

Artificial Intelligence in Education

Innovation & Science @Bharat Series

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How 2020 changed educational discussions



320 million learners impacted in India alone



Digital divide exacerbated impact on learning



Hybrid model of learning will be the new normal

How 2020 changed educational discussions

FROM

Negative impact of Technology on teaching-learning process

Students need to be equipped with changing tech for Future of Work

Classrooms need to evolve to the potential of existing technology



TO

Technology can support continuity and customization of learning

Capacity building is equally important for teachers/ professors/ administrators

Technology is an enabler to achieving learning outcomes

National Education Policy vision is resilient

1 Improve Quality of Learning

Reforms in Early Education, K-12 to promote curiosity and intellectual humility

2 Inclusive & Equitable

Learning for all, irrespective of region, language, gender, economic, ability barriers

3 Holistic Development

Multidimensional assessments, multidisciplinary pursuits in learning

4 Ecosystem Development

Teacher development, sharing creation of knowledge clusters and hubs

5 Research and innovation

Setting up of National Research Foundation & National Education Technology Forum

6 Technology for all

Access to infrastructure, content, training and focus on Lifelong Learning

Implement a robust Teaching-learning platform

Just providing hardware is easy. Integrating an effective teaching-learning platform with these hardware solutions is what improves learning outcomes significantly.



"Why the disconnect?"

How teachers spend their time

Teachers spend less than half of their time in direct interaction with students.

50 Average hours of working time per week for a teacher

Source - How Artificial intelligence will impact teachers, McKinsey and Company, 2020



Activity composition of teacher working hours per week



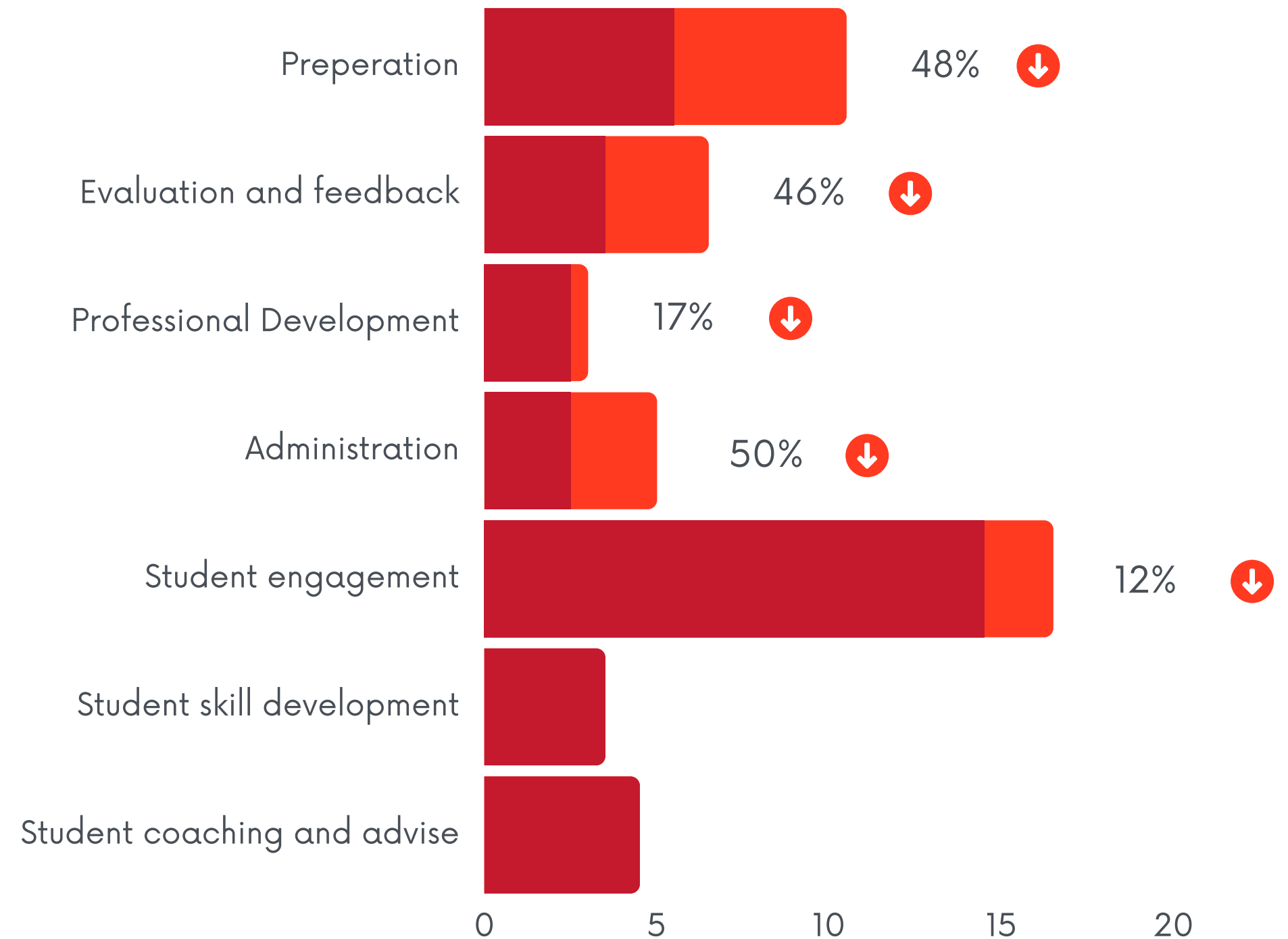
How does AI help?

More focus on student activities.

Technology and AI help teachers reallocate time towards student-centric learning activities and research activities.

