CONFERENCE PRESENTATION

Reimagining EFL Classrooms

The Transformative Potential of AI Tools in Language Learning

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Descriptive mixed-methods study • Three secondary schools, Pakistan • 2025

ABSTRACT HIGHLIGHTS

What this study set out to find

How AI is actually used

Effective strategies for implementing AI in authentic EFL classroom environments.

Measurable impact

Triangulated indicators of efficiency, engagement and teacher perception.

Opportunities & challenges

Both the pedagogical potential and the risks of AI-integrated learning.

THE BOTTOM LINE

AI offers significant pedagogical potential to enhance engagement, efficiency and instructional effectiveness — but effective implementation depends on **targeted teacher training, pedagogical adaptation, and rigorous oversight of AI-generated outputs.**

BACKGROUND

A paradigm shift since 2023

AI has moved from theory to the classroom

Generative tools such as ChatGPT are now present in real EFL classrooms, not just in research proposals.

Research has concentrated on writing & feedback

Personalised scaffolding, idea generation, reduced marking load — especially in large or disadvantaged classrooms.

But concerns persist

Incorrect content, over-reliance on tools, and questions of assessment integrity and transparency.

THE PAKISTANI CONTEXT

AI in education is still at a nascent stage.

Digital Pakistan Vision and rising school connectivity are enabling change — yet access remains uneven.

Teachers report limited support and awareness for installing, upgrading and using technology.

Infrastructure gaps persist across schools.

→ Empirical, classroom-based evidence is needed — not more theory.

THEORETICAL FOUNDATIONS

Eight frameworks, one pedagogical mediator

CALL

The foundational tradition for studying technology in language learning.

Input Hypothesis

Krashen — comprehensible input; AI supplies adaptive explanations and simplified text.

Sociocultural Theory

Vygotsky — scaffolding within the zone of proximal development.

Interaction Hypothesis

Long — learning through dialogue and feedback cycles, as in AI conversation.

Output Hypothesis

Swain — writing and revision build accuracy and fluency.

Formative Assessment

Black & Wiliam — feedback loops, directly mirrored by AI feedback systems.

TAM

Davis — perceived usefulness and ease of use shape acceptance.

TPACK

Mishra & Koehler — the intersection of technology, pedagogy and content knowledge.

Together: AI as a pedagogical mediator — reshaping teaching, learning and assessment.

OBJECTIVES

Six things this study set out to do

1. Evaluate how AI tools — **ChatGPT, QuillBot and Diffit** — are integrated into language teaching and classroom assessment.
2. Examine how AI can enhance teachers' tasks, such as **assessment efficiency and lesson preparation**.
3. Assess how well students **engage with and comprehend** AI-enabled tasks, especially writing and feedback.
4. Identify the **pedagogical, technical and ethical challenges** educators encounter when applying AI tools.
5. Provide **evidence-based recommendations** for effective AI use in resource-constrained EFL classrooms.
6. Share **evidence-informed insights** to support informed AI integration in low-resource contexts.

SCOPE & SIGNIFICANCE

Why this study matters

SCOPE

- 📍 **Three secondary schools** in Pakistan
- 🏫 **Live classroom action** — teachers and students engaged in AI-supported pedagogy
- 🗣️ **Semi-structured interviews** plus lesson and student observation
- 💻 **Platform analysis** of ChatGPT, QuillBot and Diffit
- 🌍 A contribution to research on **language learning in developing countries**

SIGNIFICANCE

- ⚠️ Empirical evidence on AI in **Pakistani EFL classrooms** is limited and weak.
- 📈 Recognition of AI's role in learning analytics and adaptive teaching is growing — the evidence base is not.
- 🎯 Offers practical recommendations for **teachers, curriculum developers and policymakers**.
- PK Speaks directly to the **Digital Pakistan** education agenda.

→ **Enables more contextually appropriate classroom technology use in low-resource settings.**

RESEARCH DESIGN

A descriptive mixed-methods design

Interpretivist stance

Centred on teachers' beliefs, views and lived experiences of AI-supported pedagogy.

Qualitative + quantitative

Interview data alongside classroom records and AI-platform logs.

Whole-school view

Real school settings, not laboratory conditions.

Pedagogical, not technical

AI integration studied as a teaching intervention, not mere tool adoption.

Framed by TPACK: AI used as a pedagogical tool guided by teachers — **never as a substitute for teaching.**

THE INTERVENTION

Four AI-supported classroom practices

Writing development

ChatGPT

Brainstorming, drafting and revising with AI support.

Language feedback

QuillBot

Paraphrasing and vocabulary enhancement, under teacher supervision.

Instructional adaptation

Diffit

Simplifying reading material to match learner level.

Reflective engagement

TEACHER-LED

Discussing, evaluating and modifying AI suggestions — never accepting them at face value.

→ Measured outcomes reflect AI-supported pedagogy, not mere exposure to AI technology.

