DIKTISAINTEK BERDAMPAK

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Konferensi Puncak Perguruan Tinggi Indonesia

AI LEARNING ECOSYSTEM IN HIGHER EDUCATION

From Fragmented Learning to Measurable Quality, Relevance & National Impact



AI Smart Classroom | Learning Insights | Ecosystem Collaboration

AI LEARNING ECOSYSTEM IN HIGHER EDUCATION

From Fragmented Learningto Measurable Quality,Relevance & National Impact

EDUCATION ECOSYSTEM CHALLENGES

1 **LEARNING &DATA GAPS**
- Limited visibility of learning progress and institutional performance.
- Inconsistentdataanddelayedgap id en t ific at io n.

2 **BENCHMARKING & COLLABORATION GAPS**
- Limited crossuniversitybenchmarking.
- Inconsistent quality indicators and weak **University – Technology – Industry** collaboration.

ROLE BASED STAKEHOLDER CHALLENGES

MI NISTRY
Limited comparable indicators of learningquality andgraduate employability (Relevance).

UNIVERSITIES
Fragmented quality data, limited benchmarking and delayed identification of at-risk students.

LECTURER
Limited insights into teaching effectiveness and student engagement.

STUDENT
Fragmented access to learning materials,progress, results, and career opportunities.

OPERATING MODEL

KEMDIKTISAINTEK
Policy, Governance, National KPI
(Learning Quality Standard, Relevance)

TECHNOLOGY PARTNERS
AI Technology & Edu Use Case

ECOSYSTEM OR CH ES TR AT OR
Eco. Governance & I nt eg r at ion

TELKOM GRO UP
Nationwide Reach & Local Pre se nc e

UNIVERSITIES
Innovation & Best Practice Adoption

STUDENTS
Better Learning Experience & Career Readiness

INDUSTRY
TalentWorkforce Al ig n me nt

Core Solution
AI SMART CLASSROOM

AI Enabled Learning Ecosystem P la tf orm
- Learning Data
- Benchmark
- Performance Insight

IMPROVEMENT PROGRAMS (ACTIONABLE INSIGHT)

Policy & QA
Standardization and governance

Learning Enhancement
Content and delivery improvement

Lecturer Development
Training & ce rt ifi cat io n

Best Practices & Monitoring
Best practice adoption & continuous improvement

NATIONAL & INSTITUTIONAL IMPACT

MI NISTRY
- National Learning Quality & Evidence Based Policy
- Graduate Employability & Relevance

UNIVERSITIES
- Institutional Performance,
- Learning Quality
- Accreditation Readiness*

LECTURER
- Teaching Effectiveness
- Student Engagement

STUDENT
- Learning Progress,
- Learning Gain
- Learning Outcomes



**Accreditation Readiness: Future Scope (LPM).*

Solution Architecture & Ecosystem

MaterialrecordsTheLMSrunslearningandAISmartbenchmarks; only matkul aggregates move up to the national space

Technology Provider

Cloud recording
Offline class,one device

Transcript
Fulltextofthe session

AI summary
Summaryandnext steps

USED BY

Lecturer (host)

1

LMS (per campus)

Learning and class
Enrolment, sessions

Learning tasks
Tasks,quizzes, exams

Attendance, grades
Per student

Zoom package
Recording, tra nsc ri p t

USED BY

Student

Lecturer

2

AI Smart Classroom

Data intake
Import,validate, map

Metric engine
Student tonational

Hierarchy, access
Prodi tominist ry

Dashboards
Course tonational

Insight engine
Gaps, best practices

USED BY

Lecturer (read-only)

Prodi head

Faculty

Campus leadership

M in ist ry

Data altitude

3

Level 0 S tud en t
Learning only

Level 1 F acu lty
Program aggregates

Level 2 C am pus
Facultyaggregates

Level 3 National benchmark
Campus aggregates

1 Zoompushes the class package to the LMS (API and webhook)

2 TheLMSsendsdata to AI Smart per data contract (API or scheduled file)

3 Studentdetail stays on campus; only learning aggregates go n ati o nal

AI SMART CLASSROOM – WORKFLOW & OUTPUT

CLASSSETUP & RECORDING

PR OC E SS
- Course Setup
- Learning Materials
- Class Recording
- Attendance



OU T PUT
- Recorded Class
- Learning Materials
- Attendance Data

LEARNING PACKAGE DELIVERY

PR OC E SS
- Recording
- Transcript
- AI Summary
- Lecturer Review & Release

OU T PUT
- Learning Package
- Transcript
- AI Summary

LEARNING & ASSESSMENT

PR OC E SS
- Learning Activities
- Tasks & Quizzes
- Exams
- Grading



OU T PUT
- Learning Activities
- Assessment Results
- Student Progress

DATA SYNCHRONIZATION & METRICS

PR OC E SS
- LMS Data Integration
- Data Validation
- Metric Calculation
- Course Level Aggregation

OU T PUT
- Standardized Learning Metrics
- Course Level Learning Data

MONITORING & BENCHMAR KING

PR OC E SS
- Role Based Dashboards
- Learning Performance
- Cross Campus Comparison
- Gap Analysis & Recommendations

OU T PUT
- Learning Performance Insights
- Benchmark Dashboard
- Improvement Recommendations

CORE LEARNING METRICS	UNIVERSITY A (WE ST)	UNIVERSITY B (MI D)	UNIVERSITY C (EAST)
St ude nt Engagement	86%	79%	71%
Assessment Completion	95%	92%	90%
Learning Gain	+28 points	+20 points	+15 points
Learning Outcomes	84	73	73

WHAT IS MEASURED – CORE LEARNING METRICS.

01. STUDENT ENGAGEMENT

Measures student participation and involvement in learning activities.
- Class Participation
- Attendance Rate
- Learning Interaction

02. ASSESSMENT COMPLETION

Measures The Completion Rate Of Assigned Learning Assessments.
- Task Completion
- Quiz Completion
- Exam Completion

03. LEARNING GAIN

MeasuresImprovementInStudent Understanding And Knowledge.
- Pre Test vs. Post Test
- Quiz Score Improvement
- Average Score Improvement

04. LEARNING OUTCOMES

Measurestheachievementofexpected learning objectives.
- Assignment Scores
- Quiz / Exam Scores
- Pass Rate

AI INSIGHT
- Best Performing University
- Improvement Areas
- Best Practices
- Recommended Actions

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Thank You

From Pilot Success to Lasting Impact

STRONGER TOGETHER
Uniting institutions, technology, and innovation for better learning outcomes.

DATA-DRIVEN IMPROVEMENT
Turning insights into decisions that elevate teaching and learning.

SUSTAINABLE FUTURE
Scalable solutions that create continuous value for education and society.

> Together, let's build an **intelligent, inclusive,** and **impactful education** ecosystem.



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