■ Relocatable time
 ■ Remaining time

Source - How Artificial intelligence will impact K-12 teachers, McKinsey and Company, 2020



Potential for time reallocation (No. of hours per week)

Focus on improving learning outcomes

Technology can help teachers reallocate 20 to 30 percent of their time towards activities that support student learning.

How do we help?

Quiklrn

Our journey so far

75,430 users

33,650 users

23,957 users

13,359 users

1,030 users

1
2016
Quiklrn Pvt. Ltd.
was founded

2
2017
The first version
of Quiklrn
released

3
2018
Entered top 2
premier
educational
institutes

4
2019
Relationship with
Oxford and
Cengage

5
2020
Crossed over 50
institutes and
50,000 users

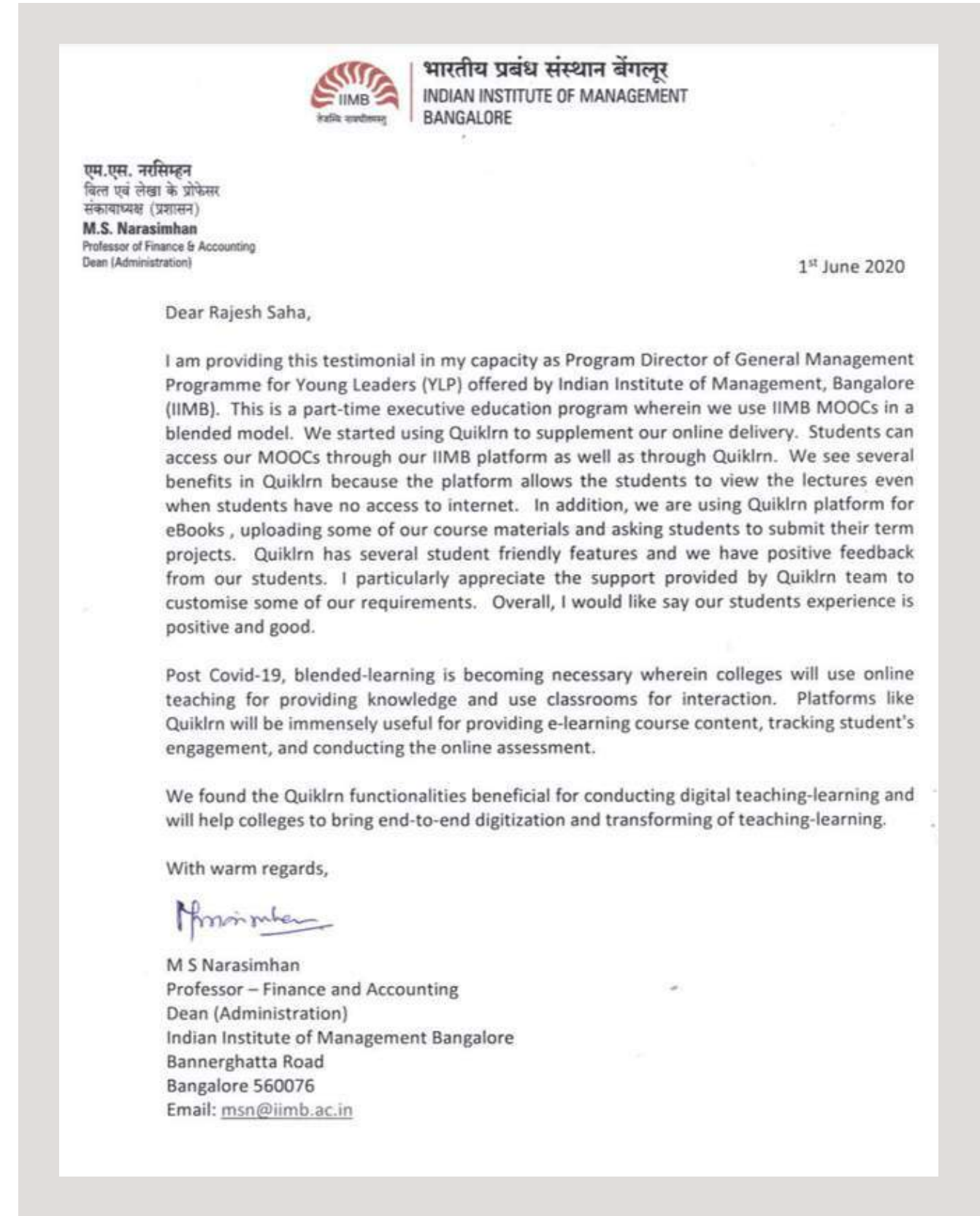
6
PRESENT
Selected by
Ministry of
Education for
NEAT 2.0.

Testimonials

Most promising
EdTech company



Recognised by IIMB



Quiklrn

an AI-enabled, integrated teaching-learning platform

Learning experience
platform

Academic operations
platform

Learning outcome
management

Q-LXP

Q-LMS

Q-OBE



Student-centric learning
platform for any time,
anywhere access



Integrated view of academic
operations across all
programs.



Standardizing CO-PO and IQAC
processes across all
programs.

Preperation

AI and technology help teachers in significantly reducing the time they take to prepare for classes.

