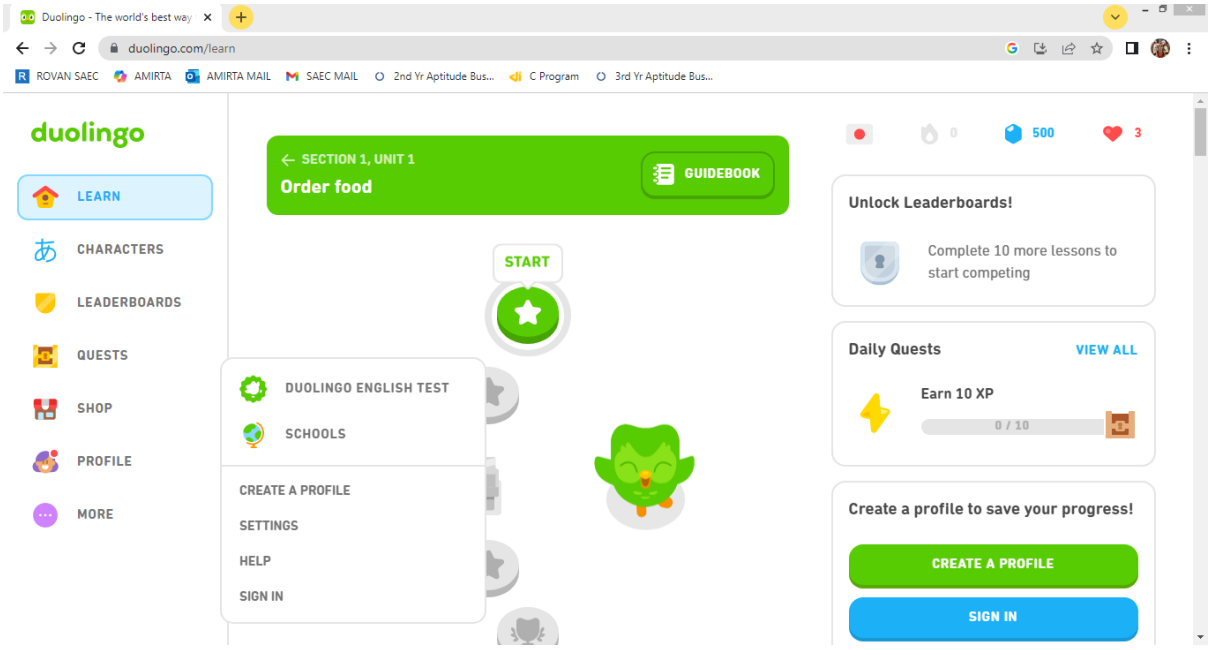
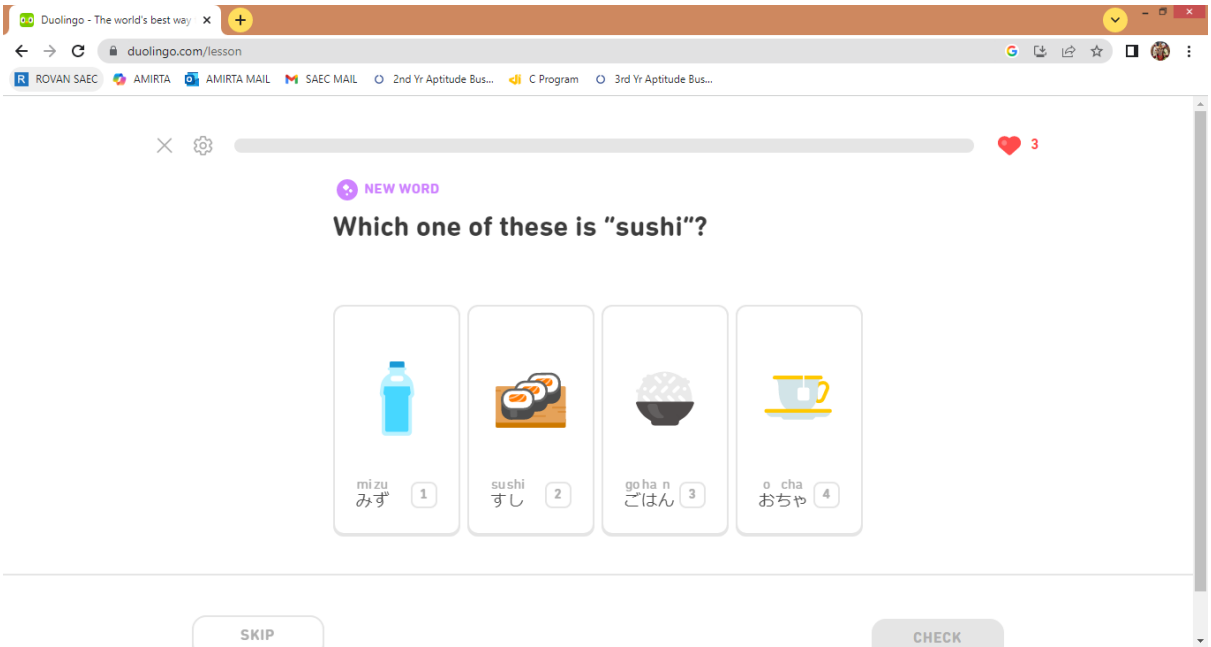
# GAME-BASED LEARNING

