Confidence Through Customisation: AI-Generated Differentiation in a Year 10 Girls' English Classroom

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Abstract

This action research study investigated whether artificial intelligence (AI) could effectively support readiness-based differentiation in a Year 10 girls' English classroom, and how this influenced girls' confidence and engagement. A class of 21 students participated in a seven-week unit in which AI-generated differentiated worksheets were embedded across non-fiction writing tasks. Students were grouped according to learning needs using cumulative reading and writing data, and for each text type, AI was used to produce tiered scaffolds tailored to differing levels of cognitive demand. Data collection techniques included confidence surveys at multiple intervals, weekly reflection journals, semi-structured interviews, classroom observations, teacher aide notes, and analysis of student writing artefacts. Thematic analysis was employed to interpret the data. Findings suggest that AI-generated tasks were able to differentiate appropriately, enabling students to access learning at an optimal level of challenge. Reduced procedural uncertainty enabled more targeted feedback and relational interaction, strengthening confidence and academic risk-taking. The intervention fostered a classroom culture characterised by collective perseverance and shared assurance. However, the effectiveness of AI-supported differentiation depended on deliberate teacher mediation and iterative refinement. The findings from this study may be valuable for educators seeking approaches to differentiation and exploring how emerging technologies can support inclusive pedagogy in girls' schools without displacing professional expertise.

Glossary

Structured Literacy: An evidence-based approach to literacy instruction characterised by explicit, systematic teaching of language structures, including syntax, vocabulary, and text organisation. In this study, structured literacy informed the modelling and scaffolding of non-fiction writing.

The Writing Revolution (TWR): An instructional approach developed by Hochman and Wexler (2024) that emphasises explicit sentence-level and paragraph-level writing strategies. In this project, TWR principles shaped scaffolded writing frames and structured progression toward independence.

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in a Year 10 Girls' English Classroom

When the International Coalition of Girls' Schools (ICGS) introduced artificial intelligence in teaching and learning as the focus for the Global Action Research Collaborative (GARC), I reflected on how AI-enabled differentiation could strengthen learning conditions in an English classroom, particularly by supporting girls' confidence and engagement with extended writing.

In academically aspirational girls' schools, diligence often coexists with quiet self-doubt, especially in extended writing; highlighting that confidence is shaped not only by ability but also clarity, cognitive load, and perceptions of competence. In this context, differentiation is critical. When tasks are pitched too high, students may disengage or avoid risk; when pitched too low, they may comply without growth. This balance is particularly important in girls' classrooms, where students may be more sensitive to perceived failure and less willing to take risks when tasks feel beyond their reach. Readiness-based differentiation addresses this tension by aligning task demand with students' current levels of understanding while maintaining shared learning goals. However, implementing systematic differentiation in a multilevel classroom is demanding. Designing multiple task versions, adjusting scaffolds, and monitoring progression requires significant teacher time and cognitive investment.

The rapid emergence of artificial intelligence in education presents new possibilities. AI tools such as ChatGPT (OpenAI, 2025) can generate varied content quickly and produce multiple versions of instructional materials in response to detailed prompts. While AI discussions often focus on automation or assessment, less attention has been given to its role in sustainable differentiation in secondary English. In a girls' school context, this has potential: if AI can support the creation of appropriately calibrated tasks, it may reduce risk aversion and enable greater engagement with challenge. If AI can efficiently produce tailored scaffolds, teachers may be able to redirect time and energy toward feedback, conferencing, and relationship-building, all of which are closely linked to student confidence, particularly for girls navigating academic risk.

These reflections led me to design a unit grounded in the following research question: *How can the use of AI differentiated learning activities increase girls' confidence and engagement in a multilevel Year 10 English class?* To explore this question, I embedded AI-generated differentiated worksheets across a seven-week non-fiction writing unit. Students were grouped according to readiness using cumulative assessment data, and tiered scaffolds were generated for each major writing task to align with varying levels of cognitive demand. The aim was not to test whether differentiation is effective, but to investigate whether AI could operationalise differentiation in a way that was both pedagogically sound and practically sustainable, while enhancing girls' confidence and engagement.

Action research was an appropriate methodology for this project, as it positions teachers as reflective practitioners seeking to improve classroom practice through systematic inquiry (Mertler, 2025). By collecting and analysing multiple forms of student voice and observational data, I sought to examine not only whether AI could differentiate effectively, but also how it shaped the emotional and relational dynamics of the classroom.