"Automate and reduce preperation time"

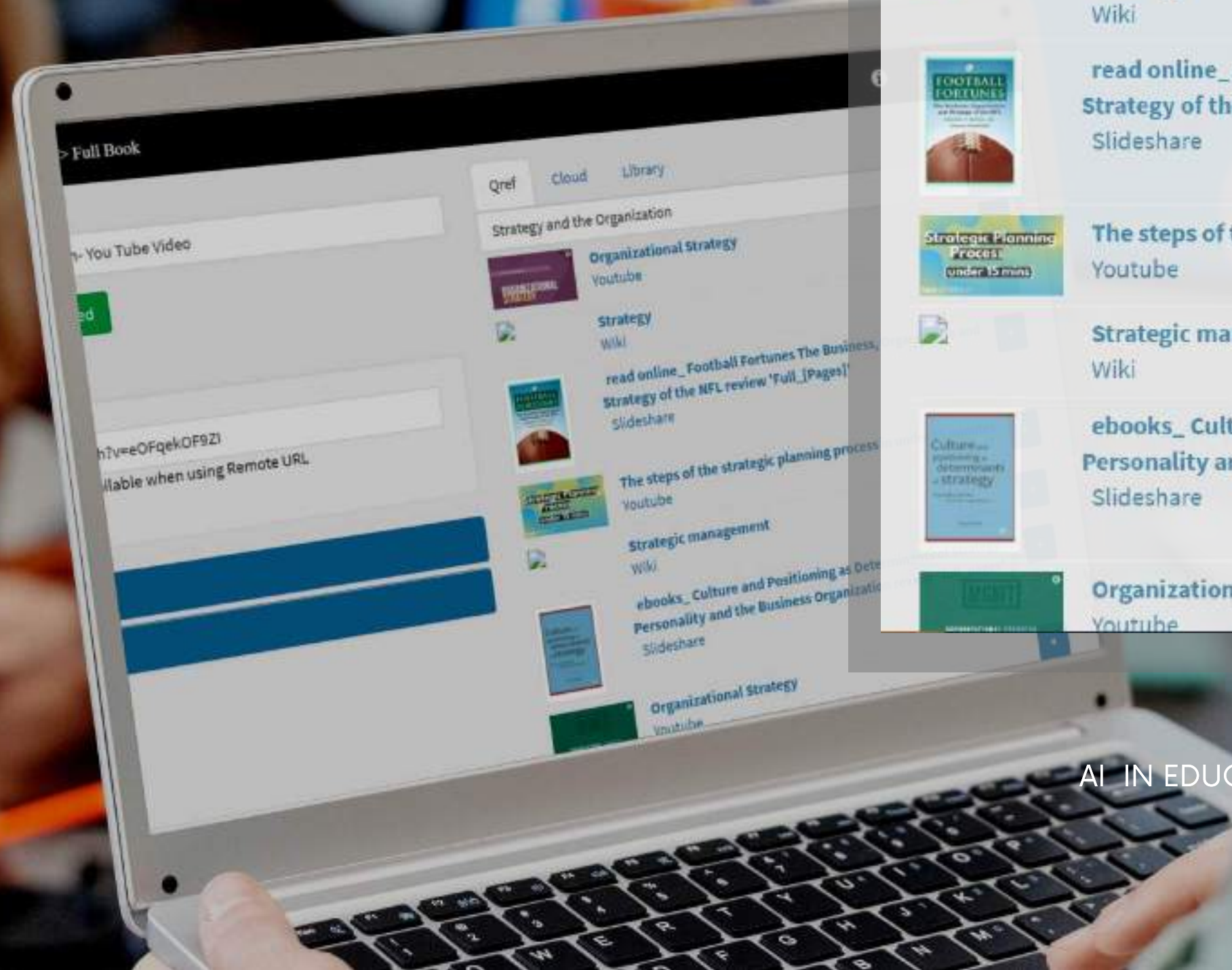


Reading Material
Topic-wise notes
Concept Videos
Practice tests
Assignments

Easy to build interactive courses to enhance engagement.




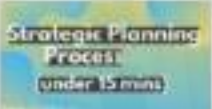



Content recommendations

AI-engine that recommends the best content from open source.



Qref Cloud Library

Strategy and the Organization

-  **Organizational Strategy**
Youtube
-  **Strategy**
Wiki
-  **read online_ Football Fortunes The Business, Organiza**
Strategy of the NFL review 'Full_[Pages]'
Slideshow
-  **The steps of the strategic planning process in under 15**
Youtube
-  **Strategic management**
Wiki
-  **ebooks_ Culture and Positioning as Determinants of S**
Personality and the Business Organization review *full,
Slideshow
-  **Organizational Strategy**
Youtube

AI-Engine that identifies topics and phrases from long videos.

The image shows a hand holding a tablet. The tablet screen displays a list of topics under the heading 'TOPICS'. A pop-up window titled 'PHRASES' is overlaid on the right side of the tablet, showing a list of phrases identified from a video. The background is a wooden desk with a laptop and some papers.

TOPICS

1. STRATEGIC MANAGEMENT
2. Strategy explains why the company matters by specifying an approach to ...
3. CHOICES
4. A company's business model sets forth how its strategy and operating ...
5. CUSTOMER VALUE PROPOSITION
6. PROFIT FORMULA
7. The issue surrounding a company's business
8. FIVE STRATEGIC APPROACHES
9. LOW-COST
10. BROAD
11. FOCUSED DIFFERENTIATION
12. BEST-COST
13. Understand these five strategic approaches to setting an organization...
14. A company achieves sustainable

PHRASES

- sustainable competitive advantage
- customer value proposition
- valuable competitive capabilities
- competitive advantage
- satisfying buyer
- company performance companies
- organizational performance
- businesses
- sustainable competitive
- cost structure

