

# **Aligning Policy and Practice in Pedagogical Leadership: A Mixed-Methods Study of School Leaders' Readiness for AI Integration in UAE Schools**

## **Purpose of the study**

This study investigates three interconnected questions: how educational leaders' perceptions of AI policy awareness and implementation differ across school types and student gender; what relationships exist between policy awareness, years of experience, and educational attainment; and which factors significantly predict leaders' readiness for AI integration in pedagogical leadership. Set against the UAE AI Strategy 2031 and Ministry of Education directives, the study aims to identify the enablers and barriers that shape the translation of national AI ambitions into school-level pedagogical practice.

## **Research methods**

A convergent parallel mixed-methods design was employed, assigning equal interpretive weight to quantitative and qualitative strands. Survey data were collected from 395 educational leaders across government, charter, and private schools in multiple emirates, using stratified random sampling to ensure representation across school cycles, sectors, and locations. Semi-structured interviews were conducted with 18 leaders selected through maximum variation sampling. Analysis was guided by a researcher-developed integrated triadic framework synthesizing pedagogical leadership theory, the learning organization model, and the technological pedagogical content knowledge (tpack) framework. quantitative data were analyzed using descriptive statistics, one-way analysis of variance (ANova), tukey's post-hoc tests, spearman correlations, and multiple regression in spss. qualitative data were thematically analyzed using nvivo 14, following braun and clarke's (2021) reflexive thematic analysis approach.

## **Results and discussions**

Findings reveal high conceptual awareness of AI's pedagogical potential ( $M = 3.77/5.00$  for AI integration in pedagogical leadership) but moderate readiness for implementation ( $M = 3.51/5.00$ ). fewer than 38% of leaders reported receiving appropriate professional development for AI use in leadership roles. multiple regression analysis identified policy awareness, knowledge of AI tools, and awareness of challenges and opportunities as significant predictors of readiness, collectively explaining 74% of its variance ( $R^2 = 0.744$ ). readiness, in turn, predicted 59% of the variance in reported AI integration within pedagogical leadership. significant differences were found across school cycles, with primary-level leaders reporting lower readiness, and leaders of female schools demonstrating consistently higher agreement across all survey dimensions. qualitative analysis revealed three dominant themes: policy integration and clarity, accessibility and translation, and perceived policy gaps. leaders described national directives as aspirational visions rather than actionable frameworks, with Arabic-only dissemination creating structural barriers for multilingual leadership teams. these findings indicate that AI readiness in UAE schools is a composite construct shaped by policy literacy, professional learning culture, and ethical-cultural competence, rather than technical knowledge alone. the study advances a holistic model of AI-enabled pedagogical leadership and calls for

structured, bilingual, contextually responsive professional development aligned with the UAE Vision 2031.

**Keywords:** AI integration, pedagogical leadership, school leaders' readiness, UAE education policy, mixed-methods research