SAMPLING

Purposeful selection, diverse contexts

🎯 Purposive sampling — institutions *and* participants

Selected for relevance and richness of data, not random representativeness.

Schools chosen by **digital infrastructure** and **observability** — allowing comparison across very different resource levels.

All teacher participants had **practical prior experience** using ChatGPT, QuillBot or Diffit in English teaching.

EFL teachers in the wider sample
Islamabad secondary schools
12

Interviewed in depth
Semi-structured interviews
7

Schools observed
School A · B · C
3

DATA SOURCES & TRIANGULATION

Five sources, one converging picture

- **Semi-structured interviews** — 7 EFL teachers across 3 schools
- **Structured classroom observation** — 6 weeks, five-dimension checklist
- **AI platform analytics** — ChatGPT, QuillBot, Diffit usage logs
- **Field notes** and reflective observation journals
- **Generated artefacts** — ChatGPT texts, QuillBot paraphrases, Diffit adaptations

METHODOLOGICAL

Triangulation

No indicator rests on a single source.

Every reported figure is cross-validated across interviews, observation and platform data.

Evidence of implementation in context — **not proof of general effectiveness.**

OBSERVATION INSTRUMENT

The five-dimension checklist

01

AI integration strategy

How teachers built AI activities into the lesson.

02

Student tool interaction

How often, and for what purposes, students used AI.

03

Teacher mediation

Explaining, correcting and evaluating AI output.

04

Learning activity outcomes

Completion of writing, revision and comprehension tasks.

05

Reflective engagement

Whether students could evaluate and modify AI suggestions.

This framework moved the study **from counting AI availability to examining what AI-supported pedagogy actually did to classroom practice.**

DATA COLLECTION PROCEDURE

Six weeks, one repeating cycle

1

Teacher sets the objective

Clear learning goal, then conventional instruction first.

2

Students draft, then consult AI

Own draft first → seek AI feedback → revise.

3

Compare and discuss

Students justify changes with teacher and peers.

4

Teacher validates

Teachers remained responsible for validating every AI suggestion.



Interviews first → six weeks of observation → platform analytics. **Diffit-adapted texts supported reading; comprehension discussion followed.**

DATA ANALYSIS

Thematic coding + a transparent metric

THEMATIC ANALYSIS

Familiarisation → preliminary coding → theme creation → category refinement.

Categories: teaching methods · teacher workload · participation · technological, ethical and pedagogical challenges.

CROSS-CASE COMPARISON

School-by-school comparison of AI use cases, to surface both similarities and differences.

WORKLOAD REDUCTION (%)

= (Pre-AI time − Post-AI time)
÷ Pre-AI time × 100

Baseline vs. 6-week AI-assisted period; cross-validated by weekly logs.

COMPOSITE ENGAGEMENT INDEX

(i) participation frequency
(ii) task completion rate
(iii) AI interaction frequency

Aggregated across observed sessions → overall percentage.

Quantitative indicators serve as **supporting descriptive evidence** alongside the qualitative account — not as causal proof.

ETHICAL CONSIDERATIONS

Doing this work responsibly

Informed consent

Teachers consented to both interview and observation before any data was gathered.

Anonymity

All data anonymised to protect participant and institutional confidentiality.

Summative analytics only

Platform data viewed in aggregate — no access to private or sensitive student information.

Academic integrity

All sources properly cited to avoid intellectual-property breaches.

Now — the findings.

RESULTS AT A GLANCE

Six numbers that tell the story

27%

reduction in grading workload

pre- vs post-AI grading time

83%

composite student engagement

three-component index

58%

of teachers concerned about over-reliance

n = 7 teachers

7

EFL teachers interviewed

3

secondary schools observed

6

weeks of structured observation

All indicators triangulated across teacher logs, classroom observation and AI-platform analytics.

FINDING 1 — INSTRUCTIONAL EFFICIENCY

Grading time fell by 27%

GRADING TIME PER ASSIGNMENT — INDEXED (BASELINE = 100)



− **27 points on the index**

HOW IT WAS MEASURED

Teacher logs of grading duration, compared before and after AI-assisted feedback.

Cross-validated with weekly logs and observation records across all three schools.

→ Less repetitive marking

= more time for teaching

FINDING 2 — LEARNER ENGAGEMENT

An 83% composite engagement index



THREE OBSERVABLE INPUTS, AGGREGATED

i **Participation frequency** — how consistently students took part

ii **Task completion rate** — how many AI-supported tasks were finished

iii **AI interaction frequency** — how often students queried, revised or sought feedback

Strongest in **writing tasks** — students actively edited their own drafts using AI suggestions.

FINDING 3 — TEACHER PERCEPTIONS

58% worried about over-reliance

CONCERN ABOUT STUDENT OVER-RELIANCE (n = 7)



■ Concerned (4 of 7) ■ Not concerned (3 of 7)

Binary coding of interview transcripts, then frequency calculation. Small n — a directional signal, not a population estimate.