Powered by VideoKen

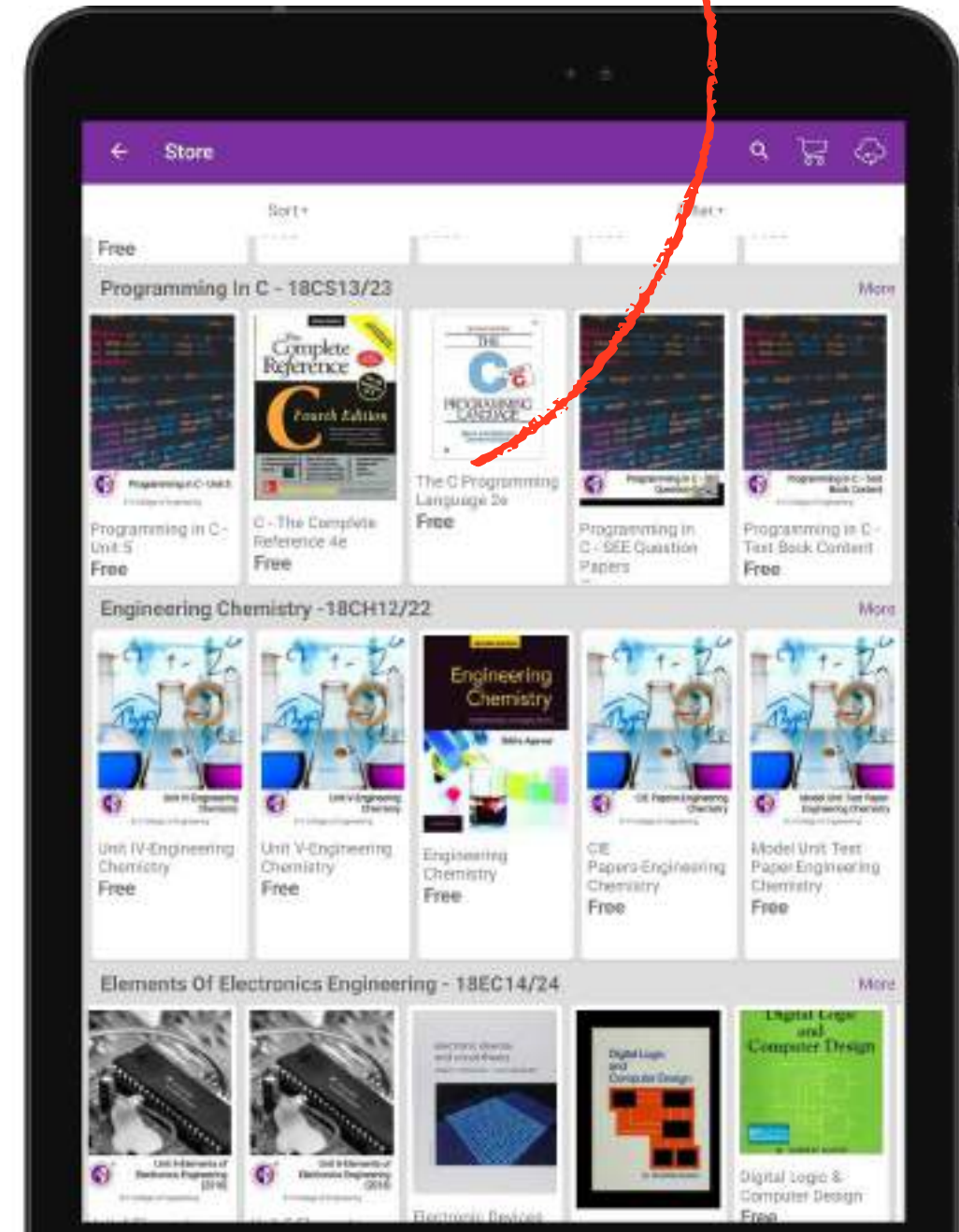
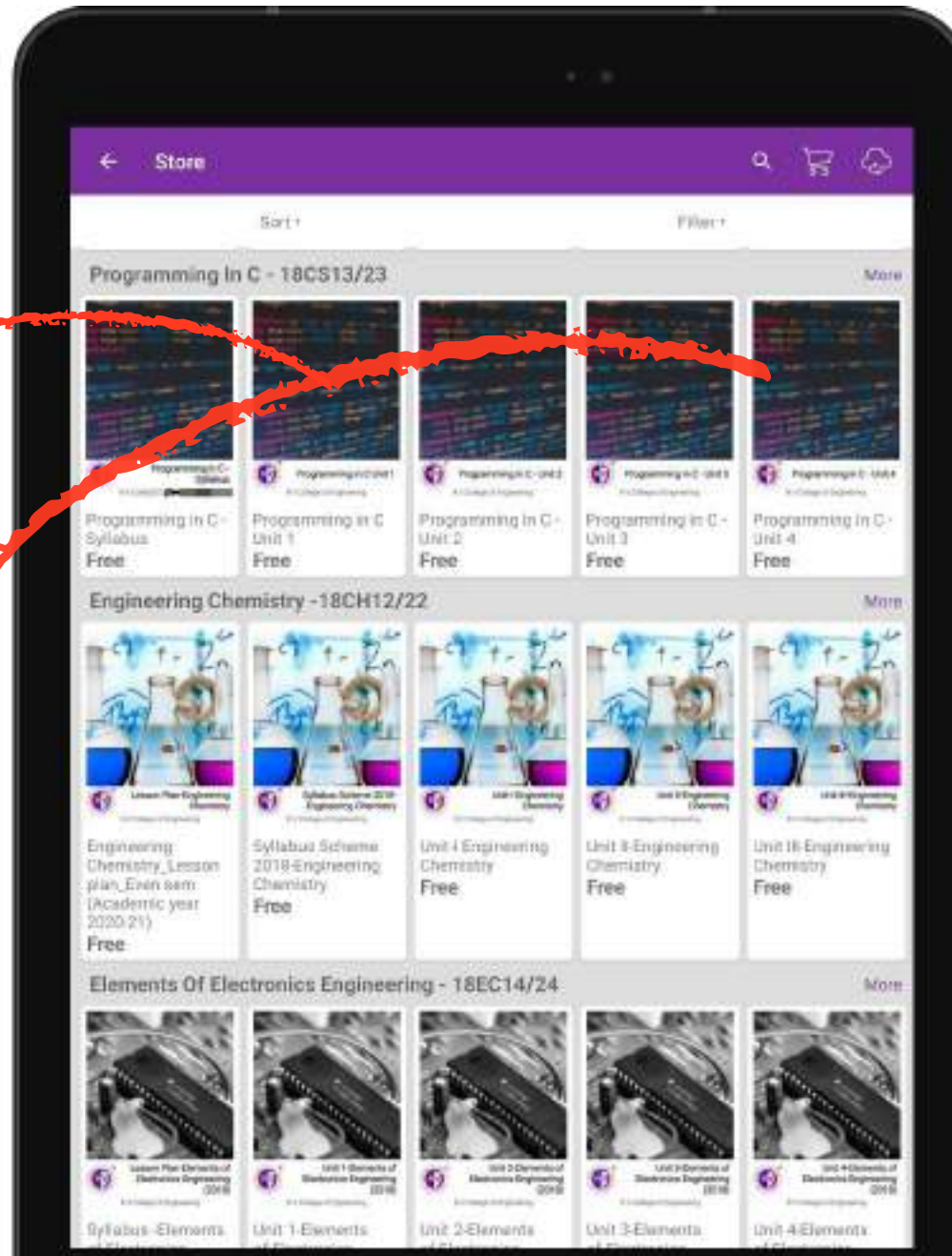