This study contributes to a growing conversation about how emerging technologies can support inclusive pedagogy in girls' schools. Rather than positioning AI as a replacement for teacher expertise, this research considers how it might extend and refine differentiated practice in ways that strengthen confidence and cultivate shared academic resilience.

Literature Review

In the classroom, differentiation involves teachers shaping learning experiences to align with students' varied readiness levels, interests, and learning needs, rather than expecting all students to progress along the same path at the same pace. Tomlinson (2001) describes how, "in a differentiated classroom, the teacher proactively plans and carries out varied approaches" (p. 7) and that teaching involves "multiple avenues of learning" (p. 15) for varied needs. Ardenlid (2020) highlights the challenge of addressing "diverse abilities, strengths, learning preferences and interests" (p. 1), noting that simply offering choice of pace or task does not necessarily equate to meaningful differentiation;

rather, differentiation is most effective when all students work towards shared outcomes through different pathways.

Deliberately planned differentiation supports both achievement and students' broader experiences of learning, including wellbeing and inclusion. Fowen (2020) highlights that differentiated instruction can "maximise the implementation of learning in class with the diversity of students" (p. 101) and frames it as an approach that shapes curriculum, the learning environment, class management and assessment. Pozas et al. (2021) similarly argue that differentiated instruction is "an inclusive instructional practice" (p. 2) characterised by intentional, systematic planning that enables teachers to meet the needs of learners in heterogeneous classrooms. In their study, students' perceptions of differentiated instruction predicted their sense of belonging and their views of their own ability. Notably, girls reported higher levels of social inclusion but lower academic self-concept than boys. These findings suggest that while differentiation may strengthen belonging, it does not automatically translate into confidence, which remains an area of concern in high-expectation single-sex contexts.

The confidence dimension is closely linked to academic self-efficacy, which Bandura (1997) defines as the belief in one's capacity to succeed in specific contexts, shaping motivation and persistence. For adolescent girls, self-efficacy can be particularly fragile. Research suggests that as gender differences in risk-taking widen during adolescence, with girls demonstrating greater risk aversion (Andreoni et al., 2019), they also report higher levels of self-critical and socially prescribed perfectionism alongside increased evaluative concern and internalised academic pressure (Rodríguez-Naveiras et al., 2025; Selcoe & Hayes, 2026). These findings highlight the importance of classroom conditions that make challenge feel manageable, normalise mistakes as part of learning, and emphasise progress over comparison with others.

Readiness-focused differentiation offers one way of supporting confidence alongside learning for girls. Tomlinson (2001) notes that "clarity about differentiation by readiness can hone and refine good instinct" (p. 45) and provide students with more appropriate learning experiences. This aligns

with Vygotsky's (1978) notion of the zone of proximal development, where tasks stretch learners without overwhelming them. This calibration of challenge is particularly significant in girls' education contexts, where confidence and willingness to take academic risks can be closely linked. Neal's (2022) action research with Year 5 girls illustrates this connection, showing that structured collaborative problem-solving strengthened both girls' learning and willingness to take academic risks.

However, differentiation is complex to implement consistently in day-to-day practice. Langelaan et al. (2024) argue that effective differentiated instruction requires active learning, collaboration, and reflection, and without these foundations it can become surface-level. Moreover, Pozas et al. (2021) describe differentiated instruction as "relatively demanding and challenging" (p. 6) and emphasise the need for professional learning and support to embed it systematically. For teachers working within time-poor environments, these demands can make differentiation feel overwhelming and difficult to sustain.

It is in this challenging context that artificial intelligence is increasingly being explored as a tool to support differentiation. Damyanov (2024) argues that AI has the potential to support teachers through intelligent tutoring systems, adaptive learning platforms, and automated feedback, offering "rapid, consistent feedback, personalised content and adaptive learning pathways" (p. 14). In theory, this aligns with Tomlinson's (2001) emphasis on providing multiple avenues of learning and could reduce some of the workload pressures that make sustained differentiation difficult.

At the same time, researchers caution that AI will not automatically deliver these benefits. Damyanov (2024) raises concerns including bias, data privacy, and the need for teacher training to ensure responsible use. Clark (2024) similarly warns that AI-generated educational content may replicate problematic discourses found online, and that even with careful prompting, teachers often need to modify outputs to ensure accuracy, cultural responsiveness, and alignment with learning goals. This positions the teacher as a critical mediator rather than a passive user of AI tools.