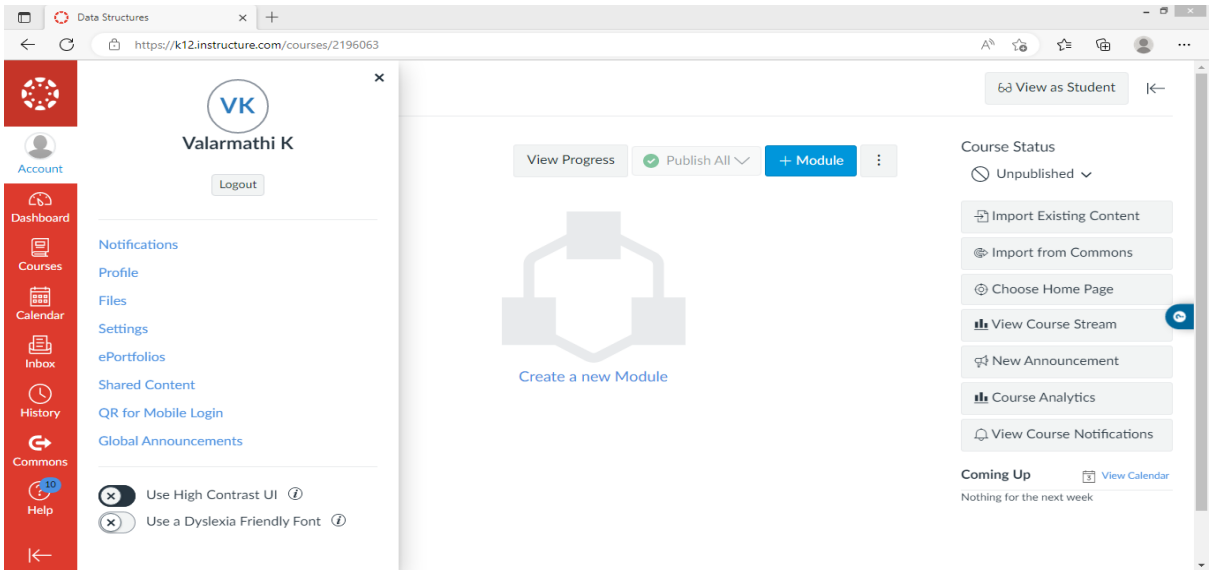
***Learning with Duolingo is fun, and  With quick, bite-sized lessons, you'll earn points and unlock new levels while gaining real-world communication skills.***



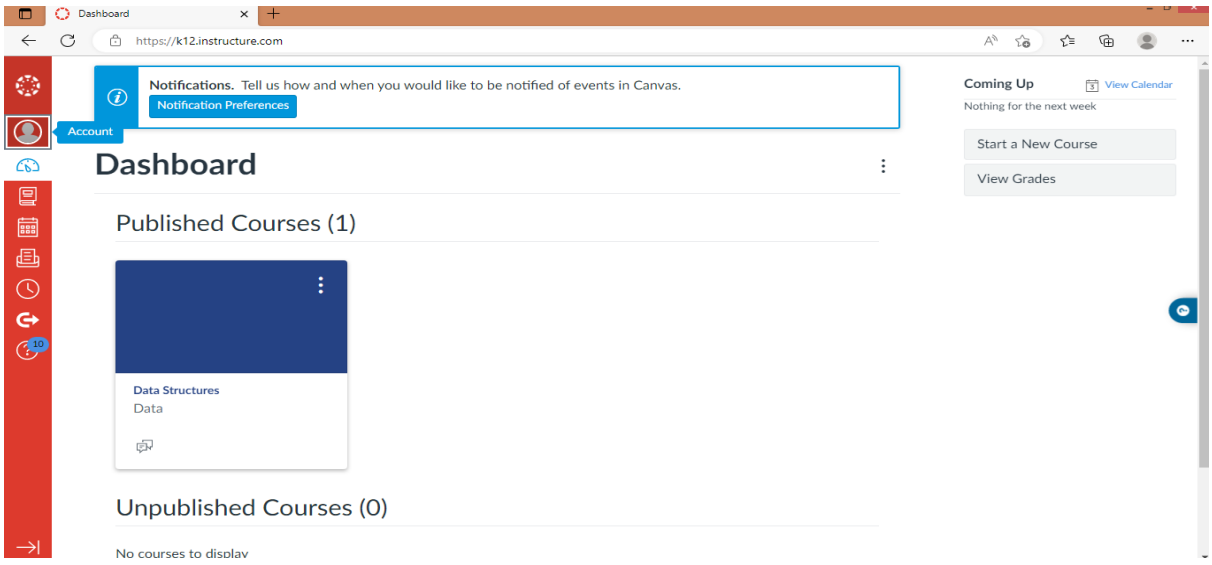

***Teaching professionals incorporating interactive digital tools into their curriculum using duolingo dashboard***



*Equitable, accessible learning with a strong commitment to accessibility standards and inclusive design at its core, Canvas helps institutions meet diverse learner needs.*