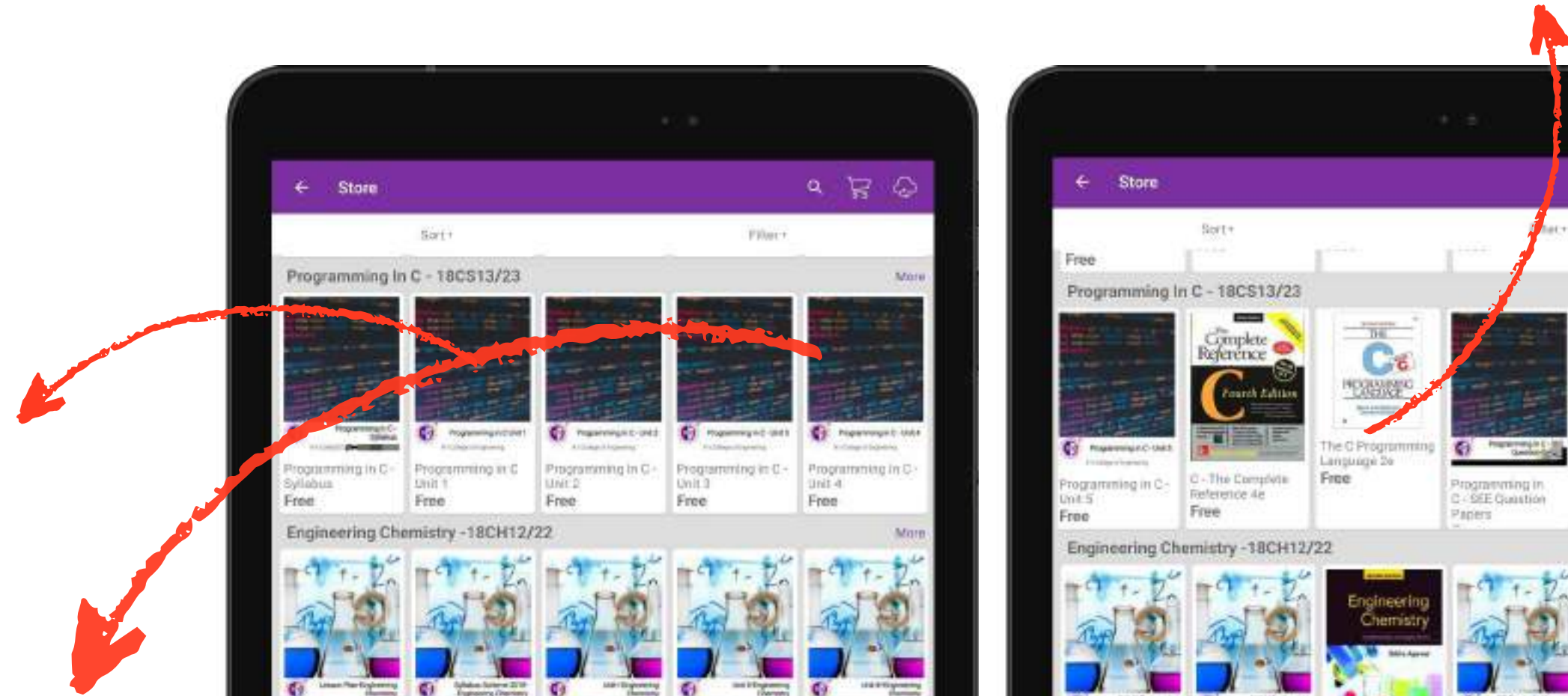
Fast access to ready content