Although the promise of AI in education is widely discussed, there is still limited research that considers how differentiation specifically supports girls, and even less that explores how AI and

differentiation intersect in this context. Much of the literature on AI has focused on tertiary or STEM settings (Zawacki-Richter et al., 2019), while most studies of differentiation centre on achievement rather than confidence or academic self-concept. Studies that attend to the needs of adolescent girls, especially in English classrooms, remain scarce.

This study does not seek to establish whether differentiation is beneficial; the value of readiness-based differentiation is well supported in the literature (Tomlinson, 2001). Rather, it investigates whether artificial intelligence can produce appropriately differentiated learning activities in a time-efficient and sustainable way, and how this in turn shapes girls' confidence, engagement, and willingness to persevere. Limited research examines how differentiation, girls' self-efficacy, and AI intersect in secondary English classroom. Therefore, this study addresses a gap in the literature by examining AI-enabled readiness-based differentiation specifically within a Year 10 girls' English classroom and analysing its influence on academic self-efficacy, engagement, and perseverance. By positioning AI, not as a replacement for teacher expertise, but as a tool that can extend and systematise differentiated practice, the study aims to contribute insight into how inclusive pedagogy and emerging technology can intersect to support girls in becoming more confident and resilient learners.

Research Context

Rangi Ruru Girls' School is an independent girls' school located in Aotearoa New Zealand, with a roll of approximately 700 students. The school serves students from 11 to 18 years old and is academically high achieving, with a strong emphasis on relational pedagogy, structured literacy, and the development of confident young women. The school community is forward-thinking, with growing interest in how emerging technologies, including artificial intelligence, can support learning while remaining aligned with evidence-based practice.

The participants in this project were 21 students aged 14–15 years old in my Year 10 English class. Year 10 represents a pivotal stage in the New Zealand curriculum. Positioned immediately prior to National Certificate of Educational Achievement (NCEA) Level 1, this is a transitional stage where

literacy demands increase and academic self-concept becomes more visible as expectations shift toward independence. This cohort was well positioned: mature enough to reflect on learning while still shaping their academic identity.

The class was multilevel in nature, with a wide range of literacy readiness. Some students demonstrated strong analytical writing skills and independence, while others required significant scaffolding to interpret non-fiction texts and structure extended responses. Variation in reading fluency, writing stamina, and confidence was considerable across the class. This heterogeneity made the class an appropriate context in which to explore readiness-based differentiation supported by artificial intelligence.

The research was conducted over a seven-week teaching sequence. All students completed the same core curriculum content and writing tasks to ensure no student was advantaged or disadvantaged by participation. Permission to participate was obtained through an opt-out letter to parents and caregivers, approved by the school leadership team. No families chose to withdraw. All data were anonymised, securely stored on password-protected school systems, and accessible only to the researcher. No identifiable student information is included in this report.

This multilevel Year 10 girls' English classroom within an academically aspirational, relational school provided a rich context to examine how AI-generated differentiated learning activities might influence confidence and engagement.

The Action

The research project was embedded within a seven-week Year 10 English unit titled "Voices of Change," which focused on the explicit teaching of non-fiction text types. The central pedagogical shift was the systematic integration of AI-generated differentiated scaffolds to operationalise readiness-based differentiation.

Students were grouped (1–4) prior to the intervention using cumulative reading and writing data collected over two terms, including formative and summative assessments, writing

samples, and Progressive Achievement Test (PAT) standardised reading results. This evidence informed the formation of four readiness-based tiers:

1. Making Meaning
2. Digging Deeper
3. Making Judgements
4. Thinking Bigger

These tier names were deliberately chosen to reflect levels of cognitive demand rather than ability labels, reinforcing that all students were engaged in meaningful learning.

Across the unit, students examined multiple non-fiction text types, including opinion pieces, infographics, a formal letter, a newspaper report, and a magazine article. For each text type, lessons followed a consistent instructional sequence. Students analysed a model text, identified structural and language features, and engaged in structured literacy and sentence-level instruction informed by “The Writing Revolution” approach before moving into guided practice.

