Policy Brief
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TEACHING TOMORROW: WHY AI READINESS IS KEY TO QATAR'S EDUCATION VISION

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Executive Summary

Qatar's National Vision 2030 and its National Artificial Intelligence (AI) Strategy set a bold agenda: transform the nation into a knowledge-based economy, with education as the engine and AI as a key enabler. But as AI tools enter classrooms, one question emerges: Are teachers ready?

This policy brief, commissioned by the World Innovation Summit for Education (WISE), Qatar Foundation, shares insights from a national survey of 296 K–12 teachers across Qatar's public and private schools. Conducted in the second quarter of 2025, the survey explored teachers' attitudes, usage patterns, and the conditions that drive meaningful AI integration in classrooms. The survey link was disseminated through the Ministry of Education and Higher Education, and from a national teaching population of approximately 36,000 educators, the 296 voluntary responses represent a diverse and representative cross-section of Qatar's teaching workforce.

Teachers from all grade levels participated: 56% high school, 23% middle school, 21% elementary, and 1% early childhood.

Key Insight: Teacher demographics such as age, school type and years of experience do not predict AI adoption. Instead, four factors emerged as drivers of successful integration:

1. **Digital confidence**
2. **Structured training pathways**
3. **Belief in AI's instructional value**
4. **English language support for teachers**

Without addressing these, gaps in readiness will persist—threatening equitable access to AI's benefits.

Teachers are experimenting with Generative AI (GenAI), mostly for lesson preparation (e.g., creating assignments, generating lesson plans), with fewer using it during instruction. While adoption is still modest, a growing minority are integrating GenAI regularly. Encouragingly, most teachers believe GenAI improves learning, boosts efficiency, and enables personalization for student learning.

Key Policy Recommendations

- **Assess Teachers' Digital Literacy First:** Establish a baseline of digital skills to tailor AI training and mea sure its effectiveness.
- **Set Clear AI Competency Standards:** Define minimum AI skill requirements across all teacher training pathways to ensure consistency and readiness.
- **Prioritize Teaching Quality Over Tech Skills:** Focus professional development on how AI can enhance teaching outcomes, not just on learning how the tools work.
- **Ensure Language Support for Equitable Access:** Provide English language assistance so all teachers can fully benefit from AI tools and training.

The Challenge

Schools in Qatar have made significant progress in establishing the technological infrastructure and policy frameworks necessary to support AI integration in education (Government Communications Office, 2024). Teachers are equipped with access to AI tools, and institutional policies are increasingly designed to encourage their adoption. However, while enabling conditions are in place, actual classroom usage varies considerably across the teaching workforce.

This creates uneven access to opportunities to use AI's potential: some educators have the conditions and support to benefit, while others face constraints such as limited training time, language support, or access to tools. The question emerges: How can Qatar ensure that vastly different AI readiness levels among teachers do not result in inconsistent learning and teaching experiences that compound existing educational disparities?

Key Findings

Primary Uses of GenAI by Teachers in Qatar

Teachers in Qatar are using GenAI not just to save time but to transform how they prepare and personalize learning. While most use it for creating assignments, teachers share that the real value lies in freeing up their time for deeper engagement with students.

This shift from administrative burden to instructional focus reflects a broader trend: GenAI is enabling teachers to move beyond routine tasks and invest more in student-centered learning. The diversity of use cases, from lesson planning to visual aids, shows that teachers are beginning to explore AI's potential as a creative and adaptive teaching partner.