Institute-specific content repository

Unit-wise notes

Reading Material

Reference books



Evaluation and feedback

- Automations help faculty in conducting multiple and frequent evaluations.
- AI- based proctoring automates invigilation, and reduces malpractices.



"Robust evaluation systems to track and monitor learning effectiveness"

Evaluations

1 Question banks

Create question banks categorized according to course outcomes

2 Multiple question formats

MCQ's, match the following, short answers, true and false, and numerical questions.

3 Machine-generated quiz

Randomizing questions and shuffling options help generate unique quizzes.

4 Restricted access

Password, time restriction and section/group restrictions can be created for quizzes.

5 Easy grading

Instant corrections with marks overwrite and tracing capability.

Evaluation types



Surprise Quiz

Helps to gauge the attentiveness of students during the session.



Practise tests

Time-bound practice tests ensure students completing portions on time.



Regular quizzes

Faculty initiated regular internal quizzes at any time of the course.



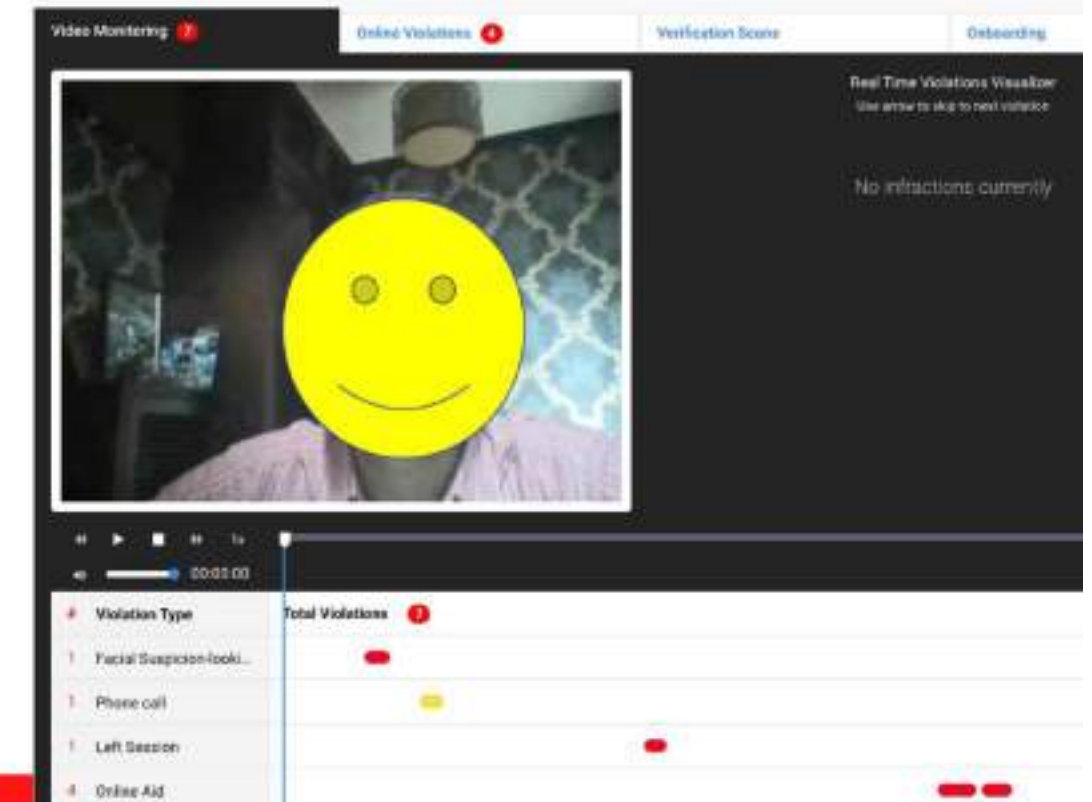
Descriptive exams

Facility to submit handwritten responses, with online corrections.