The innovation occurred in this practice phase. For each text type, ChatGPT was prompted to generate four differentiated analytical worksheets aligned to the readiness tiers. Prompts specified explicit teaching of text features, scaffolding, calibrated cognitive demand, and progressive reduction of support. Differentiation occurred through variation in modelling, sentence stems, vocabulary scaffolds, questioning depth, and the degree of independence required. Students worked with a new AI-generated worksheet every two to three lessons, embedding readiness-based differentiation consistently across multiple text forms rather than a single task.

Each cycle began with analysis of a model text, reinforcing the reading–writing connection before students transitioned into scaffolded composition tasks. A typical analytical worksheet cycle followed a structured sequence, adjusted by readiness tier. For Groups 1 and 2, students identified unfamiliar vocabulary and clarified meaning (with teacher support where required) before identifying the main idea and author’s purpose. They then completed scaffolded tasks exploring how that purpose was achieved through specific language and structural choices. In contrast, Groups 3

and 4 began by articulating the author's purpose, justifying this through close analysis of language and structure, before completing a "beyond the text" task requiring evaluation of impact, contextual connections, and bias.

Following each analytical cycle, students moved into a compositional phase in which they produced their own version of the non-fiction text type. These planning scaffolds were AI-generated using structured prompts I designed, aligned to each readiness tier. For Groups 1 and 2, ChatGPT generated highly scaffolded planning frameworks including sentence stems, paragraph outlines, and modelled introductions and conclusions. These supports reduced cognitive load by making structure visible and predictable, allowing students to focus on idea development and clarity of expression. For Groups 3 and 4, ChatGPT generated planning frameworks using guiding questions and extension prompts, requiring independent generation of topic sentences, selection of evidence, anticipation of counter-arguments, and refinement of tone for audience impact. In this way, AI-supported differentiation extended from analysis into composition, ensuring that each student engaged in authentic text production at an appropriately challenging level of independence and complexity.

Each major writing task was followed by targeted refinement. After producing a formal email, students completed focused writing practice based on identified skill gaps. While marking each task, I recorded specific notes and copied brief excerpts from students' work, which were then used to generate tailored revision and practice tasks through ChatGPT. Similarly, the newspaper report led to a structured editing task targeting recurring patterns and individual needs. Differentiation therefore extended beyond initial production into revision and improvement.

Grouping remained flexible throughout the project. Weekly reflections, task completion data, writing artefacts, and classroom observations informed movement between tiers. Students positioned between two groups were given access to both worksheet levels and invited to select the tier that felt appropriately challenging, with final decisions confirmed through teacher review.

The most significant departure from baseline practice was the sustained and systematic integration of AI-generated differentiated scaffolds across every major text type. Readiness-based

access points were embedded as a consistent structural feature of instruction rather than an occasional adjustment, reshaping analytical engagement and compositional independence across the unit.

Data Collection

During the seven-week “Voices of Change” unit, I used polyangulation to strengthen the credibility of findings, with a focus on student voice. Data were collected through surveys, weekly student reflection journals, semi-structured interviews, and classroom observations conducted by myself and colleagues, including teacher aide notes.

Weekly reflection journals provided ongoing insight into students’ emotional and cognitive engagement with the differentiated tasks. Prompts invited students to reflect on confidence, motivation, challenge, and perceived success, generating qualitative evidence of both individual development and broader class patterns.

These same areas were explored through questionnaires administered via Microsoft Forms at four points: pre-intervention (baseline), midway through the unit, immediately before the NCEA Level 1 Literacy Co-requisite Reading and Writing assessments, and after completion. This enabled comparison of confidence over time and across key assessment points.

Two semi-structured interviews were conducted with focus groups representing different readiness tiers. Interviews explored students’ experiences of challenge, the usefulness of differentiated supports, and readiness for assessment. Interviews were recorded and transcribed, using the flexible questioning approach recommended by Mertler (2025).

Classroom observations and field notes were guided by an adapted version of Mertler’s (2025) classroom observation template (p. 249), focusing on visible indicators of confidence such as task initiation, persistence, participation, and collaboration. Peer observation notes and teacher aide observations supported interpretation and reduced researcher bias.

Data Analysis

Data were analysed using Mertler's (2025) inductive process of organise, describe, and interpret. Qualitative data from journals, interviews, and open survey responses were coded and categorised using Excel, with Otter.ai supporting accurate interview transcription. I revisited early interpretations to ensure identified themes remained grounded in the data.