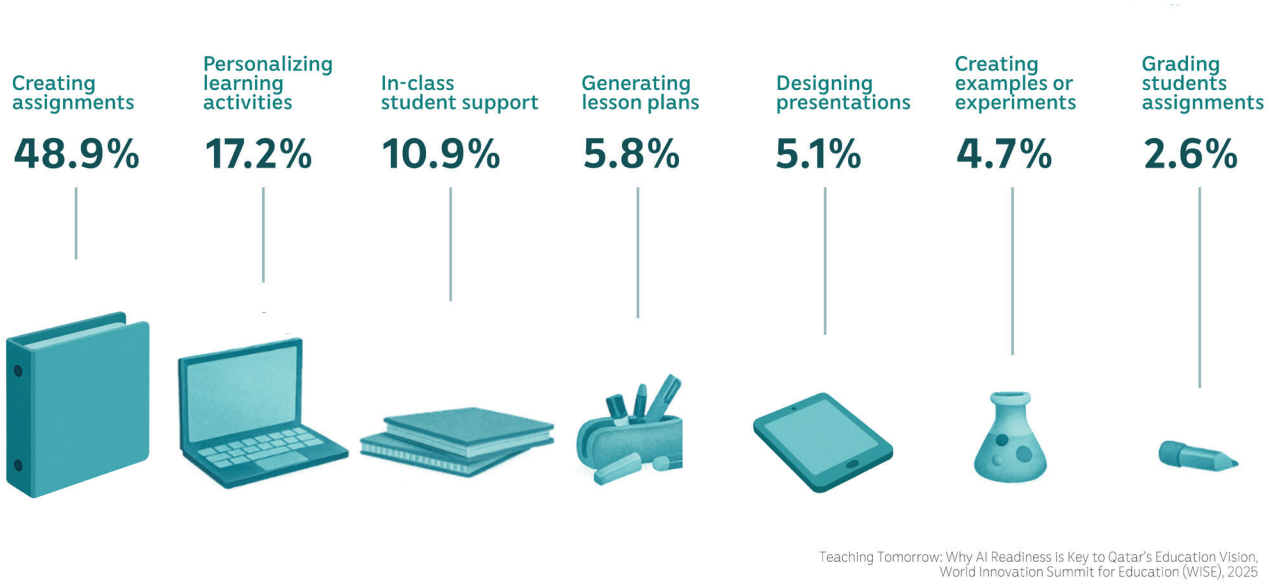

Figure 1.1. Primary ways teachers in Qatar use GenAI in their practice.

** Note: The "Other (4%)" category includes uses such as checking student work, supporting English language learners, and navigating institutional constraints like data privacy policies.*

> It's not just providing information and getting a lesson plan back. I build an entire conversation around the lesson, skills, and unit. Through that dialogue, I refine the content until I get exactly what I need.
>
> **- Teacher in Qatar**

Where Teachers in Qatar Are on the AI Adoption Curve

The data reveals a clear trend: teachers are more comfortable using GenAI for preparation than for real-time teaching. A larger proportion reported using GenAI weekly or more for lesson preparation compared to classroom instruction.

The difference in usage frequency between preparation and teaching reflects the varying levels of familiarity, confidence, and perceived utility across contexts. It also indicates the diversity in how teachers are approaching GenAI, some as a planning assistant, others as a classroom collaborator.

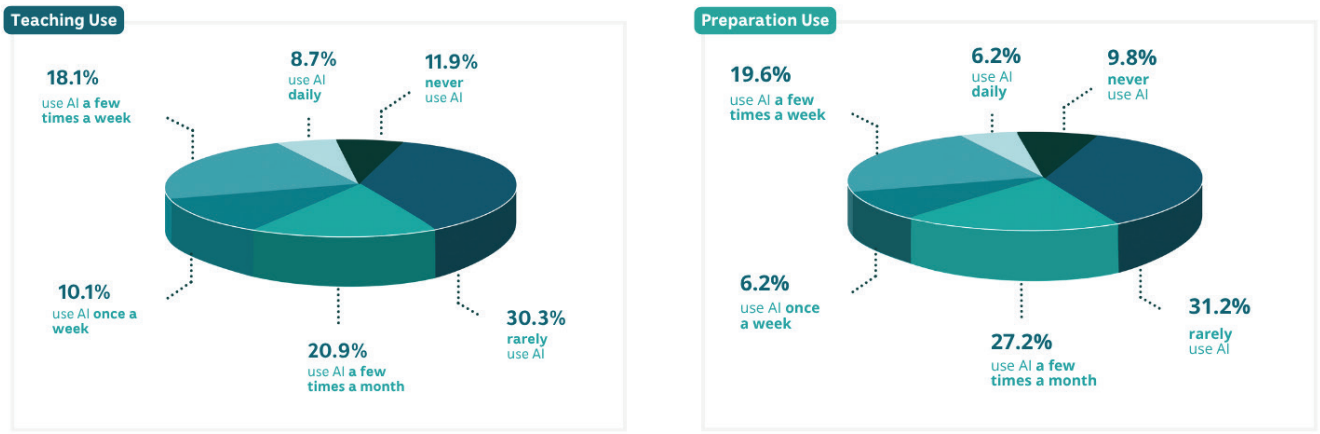

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Figure 1.2 Frequency of GenAI use for lesson preparation versus classroom teaching, based on a 6-point Likert scale ranging from "Never" to "Daily".

