

DEPARTMENT OF INFORMATION TECHNOLOGY

Real-Time Polling and Feedback

Faculty: Mrs. T. Leonila

Course: Theory of Computation

Class: IV Semester

Academic Year: 2024–2025

Topic Selected (TOC): Deterministic Finite Automata (DFA)

Date : 13.02.2025

No of Students Participated: 59

Description of the Method

This teaching method integrates live polling, instant feedback, and interactive question sessions during TOC lectures using Mentimeter and Slido. These tools allow students to respond instantly to conceptual questions, visualize answers in real time, and clarify doubts anonymously.

This approach encourages continuous engagement, helps identify misconceptions immediately, and turns traditional lectures into interactive learning experiences.

Objectives of the Innovation Method

1. To assess student understanding **instantly** during lectures.
2. To promote interactive learning and active participation.
3. To help students overcome fear of answering publicly by allowing anonymous responses.
4. To identify misconceptions in DFA concepts in real time.
5. To improve conceptual clarity through immediate feedback and explanation.
6. To enhance classroom engagement using technology.

Tools Used

1. Mentimeter

- Multiple-choice polls
- Word clouds
- Concept-check questions
- Live graphs and analytics

2. Slido

- Live Q&A sessions
- Anonymous doubt posting

- Quick quizzes
- Poll results visualization

Implementation Procedure

Step 1: Introduction to Tools

Students were introduced to Mentimeter and Slido.
The teacher demonstrated:

- Login/access steps
- How to answer polls
- How to post questions anonymously
- Viewing live results

Step 2: Teaching of the Selected Topic – DFA

During the lecture on Deterministic Finite Automata, the teacher used slides integrated with real-time poll questions.
Key concepts discussed:

- Components of DFA
- Transition diagrams
- Acceptance criteria
- Examples of strings accepted/rejected

Step 3: Conducting Real-Time Polls (Mentimeter)

Students participated in live polling, including:

- Identifying whether a given string is accepted by a specific DFA
- Predicting next states
- Choosing correct transition functions
- Classifying valid/invalid DFAs

Results were displayed immediately in graphs or charts.

Step 4: Live Q&A and Feedback

Students submitted doubts during the lecture:

- Anonymous questions
- Upvoting questions, they also wanted answered
- Clarification requests on DFA transitions or acceptance

Teacher addressed top-voted questions in real time.

Step 5: Instant Assessment and Reinforcement

After analyzing poll results:

- Teacher explained the correct answers
- Misconceptions were addressed immediately
- Additional examples were given based on areas of difficulty

This ensured learning gaps were filled instantly.

Step 6: Final Concept Recap Quiz

Before ending the session, a short Slido quiz was conducted:

- 5–7 questions
- Timed responses
- Leaderboard display to motivate students

Is a given string accepted by this DFA?



18

A	Yes
B	No
C	Can't tell
D	Depends

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Q&A

Can you explain DFA?