AI used to curb malpractices

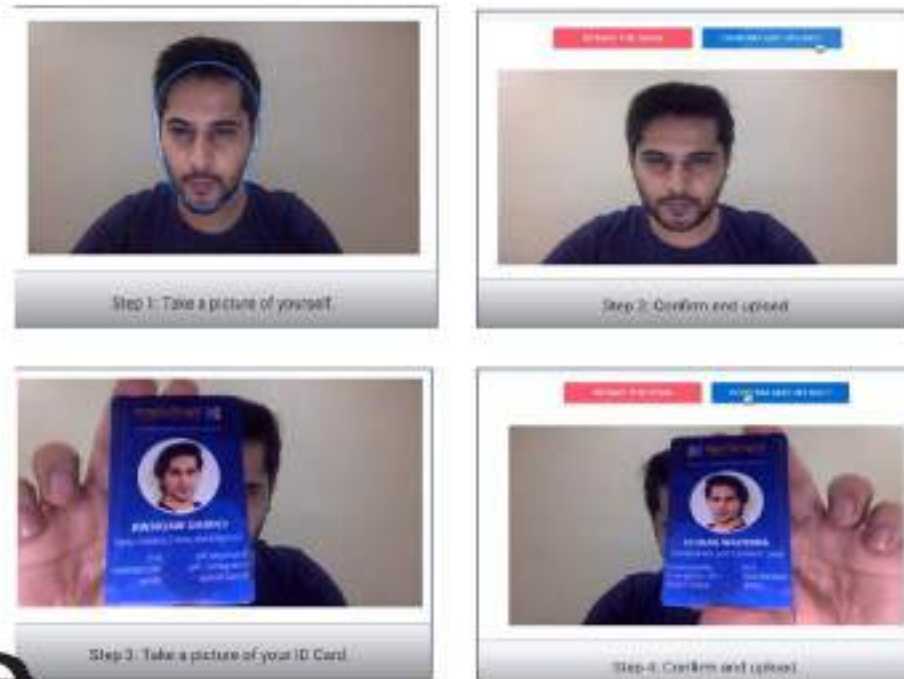
Reviewing Proctored data

- Video Monitoring
- Online Violations
- Verification Scans
- Onboarding



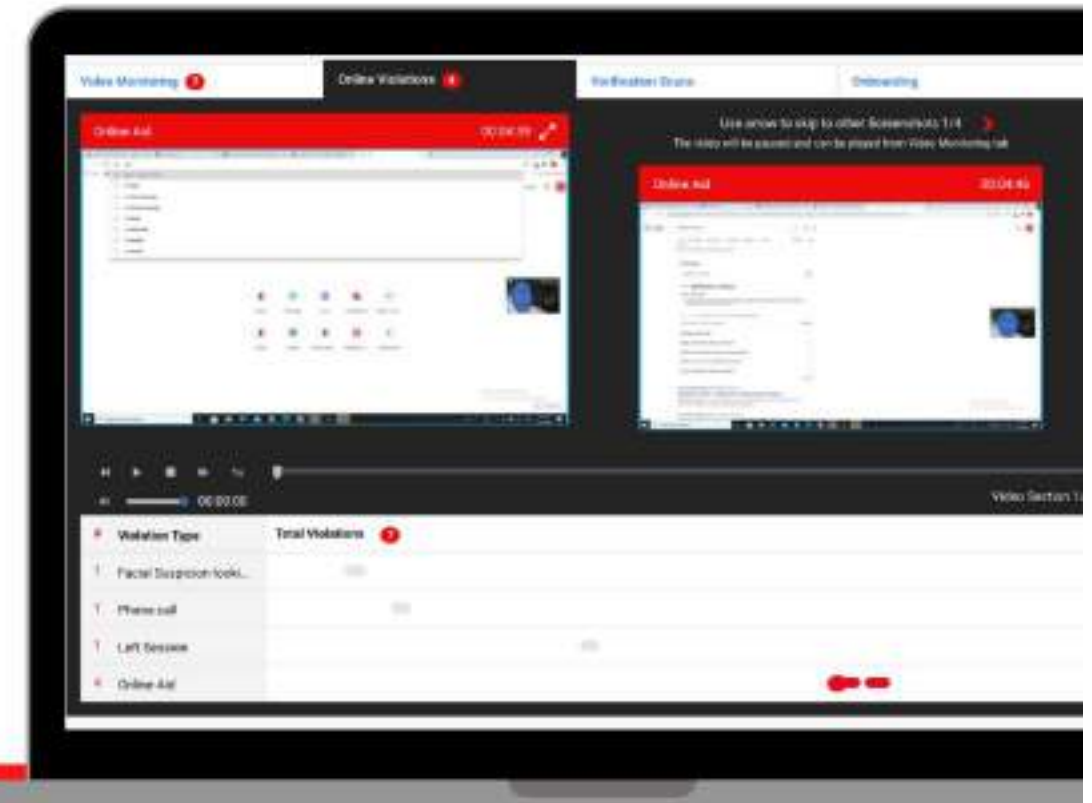
Onboarding Process

Prevents impersonation



Reviewing Proctored data

- Video Monitoring
- Online Violations
- Verification Scans
- Onboarding



Administration

Real-time dashboards help to reduce manual excel-based data gathering by 80 percent.



"Faculty reallocates time towards student-centric learning and research"

Operations dashboard

Single integrated dashboard to track, manage, and improve academic operations.

NOTE: Click on the Number or Graph to get more details about it.

Search:

Course	Section	Department	# Student	# Course Pack/Books	Sessions	Average Attendance	Average Marks	Total Time Spent	Total Pages Viewed
Power System Operation and Control-8-Sem-15/17EE81	2020-EE-8 Sem-Parallel Batch-17 Scheme	Electrical and Electronics Engineering	17	1		85.05	0	0.2	54
Operation and Maintenance of Solar Electric Systems-8-Sem-15/17EE832	2020-EE-8 Sem-Parallel Batch-17 Scheme	Electrical and Electronics Engineering	17	1		84.38	89.76	14.35	1086
Industrial Drives and Applications-8-Sem-15/17EE82	2020-EE-8 Sem-Parallel batch-17 Scheme	Electrical and Electronics Engineering	17	2		70.92	76.82	18.51	1167
Operation and Maintenance of Solar Electric Systems-8-Sem-15/17EE832	2020-EE-8 Sem-Parallel Batch-15 Scheme	Electrical and Electronics Engineering	20	1		68.13	72.55	16.93	1205