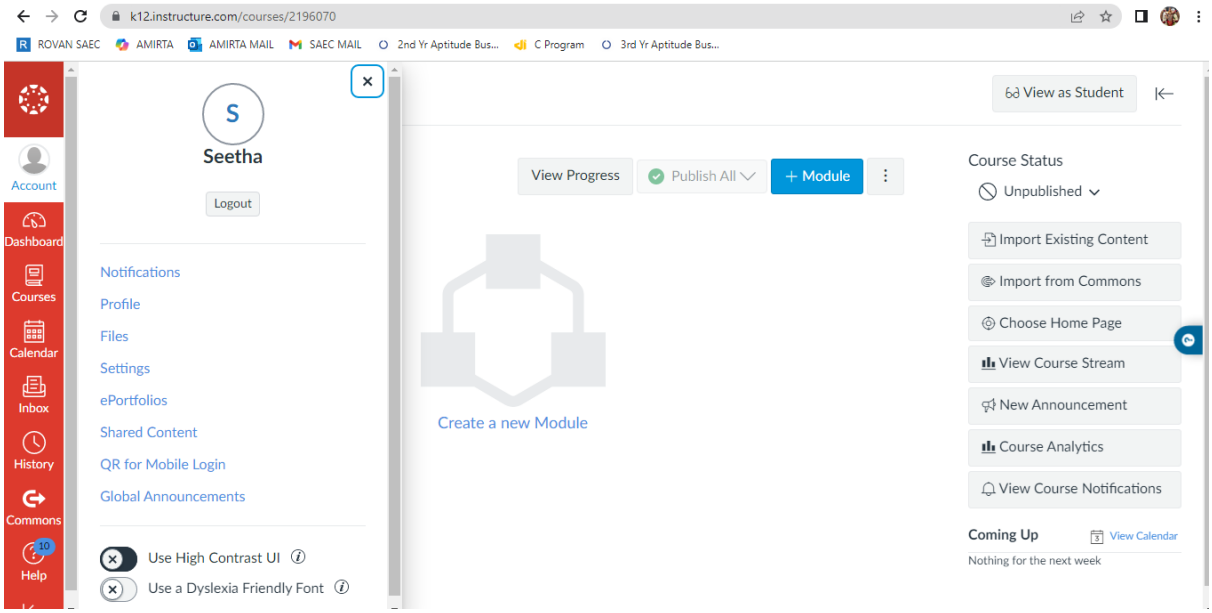



*Asst. Prof. K. Valaramthi leveraging Canvas to implement differentiated instruction and experiential learning*

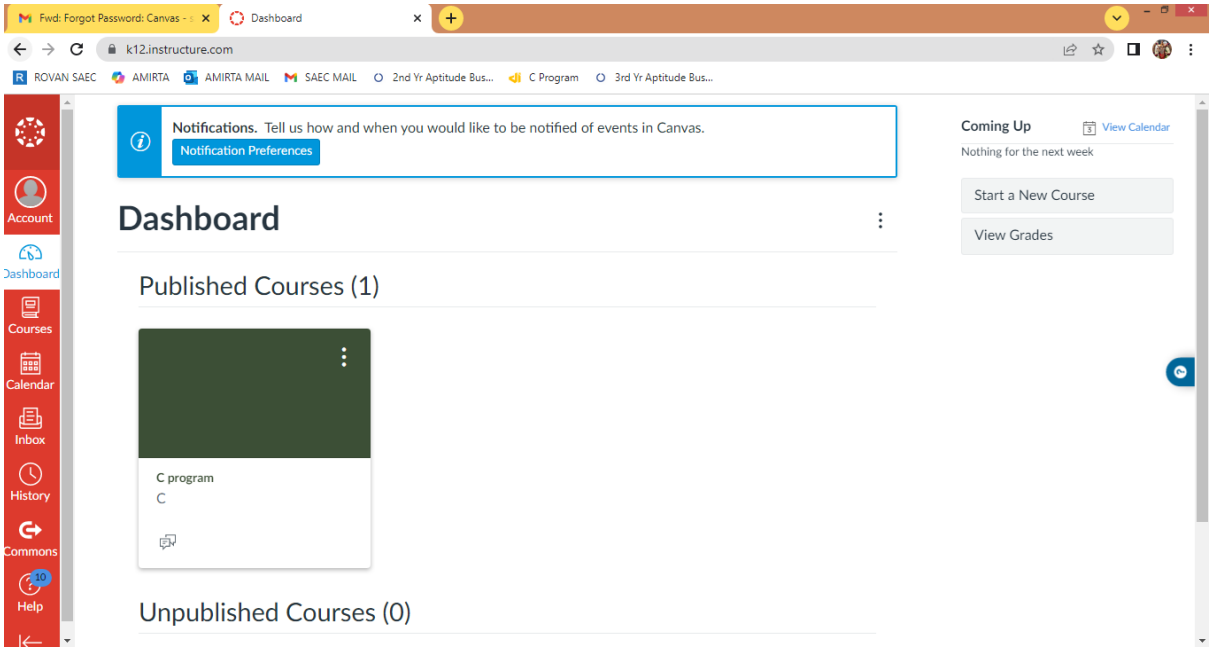



*Asst. Prof. K. Valaramthi Canvas learning dashboard structured and customized for instructional delivery*

