outperformed Cohort 1, with all apprentices achieving a distinction.

DISCUSSION

The integration of deliberate practice provided apprentices with structured, iterative skill development, aligning with Ericsson and Pool's (Ericsson & Pool, 2016) assertion that goal-directed practice with feedback is fundamental to expertise. However, deliberate practice requires sustained effort and high-quality mentorship, which may not always be feasible due to workload constraints in apprenticeship programs. The effectiveness of this approach is contingent on mentors' ability to provide targeted feedback, raising questions about consistency in mentor support across different workplace settings.

Similarly, the spiral curriculum facilitated deeper knowledge retention, as suggested by Bruner (Bruner, 1960). Apprentices repeatedly engaged with key concepts, which enhanced their ability to apply knowledge in different contexts. However, this approach assumes that all learners benefit equally from incremental revisitation. In practice, some apprentices may require greater differentiation, as prior knowledge, experience, and learning pace vary across individuals (Schmidt & Bjork, 1992). The effectiveness of a spiral curriculum is also dependent on curriculum coherence and progression mapping, which requires substantial planning and coordination between training providers and employers.

One of the most persistent challenges in apprenticeships is ensuring that theoretical learning is effectively transferred to workplace practice (Fuller & Unwin, 2011). Kolb's Experiential Learning Theory suggests that

learning is reinforced through cycles of experience, reflection, and adaptation, yet vocational education often lacks structured opportunities for critical reflection (Kolb, 1984). The blended learning model adopted in this study (Hrastinski, 2019; Kintu *et al.*, 2017) facilitated theory-to-practice alignment, but it is important to acknowledge that workplace constraints (*e.g.*, time pressures, competing responsibilities) may limit apprentices' ability to engage deeply with reflective processes.

The increase in distinction rates from 25% in Cohort 1 to 100% in Cohort 2 suggests that deliberate curriculum changes directly influence assessment success (Grant, 2022; Poole, 2023). However, assessment outcomes do not always reflect workplace readiness. While retrieval practice and scaffolded learning enhanced confidence and reduced cognitive overload (Kirschner *et al.*, 2018; Sweller, 1988), the extent to which this preparedness translates to long-term professional competence remains an open question. Apprentices may perform well in structured assessments but still face challenges when navigating unpredictable real-world teaching scenarios.

CONCLUSION

This study highlights the impact of integrating deliberate practice, a spiral curriculum, and theory-to-practice alignment in teacher training apprenticeships. The improved EPA success rates and learner confidence in Cohort 2 suggest that structured curriculum design enhances both vocational education quality and professional readiness. Deliberate practice supported skill mastery through focused repetition, while the spiral curriculum reinforced knowledge retention (Bruner, 1960; Ericsson & Pool, 2016). Blended learning further contextualized theory through workplace applications, strengthening practical understanding.

Despite a small sample, external validation of EPA assessments and positive Ofsted feedback confirm the curriculum's effectiveness. Structured mentorship played a key role in bridging classroom learning with real-world practice, equipping apprentices with technical and soft skills for the workforce (OECD, 2019).

This study provides a model for enhancing apprenticeship programs through scaffolded, context-driven learning. Future research should explore its scalability across sectors to validate its broader applicability.

DECLARATIONS

Acknowledgement
The author would like to acknowledge the dedication, time and effort that apprentices put into their study and the impact of this in their workplace and beyond.

Author contributions
Sohdi R: Conceptualisation, Data curation, Methodology, Formal analysis, Investigation, Resources, Writing—Original draft, Writing—Review and Editing. The author has read and approved the final version of the manuscript.

Source of funding
This research received no external funding.

Ethical approval
Not applicable.

Informed consent
Not applicable.

Conflict of interest
The author has no conflicts of interest to declare.

Use of large language models, AI and machine learning tools
None.

Data availability statement
No additional data.

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