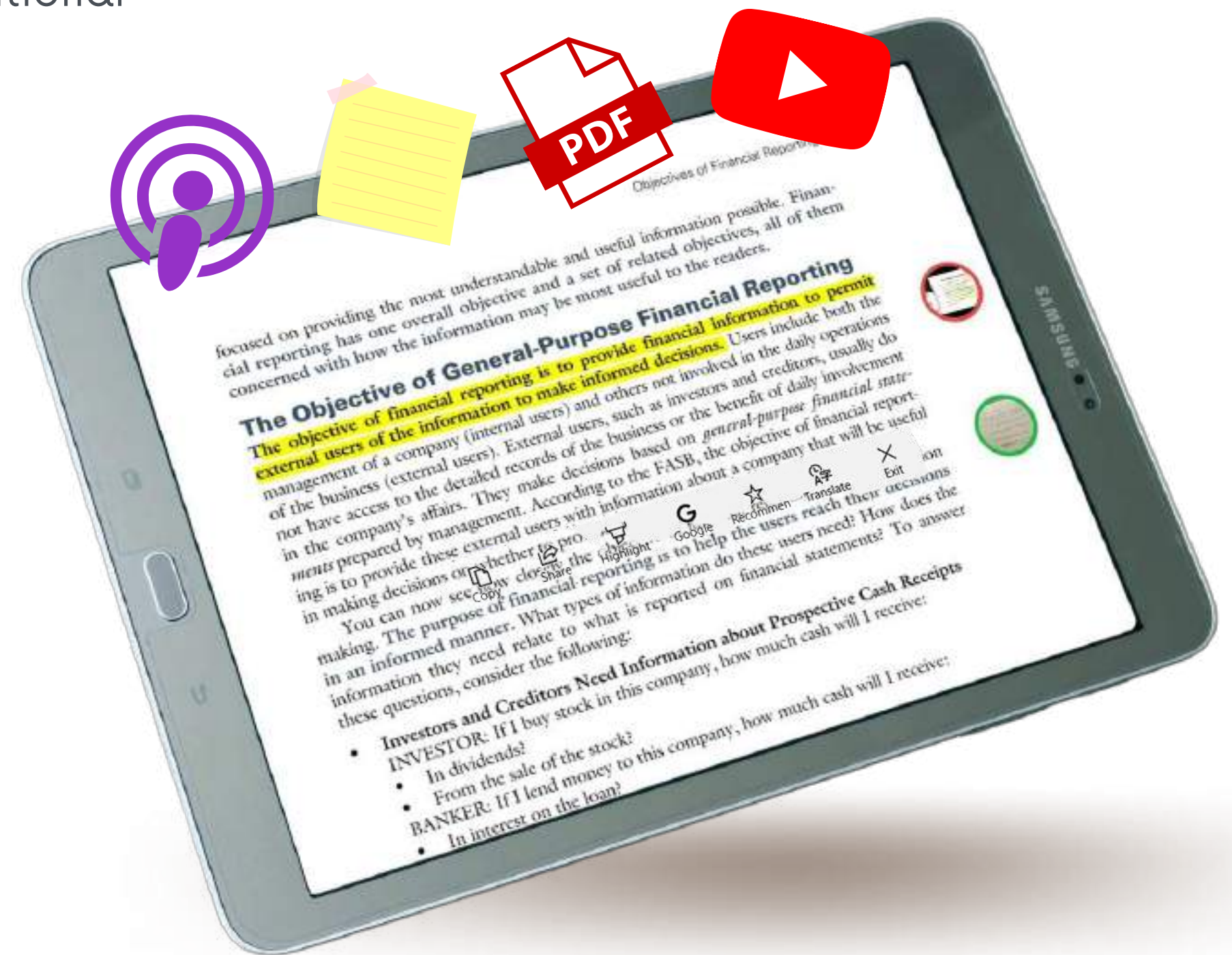
Student Engagement



AI-assisted learning

Kindle kind of reading and learning experience with additional capabilities.

- App based access for offline reading.
- Rapid serial visual representation of reading.
- Integration with natural language processing and language translation.
- Add handwritten notes, videos, podcasts, and content as digital pins.
- Creates a personalised learning map.



Use case

Analysis of the Low Average(10 students)

Learner Not Motivated

Slow Learner
Time Spent Vs Marks.
Students not scoring not enough marks despite efforts being put by them

Notable patterns

Parameters (Section N)	Time Spent (hrs)	Marks
Low average (10)	1.7	16.1/60
High average (10)	6	54/60
Class average (62)	5	39.5/60

Totals	Section N Average(s)	5.0	236.4	6.6	32.9	39.5
Section	email id	Time Spent (hrs)	Page Views	Quiz 1	Test 1	Total Marks
2018 1st Year N		0	2	0	0	0
2018 1st Year N		0.1	8	0	0	0
2018 1st Year N		0.72	71	3	1	4
2018 1st Year N		0.99	184	6	13	19
2018 1st Year N		5.56	508	6	13	19
2018 1st Year N		0.65	65	2	21	23
2018 1st Year N		0.91	44	5	18	23
2018 1st Year N		3.57	169	4	19	23
2018 1st Year N		4.54	250	4	20	24
2018 1st Year N		0.23	63	3	23	26

AI-enabled learning preferences

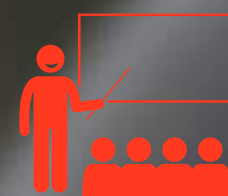
Now

Knowledge is continuously evolving and is being created



Learning Approach

Student-centric.
Self-pace and exploratory.
Flipped classrooms.



Role of teacher

70% of learning happens during self-study.
Active participation-based learning



Process of learning

Self-assessment and practice exercises to measure the learning.
Detailed outcome measurements



Evaluation of learning

Then

Knowledge is fixed, and slow to expand

Instructor-centric.
Delivery is sequential.
The role is to guide and monitor

Learning happens within a scheduled classroom.
Instructor-based learning.

Little efforts to measure effectiveness.
Done at a high level.

Digital transformation – key pillars

Digital Infrastructure enablement is but one aspect, focused solutions are essential for success



Whole-of-Org Approach

Impacts Students,
Teachers, Administration



Opportunities over costs

Opens various opportunities:
adaptive learning, assessments,
translations, ...



Relook Status Quo

Relooks at how time is spent on
learning & related outcomes

GOALS

Implement technology to help reallocate 20 to 30 percent of teachers' time towards activities that support student learning.

Create a concerted and evidence-based teaching-learning to ensure access and adherence to high-quality education. A step towards NEP 2020.

Dell and Quiklrn work together

APPROACH

- Workshops to identify institute-specific impact areas.
- Trial to evaluate tangible benefits.
- Faculty development programs to understand the usage of technology.
- Prioritized implementation of integrated hardware and software solution stacks across various programs.

DELL Technologies

The logo for Quiklrn features a stylized 'Q' in purple and white, followed by the letters 'uiklrn' in a multi-colored font: 'u' is blue, 'i' is green, 'k' is yellow, 'l' is orange, and 'rn' is red.

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