***Asst. Prof. A.Seetha Canvas platform facilitating multimodal instruction and contextual learning***



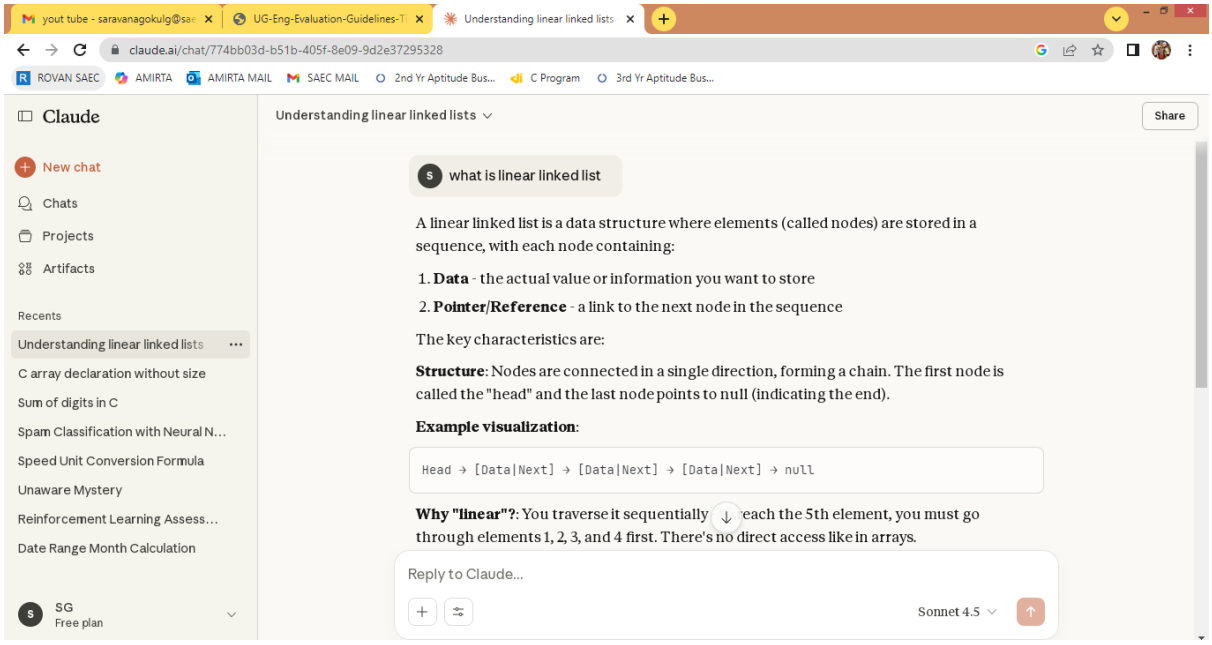

***Asst. Prof. A.Seetha Canvas integration fostering equitable and experiential learning environments***



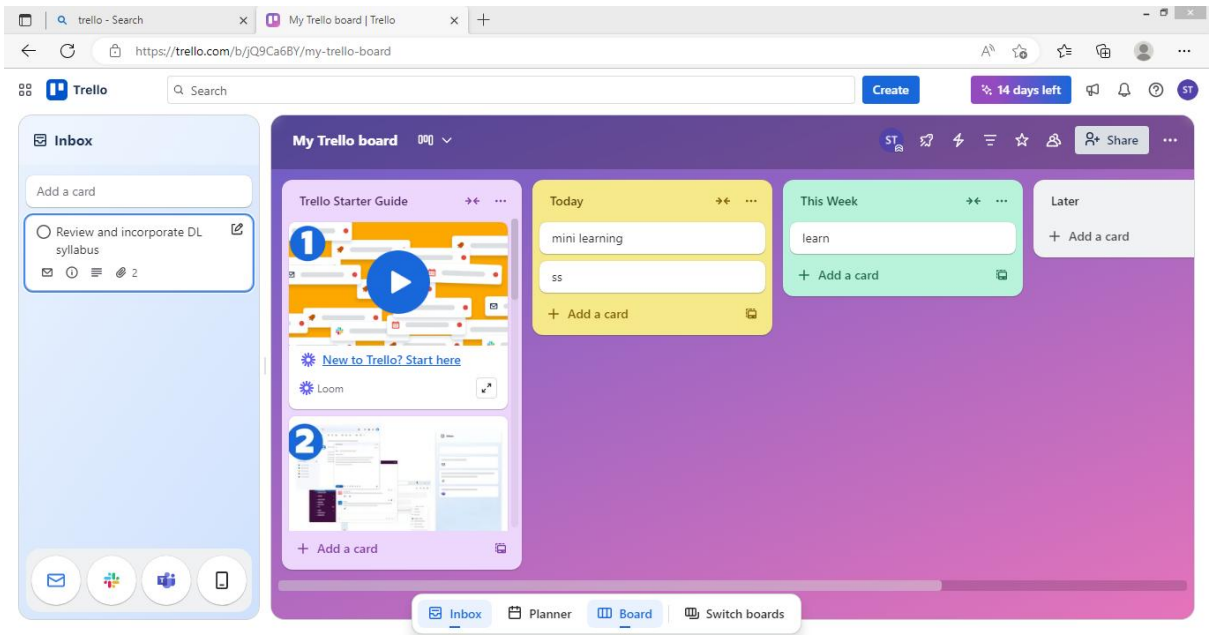
# CODECOMBAT

*Learn to code and use AI, all through the power of play*