Polyangulation was used to cross-check patterns and to enrich the data across reflection journals, surveys, interviews, classroom observations, and teacher aide notes. Quantitative trends supported and contextualised qualitative findings, while discrepancies were retained to preserve complexity. This multi-perspective dataset strengthened credibility and reduced potential researcher bias.

Discussion of Findings

This project examined whether AI-generated tasks could successfully differentiate in a Year 10 English classroom, and was possible when differentiation could be produced more efficiently. Across surveys, reflections, interviews, observations, and artefacts, four interconnected themes were identified. Collectively, they suggest that AI-supported differentiation calibrated the girls' cognitive demand at the point of entry, redistributed teacher attention toward feedback and refinement, strengthened girls' collective perseverance and learner identity, and required sustained professional mediation from the teacher to remain pedagogically sound.

AI-Generated Differentiation Calibrates Girls' Cognitive Demand and Supports Self-Efficacy and Confident Engagement

Across reflections, interviews, and classroom observations, students repeatedly described the AI differentiated work as appropriately balanced, both manageable and stretching. One student reflected she was "not stuck … but not breezing through [something that] is too easy." Others described tasks as "a good challenge," targeted more "towards my needs," and "specific to my level." One summarised the calibration succinctly: "Because they were made specifically to me the work felt like it wasn't too easy but also not too hard." This balance reflects Vygotsky's (1978) zone of proximal

development: growth occurred when tasks stretched learners without overwhelming them. Rather than positioning tasks as hard or easy, students described access paired with challenge.

For several girls who had previously hesitated to begin literacy tasks independently, this balance reduced apprehension at entry. Students described being able to “start them without needing to ask for help straight away” and feeling proud of completing work “by myself.” Others reflected, “When I understand I lock in,” suggesting that clarity of entry enabled momentum. Observations from the teacher and teacher aide supported this shift; students moved more readily into annotation and evidence gathering without waiting for reassurance.

At baseline, most girls positioned themselves cautiously as only “a little confident,” and one described herself as “not confident.” Several mentioned “doubting” and feeling “below average,” particularly when tasks felt large or unclear. This aligns with research suggesting girls may underestimate their capabilities and approach challenge with caution, particularly in uncertain contexts. Significantly, by the end of the unit, no girls described themselves in these terms. Most identified as confident, several as very confident. This suggests a cohort-wide shift in perceived capability.

These patterns align with Bandura’s (1997) assertion that mastery experiences are the strongest source of self-efficacy. Confidence emerged not from simplification, but from structured success within appropriately demanding work. Confidence gains were most visible among lower-readiness groups, who described relief at knowing how to begin and what was expected. For these girls, reduced entry anxiety appeared transformative. This is significant given evidence that adolescent girls demonstrate higher concern over mistakes and evaluative pressure (Madigan, 2019; Rodríguez-Naveiras et al., 2025). When cognitive demand is opaque, self-evaluative processes may activate before sustained effort, reinforcing avoidance patterns.

A small number of higher-readiness students described some tasks as “too easy” or “samey.” However, their work samples showed continued improvement in fluency and analytical

precision, suggesting consolidation rather than stagnation. Where dissatisfaction emerged, it reflected a desire for greater autonomy rather than absence of growth.

Across groups, repetition functioned as consolidation rather than monotony. AI-supported scaffolds did not lower expectations; they adjusted entry points so that students could engage confidently with demanding literacy work.

Reduced Procedural Uncertainty Shifts Student Focus Towards Craft Improvement

Once students could enter tasks confidently, the instructional dynamic shifted. A consistent thread throughout student voice was task transparency. Students rarely mentioned the technology itself; instead, they emphasised clarity. “I’m on task and know what I’m doing,” one wrote. Another explained, “I feel confident because I understand what needs to be done.” Earlier reflections had described tasks as “hard to understand” or requiring clarification “just to know what I’m meant to be doing.” During the AI-supported cycle, questions increasingly shifted from clarification to refinement.

Students began asking about flow, transitions, and depth rather than instructions. One reflection highlighted the value of “getting feedback on my work as I write it,” while another described how targeted revision tasks “made me feel the most confident.” Once access to the task was secured, cognitive energy could move toward craft. Students’ emphasis on clarity aligns with research suggesting that perceived differentiation strengthens learners’ sense of competence and academic self-concept (Pozas et al., 2021).