Ask



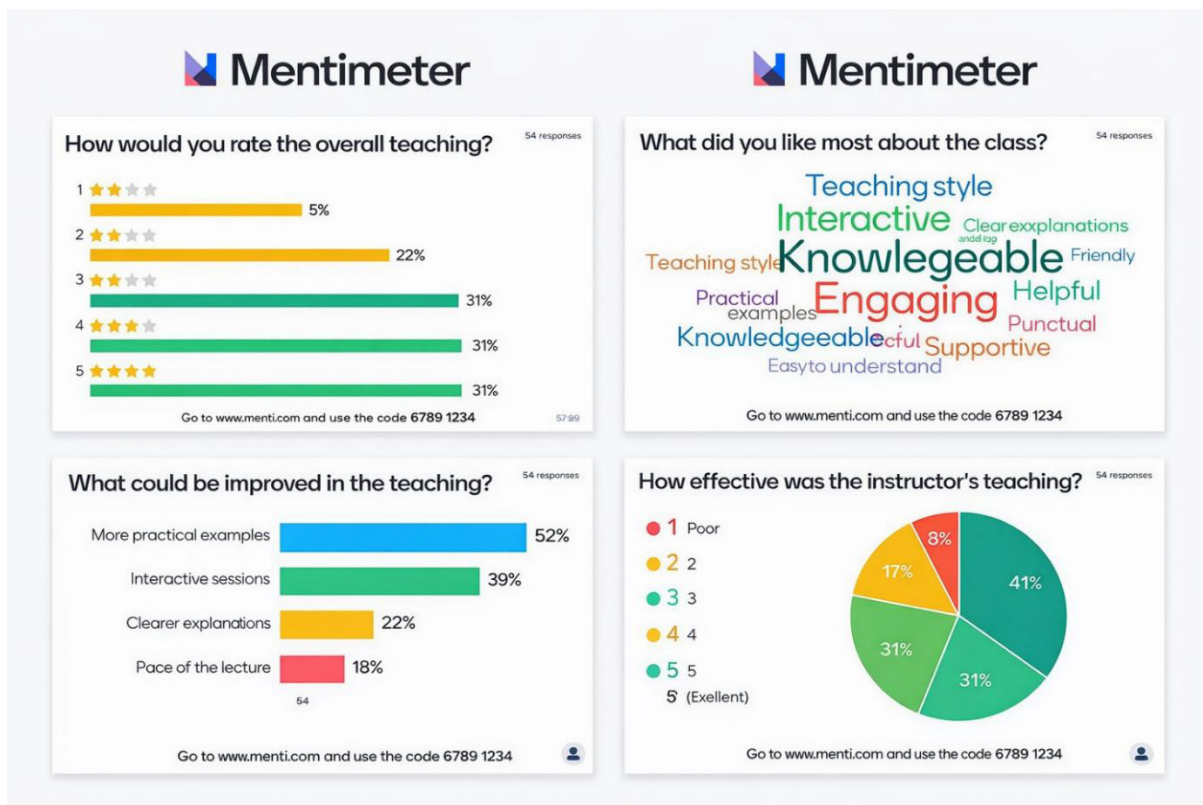
Anonymous

Can you explain DFA?

3 votes

Outcomes of the Innovation Method

- Students were more attentive and motivated during class.
- Understanding of DFA concepts improved significantly through continuous checks.
- Anonymous questioning helped shy students clarify doubts freely.
- Immediate visualization of correct/incorrect answers highlighted areas needing reinforcement.
- The teaching session became more interactive and student centered.
- Teacher could adapt teaching pace based on real-time feedback.



Screen shot of Mentimeter for Faculty Feedback by Students on topic DFA

Conclusion

The use of Real-Time Polling and Feedback Tools greatly enhanced the teaching and learning process in Theory of Computation. Concepts like DFA, which often require step-by-step reasoning, became easier to understand through instant feedback and interactive student participation. The method effectively supported active learning, reduced hesitation among students, and provided valuable insights into student comprehension during the lecture itself.

This innovative method proves to be a highly effective strategy for teaching abstract and theoretical topics such as those in TOC.

LIST OF STUDENTS ATTENDED**III YR STUDENTS LIST**

S.NO	REG.NO	NAME
1.	312823205063	NIRANJANA DEVI S
2.	312823205064	NITESH MALAN S
3.	312823205065	NITHISH B
4.	312823205066	NITHISH S
5.	312823205068	PARTHIBAN R
6.	312823205069	PAVITHRA K
7.	312823205070	PAVITHRA V
8.	312823205071	POOJASREE N
9.	312823205072	PRADEEP G
10.	312823205073	PRASANNA G
11.	312823205074	PRASANNA SC
12.	312823205075	PRATHAP S
13.	312823205076	PRAVEEN B
14.	312823205077	PRINCY U
15.	312823205078	RAGHUL G
16.	312823205079	RAJA SUBIKSHEN T. V
17.	312823205080	RAJESH S
18.	312823205081	RAJESHWARI S
19.	312823205082	RANJITHA M
20.	312823205083	RAUNAK MANOJ KUMAR
21.	312823205084	RAYARKUMAR M
22.	312823205085	ROHITH M
23.	312823205086	SABARISHWARAN M
24.	312823205087	SAI AISHWARYA V
25.	312823205089	SANDHIYA R
26.	312823205090	SANJAY K
27.	312823205091	SANJAY R
28.	312823205092	SANJAY KANTH S A
29.	312823205093	SANJAY KUMAR M
30.	312823205094	SANTHOSH J
31.	312823205095	SEDHUPATHI R
32.	312823205096	SELVA KUMAR T
33.	312823205097	SERSABESAN S
34.	312823205098	SHALINI D
35.	312823205099	SHAMILI V
36.	312823205100	SHEBA EVANGELIN V
37.	312823205101	SITHICK SAHIL AHAMED Z
38.	312823205102	SIVARANJINI D
39.	312823205103	SOFIYA NISHA K
40.	312823205104	SRI KRESH SA T. R
41.	312823205105	SRINIVASAN V
42.	312823205106	SRIRAM P
43.	312823205107	SUDHARSAN M

44.	312823205108	SUGANTHAN A S
45.	312823205109	SUGANTHAN R
46.	312823205110	SURYAPRASSANNA J.M
47.	312823205111	SYED ABBAS N
48.	312823205112	TANUSHRI V
49.	312823205113	THARANIA DEVI C
50.	312823205114	THARUN B
51.	312823205115	THIRUMALA MHENDRA
52.	312823205116	THRIKSHA PRIYA DHARSHANI M
53.	312823205117	VEL RAVI R
54.	312823205118	VETHA SRI B. T
55.	312823205119	VIJAY THARRSHAN S
56.	312823205120	VIKRAM M
57.	312823205121	VIMAL RAJ D
58.	312823205701	ANDREWS REJERSAN M
59.	312823205702	DIVYA S

Course Handling Faculty

Feedback Link : <https://forms.gle/4tjt7BmrKpGnQVcf6>

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