> "It used to be a process I didn't like—preparing five lessons a day was exhausting. Now, using AI, it's a click of a button. I have more time to individualize, differentiate, and support students in the classroom."
>
> **- Teacher in Qatar**

WISE (https://www.wise-qatar.org/)

Teachers Perceptions of GenAI's Impact on Education

Most teachers expressed positive views about GenAI's role in education. A strong majority agreed that it improves student learning (76%), enhances teacher efficiency (72%), and supports more personalized instruction (71%). These responses suggest that GenAI is seen not only as a tool for saving time, but also as one that can help tailor learning experiences to individual student needs.

Support for GenAI-related training was similarly high, with 72% of teachers agreeing that professional development should be mandatory. This indicates broad recognition of the importance of building capacity to use AI effectively.

While disagreement was minimal, approximately 20% of respondents selected neutral responses across several statements, highlighting a group that may require further engagement or targeted support. This group may reflect teachers who are still forming opinions or have limited experience with GenAI in practice. The overall sentiment indicates that teachers are optimistic about GenAI's potential, especially when its use aligns with instructional goals and student outcomes.

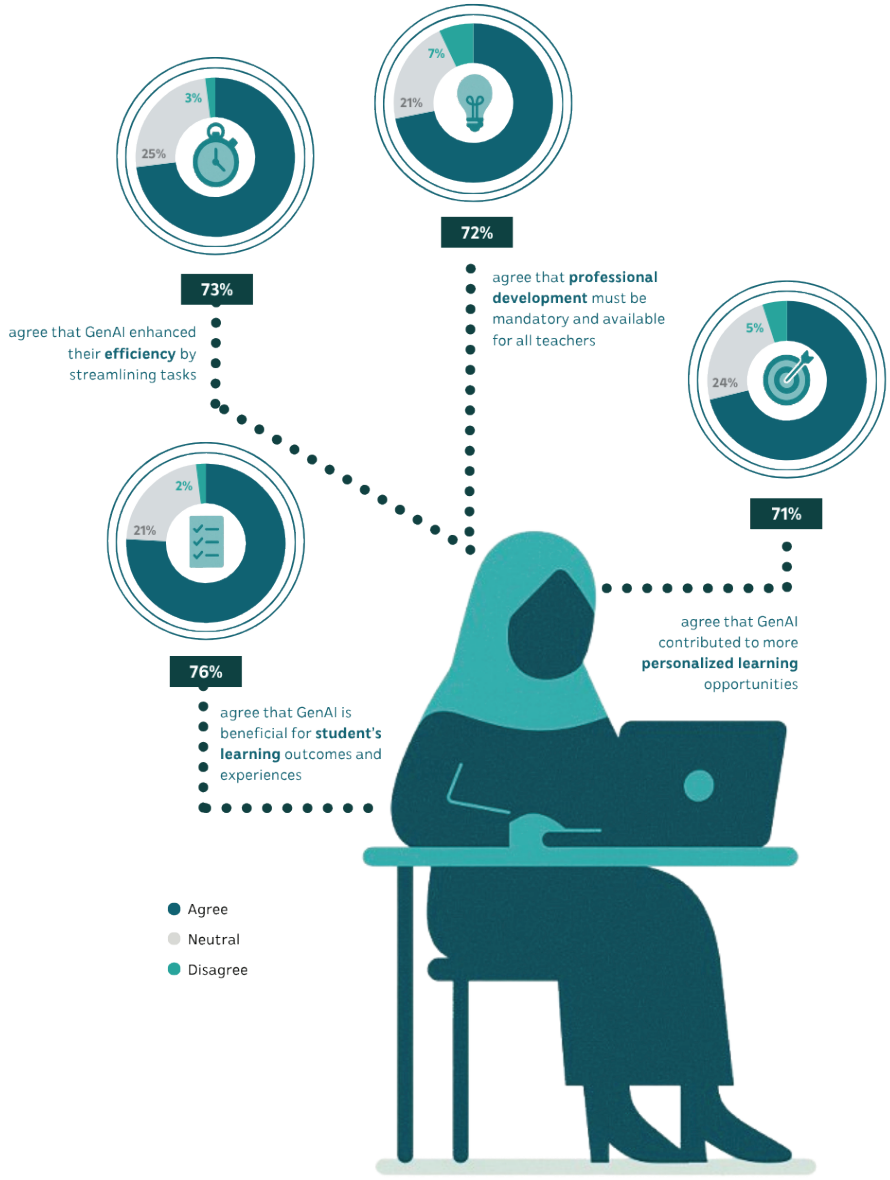