Classroom observations reflected this redistribution. With fewer whole-class clarifications required, conferencing deepened, and feedback became more responsive and precise. Students described being able to “structure my writing really well” and produce “clear and concise sentences.” The shift was not toward speed, but toward control. As procedural demands reduced, teacher interaction became increasingly dialogic, creating more opportunities for relational feedback, an important factor in supporting girls’ confidence and willingness to engage with challenge. This aligns with descriptions of effective differentiated instruction as reflective and responsive rather than

merely structural (Langelaan et al., 2024). In this way, AI functioned not as a replacement for teacher expertise but as a tool that reduced routine demands and enabled greater pedagogical focus (Damyanov, 2024).

A small number of students expressed a desire for greater variety. However, productivity and precision remained steady, suggesting that repetition functioned as refinement. Clarity reduced procedural load and allowed focus on higher-level craft development.

AI-Supported Differentiation Strengthens Collective Perseverance and Fosters a Classroom Culture of Shared Confidence

Beyond individual entry and instructional shifts, a broader cultural change became visible. Students began describing themselves as progressing learners. One wrote, “I feel like I am becoming more confident in my learning,” while another summarised simply, “Confident because I can do it.” End-of-term reflections included pride in “the amount of writing pieces I completed” and “doing heaps of writing and reading tasks,” signalling sustained effort rather than hesitation.

Several girls articulated an identity shift. “I used to think I wouldn’t pass my writing and now I think I was a bit hard on myself,” one reflected. Another described submitting work independently as “a big milestone.” Confidence appeared not only skill-based but identity-based.

Given research indicating that adolescent girls demonstrate greater behavioural risk aversion than boys (Andreoni et al., 2019) alongside higher levels of socially prescribed perfectionism and evaluative concern (Rodríguez-Naveiras et al., 2025; Selcoe & Hayes, 2026), this movement from self-doubt toward self-recognition is particularly significant. The environment created by the AI differentiated tasks appeared to normalise effort and iteration, potentially buffering against perfectionistic self-critique.

Peer dynamics reinforced this shift. Students described “working in groups” and having others “do the same work as me.” Shared readiness reduced comparison anxiety and allowed risk-taking within a psychologically safer environment. As Bandura (1997) suggests, observing peers succeed strengthens individual efficacy beliefs. This aligns with research indicating that students’

perceptions of differentiated instruction predict stronger feelings of belonging (Pozas et al., 2021). When readiness grouping was framed around growth rather than fixed ability, differentiation appeared to function as inclusion rather than hierarchy. Furthermore, Neal's (2022) action research with girls found that structured collaboration strengthened academic risk-taking. In this context, the dominant narrative was not competition but shared progress.

Confidence growth was not universal. A small number of girls reported feeling "about the same," and two girls described feeling "nervous" about particular tasks. Efficacy beliefs are task-specific and context-dependent (Bandura, 1997), and fluctuations are therefore expected. However, across reflections, interviews, artefacts, and classroom behaviour, the dominant pattern was one of increasing emotional safety and shared perseverance.

AI Differentiation is Effective When Mediated Through Teacher Judgement, Verification, and Iterative Refinement

The gains described from AI-supported differentiation did not emerge independently. Differentiation required sustained professional mediation. Early worksheets needed teacher refinement; some phrasing was unclear. Students noted that "the wording was sometimes a bit off," and teacher observations confirmed moments requiring clarification. Over time, templates became more precise and reusable. The process was iterative rather than seamless. Tomlinson (2001) positions differentiation as a proactive and responsive act of professional judgement rather than a static resource; AI outputs required ongoing interpretation and adjustment in context.

Girls' trust in the worksheets was cautious rather than automatic. Few girls reported complete trust. Most described themselves as "mostly trusting," while some expressed uncertainty. One explained she trusted them because she assumed, "I thought you would check if they were right." For others, trust deepened through experience: "I was learning stuff from the sheets." Bandura (1997) highlights the role of credible guidance in shaping efficacy beliefs; confidence appeared anchored less in the tool itself and more in visible professional oversight.

Scepticism remained present. One student argued that “AI makes up misleading information,” while another stated firmly that “AI was never needed.” These negative cases strengthen the finding: AI did not generate trust independently. It required visible teacher oversight and professional judgement to remain pedagogically sound and ethically responsive (Clark, 2024; Damyanov, 2024).