WHAT TEACHERS SAW

Some students used ChatGPT to compose tasks, producing output that required little independent processing.

The tension, stated plainly

AI scaffolding raised **writing fluency** while narrowing opportunities for **critical thinking and independent writing.**

CROSS-SCHOOL COMPARISON

Infrastructure shaped everything

School A

HIGH

Developed digital infrastructure

ChatGPT for drafting and revision

Consistently high engagement; frequent drafting and revision cycles.

Students actively compared and edited each other's work.

Sustained, self-directed tool use

School B

MODERATE

A selection of digital tools

QuillBot for paraphrasing

Moderate but structured engagement; teacher-led and directive.

Students compared original and paraphrased sentences.

Effective in regular, bounded intervals

School C

SCARCE

Limited digital infrastructure

Diffit for simplified reading

Low baseline participation, rising when teachers facilitated.

Adapted passages presented for group comprehension discussion.

AI as a teaching aid, not a student tool

Common across all three: greater willingness to write, more peer discussion during revision, better response when AI feedback was teacher-mediated.

THE OTHER SIDE OF THE FINDING

Three concerns the data kept returning

CONCERN 01

AI dependency

Students leaning on pre-formulated phrasing instead of composing their own.

Risk: weaker critical thinking, reduced learner autonomy.

CONCERN 02

Feedback inconsistency

AI feedback was not accurate, curriculum-aligned or contextually appropriate in every case.

Risk: repeated need for teacher correction and adaptation.

CONCERN 03

Surface learning

Grammatically improved text without awareness of what changed, in School B's paraphrase work.

Risk: polish mistaken for understanding.

Teachers also reported **AI suggestions that lowered academic rigour** or conflicted with their own guidance.

THEMATIC SYNTHESIS

Five themes, and what each implies

THEME	FINDING	IMPLICATION
Instructional efficiency	Reduced workload	More time for teaching
Learner engagement	Higher participation	Improved motivation
Pedagogical adaptation	Strategy changes	Blended learning
AI dependency	Overuse by students	Need for guidance
Feedback reliability	Inconsistent output	Teacher validation required

Benefits and risks are not two lists — they are the same mechanism, differently mediated.

THE CENTRAL TENSION

A double-edged sword

Benefits

⚡ Efficiency
27% less grading time; more room to teach

Engagement
83% composite index across observed sessions

Motivation
Greater willingness to write and revise

Risks

⚠ Over-reliance
58% of teachers raised it unprompted

Weaker critical thinking
Polished output without understanding

🔀 Feedback inconsistency
Misaligned with curriculum and context

Both sides are real. Which one dominates depends on teacher mediation and instructional design.

SIGNIFICANCE OF THE STUDY

Why this contribution matters

01

Empirical, not theoretical

Real classrooms, real teachers, six weeks of observation — in a context where such evidence barely exists.

02

Resource-constrained context

Most AI-EFL research comes from well-resourced settings. This study shows what happens when infrastructure is uneven.

03

Both sides, measured

Efficiency and engagement reported alongside dependency and reliability — not one without the other.

What it does **not** claim: that AI tools are generally effective. The indicators are **evidence of AI-supported pedagogical implementation in specific classroom contexts.**

CONCLUSION

Efficiency and engagement are real. So are the risks.

AI reduced grading load, lifted participation and supported writing development.

It also produced dependency, inconsistent feedback and, in some cases, surface learning.

The difference is teacher mediation, instructional design, student digital literacy and infrastructure.



A caution worth stating plainly: **these are context-bound indicators, not proof of general effectiveness.**

LIMITATIONS

What this study cannot tell us

1. **Small sample** — 7 teachers interviewed, 3 schools observed. Depth, not breadth.
2. **One region** — schools are situated in a particular geographic area of Pakistan.
3. **No causal design** — descriptive indicators, not an experimental or longitudinal test of learning outcomes.
4. **Indicators depend on context** — results were contingent on teacher proficiency, instructional design, digital literacy and infrastructure.

→ Future work needs larger samples, experimental or longitudinal designs, and validated metrics of AI-based engagement.

RECOMMENDATIONS

Four moves that would change the outcome

Teacher training

Build practical capability to prompt, judge and correct AI output — not just to operate the tool.

Pedagogical adaptation

Design tasks around learning goals first, then choose where AI genuinely helps — blended, not bolted on.

Oversight & validation

Rigorous review of AI-generated feedback and content before it reaches students.

Context-sensitive adoption

Design for the infrastructure that exists. In low-resource settings, teacher-facilitated AI beats student-directed AI.

None of these are technical fixes. All four are pedagogical decisions.

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Full reference list (20 sources) available in the paper. DOIs omitted here for slide legibility.



THANK YOU

Questions & discussion

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AI does not transform EFL classrooms by itself. **Task design, teacher mediation and critical AI literacy do.**