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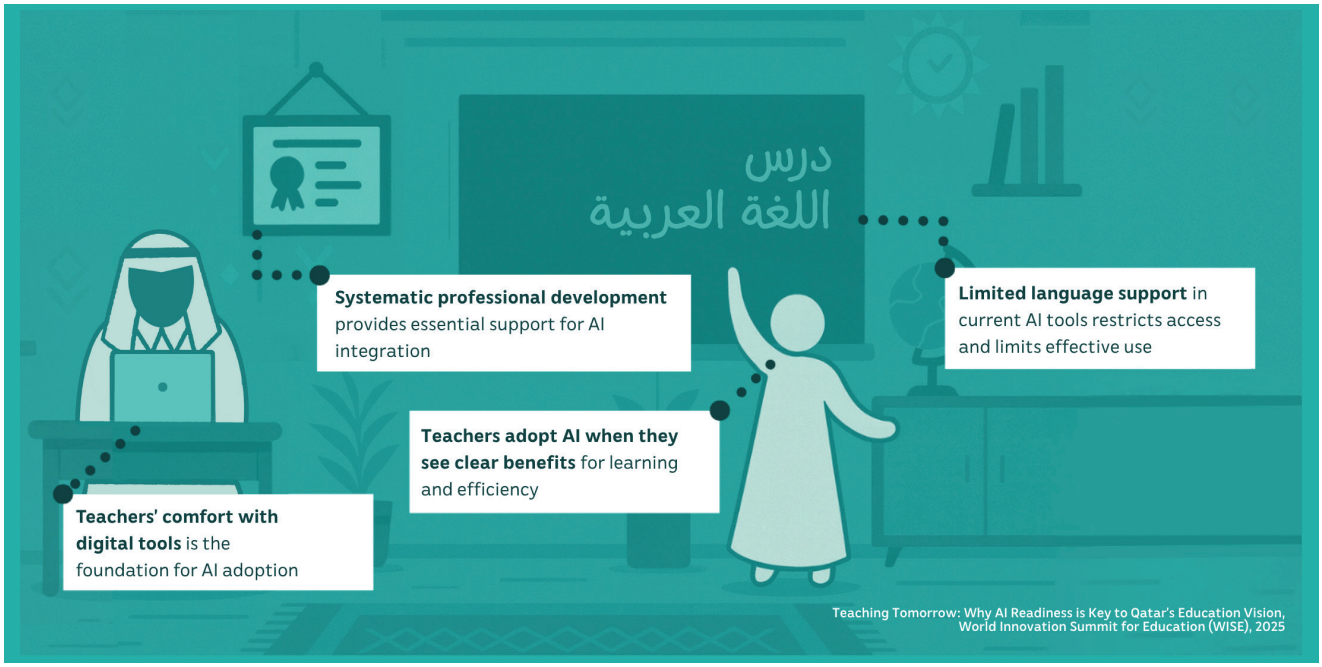
Figure 1.3 Teachers' perceptions of GenAI's impact on learning, efficiency, and personalization. Teachers rated their agreement with statements about GenAI's instructional value using a 6-point Likert scale (1 = Strongly Disagree to 6 = Strongly Agree).

Factors Shaping Teachers' Readiness for AI Integration

Teachers' readiness to integrate AI into their classrooms depends on multiple interconnected factors. Drawing from survey findings, this brief identifies four critical areas that influence successful AI adoption: teachers' confidence, systematic professional development pathways, perceived benefits for learning outcomes, and language support. The following sections examine each factor in detail and outline targeted policy recommendations.



1) Digital Confidence as a Foundational Competency

- Teachers **comfortable with educational technology were 52% more likely** to report past GenAI use.
- Digital fluency strongly predicted **awareness, confidence, and practical application** of AI tools.
- Digitally confident teachers better understood how GenAI works and felt more equipped to integrate it into their classrooms.
- Age, school type, and years of experience had no predictive effect on AI adoption

Research suggests that the success of AI integration in education depends on deploying new technologies as well as equipping teachers with the digital confidence and competence to use them effectively (Tan et al., 2025).