Sustained engagement stemmed not from novelty but from consistency and relational reassurance. Students who had previously demonstrated heightened self-criticism appeared increasingly willing to take academic risks when mediation was visible. Consistent with research linking adolescent girls’ perfectionism to evaluative pressure and emotional wellbeing (Rodríguez-Naveiras et al., 2025; Selcoe & Hayes, 2026), structured task design combined with relational verification may strengthen resilience. As Langelaan et al. (2024) argue, effective differentiation requires ongoing reflection and responsiveness; AI redistributed, rather than removed, the cognitive and pedagogical demands of differentiated instruction.

Conclusions

This study examined whether artificial intelligence could operationalise readiness-based differentiation within a Year 10 girls’ English classroom. The findings indicate that AI-generated scaffolds were able to design challenge effectively, reducing procedural uncertainty, and supporting earlier task initiation, mastery experiences, and increased academic confidence, particularly by reducing the uncertainty and risk-aversion often reported by adolescent girls. As clarity increased, teacher time shifted toward targeted feedback and relational interaction, contributing not only to strengthened individual self-efficacy but also to the development of a classroom culture characterised by collective perseverance and shared assurance, supporting girls to engage more confidently with challenge.

However, the effectiveness of AI-supported differentiation was contingent upon deliberate teacher mediation. Refinement and verification were essential, reinforcing that AI extends rather than replaces professional expertise, supporting teachers to enact meaningful differentiation

more consistently within time-constrained classroom contexts. While the development phase required substantial initial investment, the creation of reusable differentiated templates increased sustainability over time and enabled more consistent readiness-based access to learning.

Several limitations must be acknowledged. Early implementation demanded careful prompt design and ongoing verification for tone, bias, and accuracy. There remains a risk that readiness grouping may be misinterpreted as fixed ability if not continually framed as flexible and growth-oriented. Additionally, a small number of higher-readiness students reported reduced engagement over time, highlighting the importance of maintaining variation and responsiveness.

Taken together, these findings suggest that AI, when professionally mediated, can make systematic differentiation more sustainable and free teacher capacity for relational, feedback-rich interactions central to confidence-building in adolescent girls' classrooms. Future research with larger cohorts and longitudinal tracking would deepen understanding of how AI-supported differentiation shapes academic self-efficacy over time and across contexts. Further investigation into the interaction between AI-generated scaffolds and collaborative learning structures may also provide valuable insight into how technology and pedagogy can intersect to support inclusive, confidence-enhancing practice.

Reflection Statement

Participating in this action research project has been both professionally stretching and deeply affirming. I began the inquiry curious about whether artificial intelligence could make differentiation sustainable in a busy secondary classroom. Over time, however, my learning extended beyond technology. I came to understand more clearly how clarity, task calibration, and relational time shape confidence in a girls' classroom. Watching students shift from asking, "What am I meant to do?" to "How can I improve this?" was a powerful moment. It confirmed that when cognitive uncertainty is reduced, girls are more willing to take academic risks and persist.

Emotionally, the project was both energising and humbling. Early attempts at generating differentiated scaffolds were inconsistent, and refining prompts required more precision than I

anticipated. There were moments of frustration as I adjusted wording, recalibrated cognitive demand, and ensured alignment with curriculum intent. Yet these hurdles became highlights in retrospect. The iterative process sharpened my instructional clarity and reinforced the importance of professional judgement. Rather than replacing my expertise, AI demanded that I articulate more precisely.

One of the most significant highlights was observing the emergence of collective confidence. Subtle changes in peer interactions: students encouraging one another, sharing drafts more openly, and attempting work independently, suggested that differentiation was influencing not only individuals, but classroom culture. That shared sense of “we can do this” felt like the most meaningful outcome of the project.

I owe enormous thanks to the International Coalition of Girls’ Schools (ICGS) and the Global Action Research Collaborative (GARC) community for creating a space where practitioner research is both valued and rigorously supported. In particular, I am deeply grateful to my research adviser, Karen Lewis, whose thoughtful guidance, probing questions, and steady encouragement strengthened both this project and my confidence as a researcher.

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Most importantly, I am thankful to my Year 10 students, whose honesty and willingness to engage made this research possible. This journey has reinforced my belief that when instructional

structures reduce unnecessary barriers and prioritise relational trust, girls not only achieve they grow in confidence and resilience.

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