*Programming workspace facilitating applied learning of computational concepts*

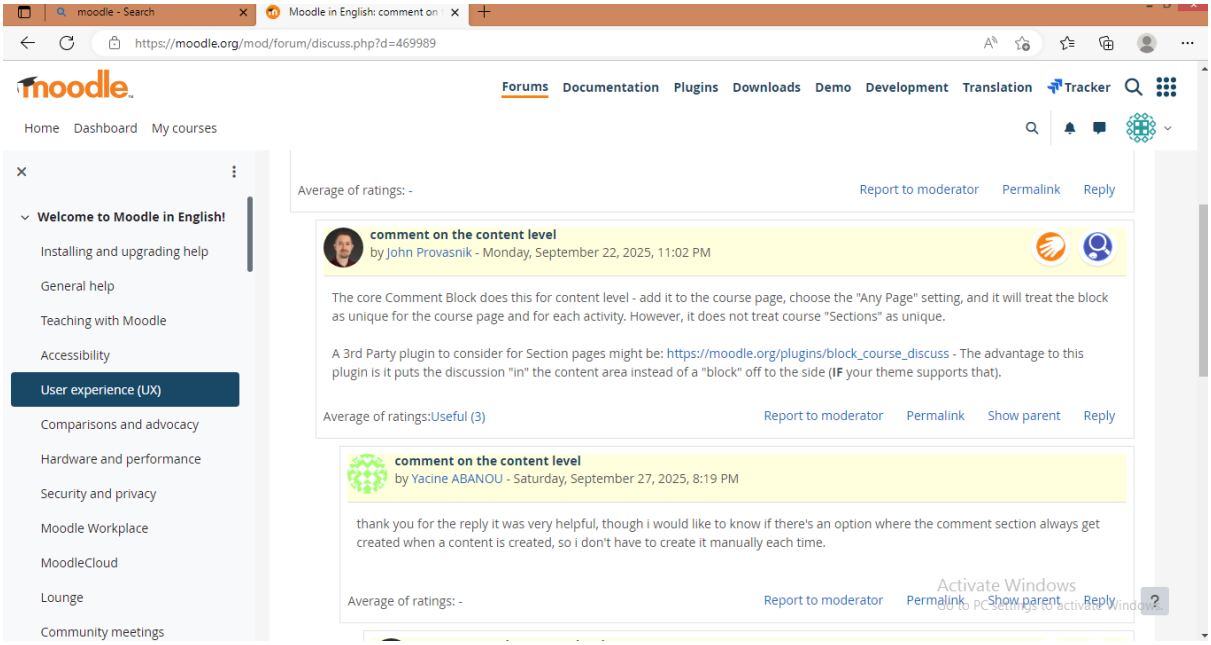



***Students utilizing Claude AI for clarification of concepts and information retrieval during examination readiness***

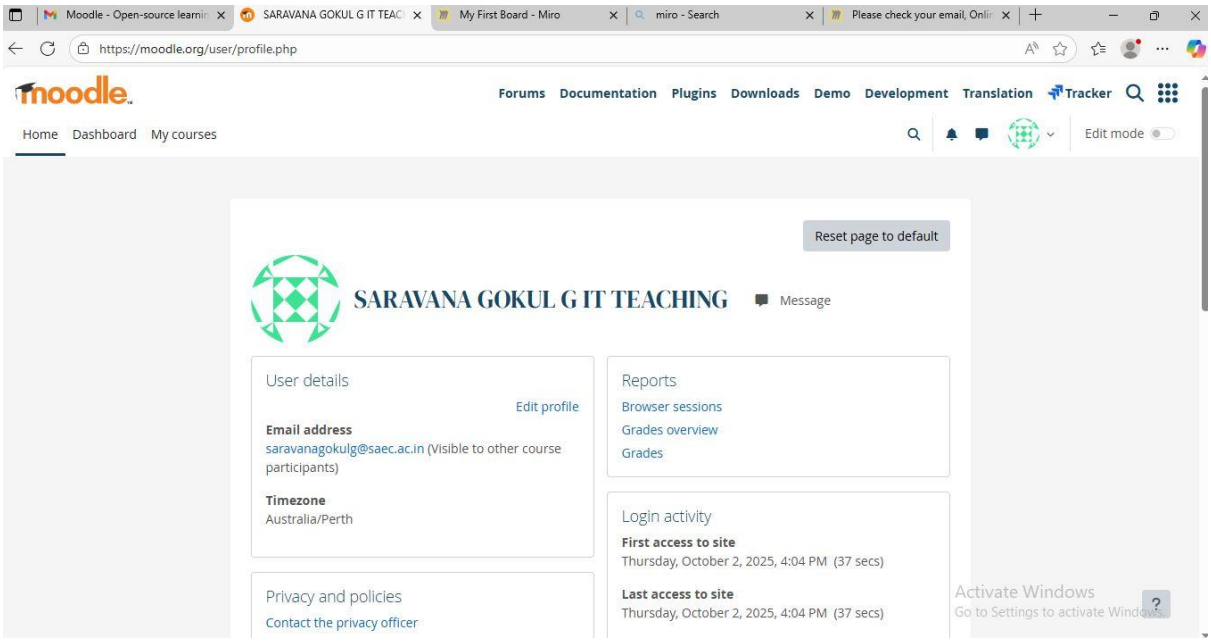



***Capture, organize, and tackle your to-dos from anywhere and escape the clutter and chaos unleash your productivity with Trello***