When foundational digital skills are lacking, the use of AI becomes limited and inconsistent. This can reduce its instructional value, hinder classroom innovation, and contribute to unequal learning experiences. Evidence shows that teachers with strong educational technology skills consistently outperform peers across all measures of AI readiness: **awareness, confidence, and practical application**.

Digital fluency gives teachers the capacity to evaluate AI outputs critically, adapt tools to classroom needs, and experiment with new teaching methods. Without this foundation, AI adoption risks being superficial or unsustainable.

Policy Recommendations

Invest in **foundational digital literacy training** for all teachers as a prerequisite for AI integration. Training should include:

- Practical orientation to vetted and approved digital tools
- Hands-on practice to build confidence and fluency in their use.
- Professional development that explicitly connects technology use with evidence-based pedagogical strategies.

2) Structured Training Pathways

- Teachers who completed university-based teacher preparation programs were far more likely to report feeling prepared to use GenAI and integrate it into lesson planning.
- Teachers **without formal preparation were 75% less likely** to use GenAI frequently for preparation tasks.
- Non-traditional entry pathways (e.g., job-based entry, informal mentoring) often lack structured opportunities to develop both digital and pedagogical skills.

AI readiness is not a personal trait. It is built through **structured preparation and continuous professional learning**. Teachers who receive formal, university-based training enter the classroom with stronger pedagogical foundations and greater ability to apply AI tools meaningfully. Alternative entry routes often leave educators underprepared to evaluate AI outputs or adapt them for student learning. If these training gaps persist, Qatar risks a two-tier system where only some teachers benefit from AI integration.

Policy Recommendations

Integrate AI and educational technology literacy into all **teacher preparation pathways** (pre-service training), both traditional and alternative.

- Develop a standardized AI competency framework with skill benchmarks that define what all new teachers should know and be able to do with AI and educational technologies.
- Provide "bridging" courses so teachers entering through alternative pathways can build the same AI and technology skills.
- Replace one-time technology workshops with ongoing professional development that allows teachers to continuously update their skills as AI and educational technologies rapidly evolve.

3) Perceived Instructional Value of GenAI (teachers' belief)

- Teachers **who believed GenAI is useful for instruction** were **67% more likely** to have used it in the past.
- Teachers were most likely to use GenAI regularly in class when they **believed it could support personalized learning**—this belief more than doubled the likelihood of frequent use.
- Teachers continued using GenAI only when they **saw a clear and meaningful relationship to student learning,** not from access to the technology alone.

Consistent with other studies, the findings show that simply providing access to AI tools does not guarantee sustained or effective integration. Sustained classroom usage depends on whether teachers see value in how AI supports student outcomes. Educators who perceived GenAI as a tool for personalizing learning and addressing diverse student needs were significantly more likely to adopt it regularly. This underscores the need for professional development that emphasizes the pedagogical value of AI, why it matters for learning outcomes, rather than focusing solely on the mechanics of its use.

Policy Recommendations

Design **professional development** to showcase the pedagogical benefits of AI for students' learning.

- Use hands-on and practical classroom examples that illustrate how GenAI can support differentiated instruction and formative assessment.
- Facilitate collaborative knowledge-sharing among teachers on AI-enabled instructional strategies.
- Support action-research initiatives that empower teachers to experiment with AI tools and evaluate their effects on student engagement and achievement.

4) Language Proficiency as a Barrier

- Teachers with stronger English writing skills are better able to navigate and apply these tools effectively.
- Limited English writing proficiency can quietly restrict access and early experimentation, even among teachers interested in using AI.

Written English proficiency emerged as a significant determinant of GenAI use in Qatar, influencing both exploration and application. Without addressing this barrier, AI integration efforts risk excluding capable educators who face language difficulties.

Policy Recommendations

Integrate **English writing support** into GenAI professional development.

- Provide bilingual or Arabic-language resources where possible.
- Scaffold prompt-writing practice to build teachers' confidence in using AI tools.
- Ensure that language support is available at all training stages, so teachers are not excluded from initial adoption.

WISE (https://www.wise-qatar.org/)

Acknowledgments

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