***The place to get support, ask and answer questions and contribute to the open-source learning platform, Moodle LMS.***

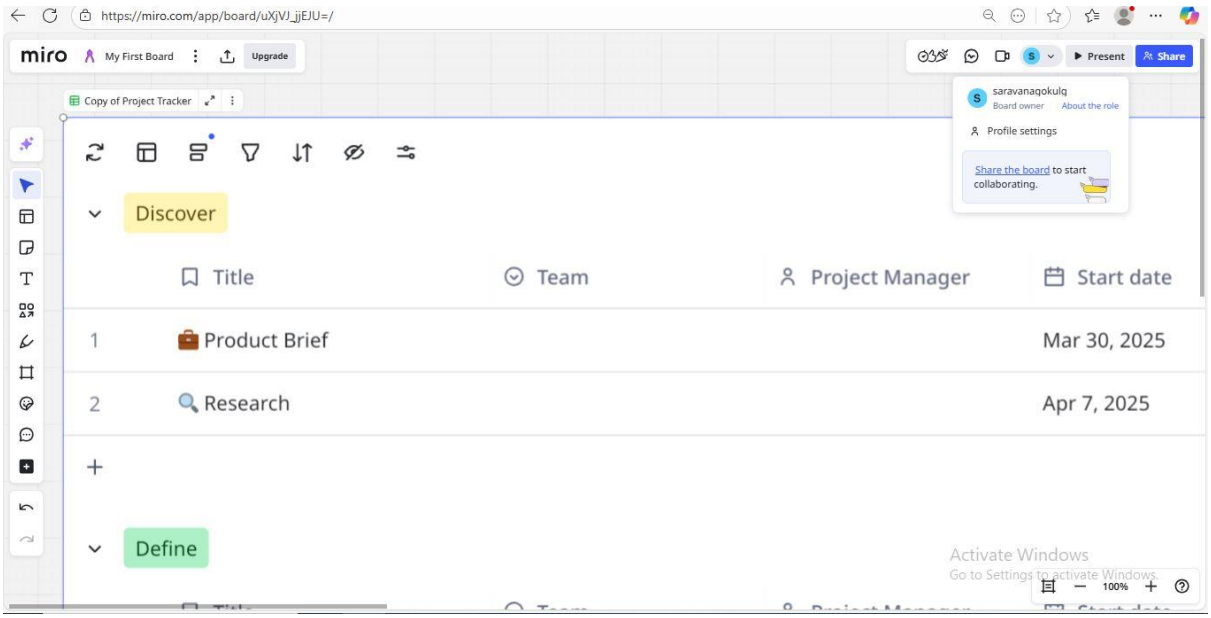



***Asst. Prof. G. Saravana Gokul integrating Moodle to accommodate heterogeneous learning pathways***

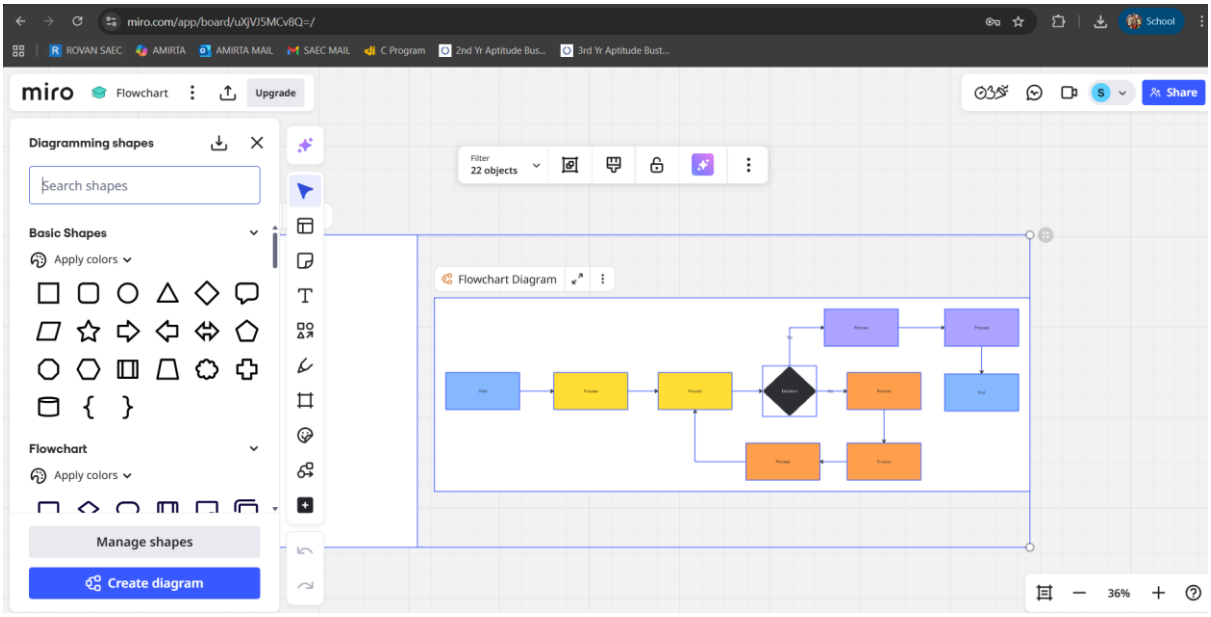



***Asst. Prof. G. Saravana Gokul cultivating inclusive learning opportunities through Moodle integration with dashboard***

*Get from brainstorm to breakthrough with Miro where teams and AI ideate, plan, and build the right things faster*




*Miro dashboard used for the content to display and arranging in the virtual rack inside platform*




*Miro flowchart dashboard used for drawing the algorithm concepts*

## 5.6.D. SUMMARY OF INNOVATION METHODS ALONG WITH THEIR GOALS AND OUTCOMES

### CONSOLIDATION SHEET

| S.No | Innovations | Goals | Methodology Used | Outcomes |
|---|---|---|---|---|
| 1 | Usage of Interactive Panel Board | Enhance interactive and visual learning for better engagement | Smart boards with touch-enabled interactive learning, real-time annotations with good internet | Improved student participation and better conceptual understanding |
| 2 | Flipped Classroom | Improve conceptual clarity before lectures | Video lectures, pre-reading materials | Increased student engagement & participation |
| 3 | Virtual Labs | Provide hands-on experience in coding & engineering concepts | Online simulations (NPTEL, MATLAB) | Improved problem-solving skills |
| 4 | Gamified Learning | Enhance interactive learning and retention | Kahoot, Quizz | Higher student motivation & better performance |
| 5 | Project-Based Learning (PBL) | Develop real-world problem-solving skills | Industry projects, capstone courses | Increased employability & innovation |
| 6 | Usage of Online Platforms | Provide flexibility in learning and assessment | Google Classroom, Moodle, Zoom, Microsoft Teams for virtual classes, quizzes, and discussions | Enhanced accessibility, self-paced learning, and continuous assessment |
| 7 | Usage of Modern Tools | Improve hands-on experience and industry readiness | Interactive Panel, LCD Projectors, Power Point Laser Presenter, Slide Changer, Wi-Fi enabled laptops. | Better practical exposure and skill development |
| 8 | Academic Reinforcement Based on Project-Based Model | Encourage problem-solving and real-world application of concepts | Capstone projects, live industry-based assignments, hackathons | Improved analytical thinking and innovation among students |

| | | | | |
|---|---|---|---|---|
| **9** | **Semester Break Internship** | **Provide industry exposure and real-world skill application** | **Internships with industry partners, online internship portals, certification-based projects** | **Increased employability and professional skill enhancement** |
| **10** | **Reinforcement through Student Club Activities** | **Foster peer learning, leadership, and technical skills** | **Technical clubs (coding, AI, robotics), hackathons, paper presentations, tech talks** | **Increased student engagement and participation in co-curricular activities** |
| **11** | **Usage of Animated Videos, Models, Charts in TLP Process** | **Enhance concept visualization and retention** | **Animated videos, 3D models, physical charts, and graphical presentations** | **Better understanding of complex topics and improved retention** |
| **12** | **Usage of Visual Library, Digital Library & Open-Source Platforms** | **Provide access to vast educational resources** | **NPTEL, Coursera, MIT OpenCourseWare, Khan Academy, institutional digital library** | **Self-learning, exposure to diverse resources, and deeper subject knowledge** |
| **13** | **Train the Trainer Using Short-Term Courses, MOOC Courses, Staff Development Programs, Conferences, and Workshops** | **Improve faculty knowledge and teaching effectiveness** | **FDPs, MOOCs (NPTEL, Udemy, Coursera), workshops, industry collaborations** | **Enhanced faculty expertise, leading to improved teaching quality and student learning outcomes** |

**Co-ordintaor** **HOD/IT**

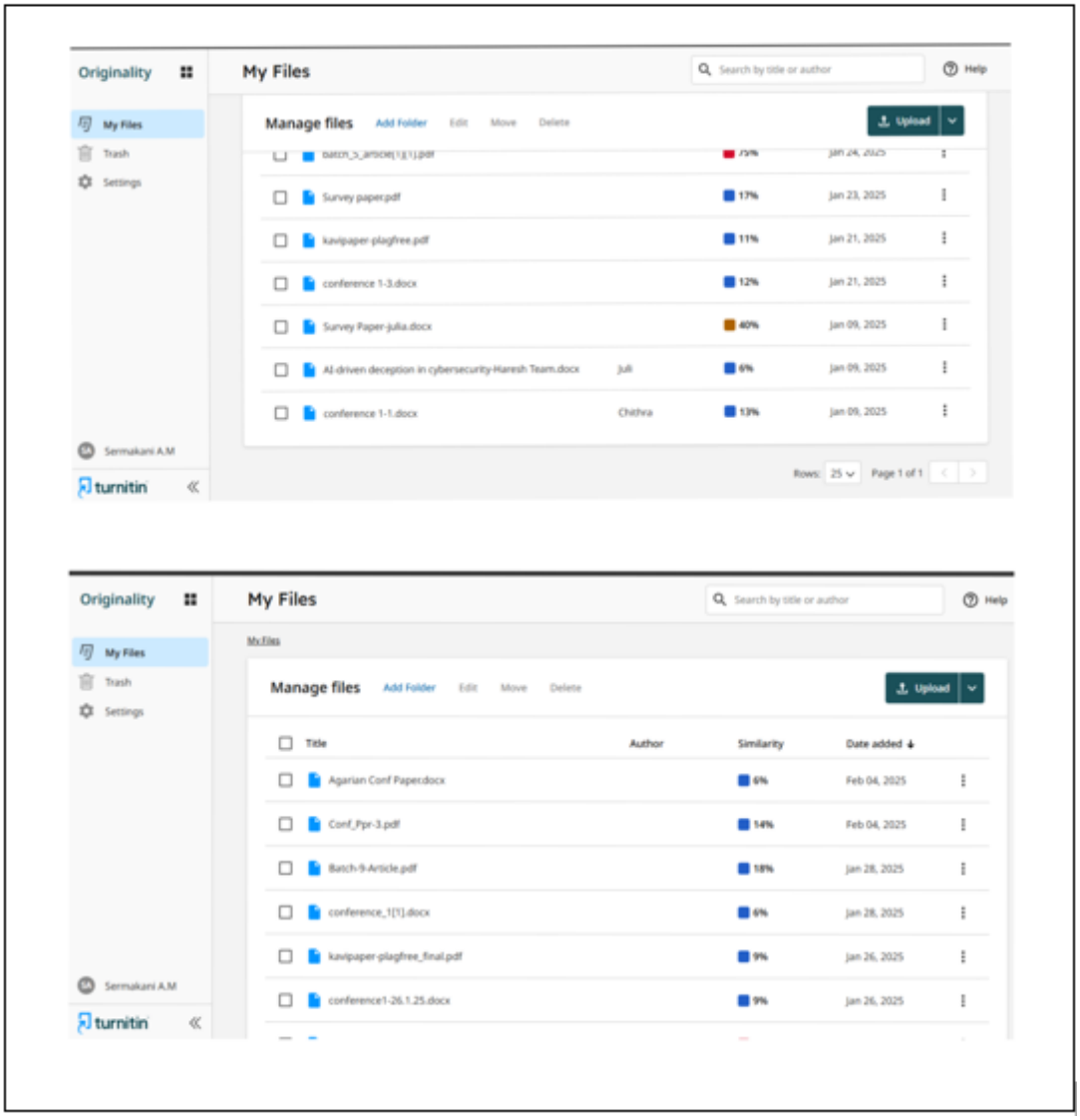
| Consolidated Sheet of Innovations by the Faculty in Teaching and Learning | | | |
|---|---|---|---|
| **S.NO** | **Teaching and Learning Categorization** | **Methods** | **Tools and Technologies utilized** |
| 1 | Innovations by the Faculty in Teaching and Learning | ICT-Based Tools & E-Learning | Moodle, Google Classroom and Canvas, Kahoot, Quizizz |
| | | | Zoom, Microsoft Teams, Google Meet |
| | | Interactive & Visualization | Digital Board with Internet |
| | | | MATLAB, Simulink |
| | | | Virtual Labs (NPTEL, CodeTantra , Labster) |
| | | Content Sharing & Knowledge | SlideShare, Prezi |
| | | | YouTube |
| | | | Google Drive |
| | | Gamification & AI-Based Learning | Duolingo & CodeCombat (for programming), |
| | | Virtual Assistants | AI-Powered Chatbots & Virtual Assistants |
| | | Peer Learning & Collaboration | Miro, Padlet, Trello |
| 2 | Technology-Enhanced Teaching Learning Process | Smart Classroom | Parakh Learning Portal, Digital board with internet |
| | | Flipped Classroom | You Tube Content in Website |
| | | Game-Based Learning | Duolingo, CodeCombat, Kahoot, Quizizz (for programming), |
| | | Virtual Lab-Enhanced Learning | Microsoft Azure |
| | | E. Learning Management Software | LMS Portal |
| | | Research-Based Teaching Learning Process | Nalaiya Thiran Project, Student Publication, Student Conference attended |

| | | | |
|---|---|---|---|
| | | Online Based Teaching Learning Process | Google Workspace/Library (Google sheet, Drive, Forms, Classroom, Slides), NPTEL, Coursera, MATLAB, |
| | | NPTEL | NPTEL Course |
| 3 | Experimental Based Teaching Learning Process | Expert Talk | Cyber security, cloud computing |
| | | Industrial Visit | Technovoation |
| | | Skill Enhancement Course | Aptitude Buster, Skill Rack, Mepro-Pearson |
| | | Industry-Driven Teaching Learning Process | Pumo Technovation, VEI Technologies |
| 4 | Faculty-Driven Video Teaching Learning Process | You-Tube Videos | You Tube Links |
| 5 | Institute Website | Research | Links available in website |
| | | E-Contents | Hyperlinked resources |
| | | Individual Faculty Profile | Hyperlinked resources |
| | | Innovative Teaching & Learning | Hyperlinked resources |
| | | You-Tube | You-Tube videos |
| | | Peer Review & Critique | You-Tube videos comments and likes |
| | | Paper published in SCI/Scopus Journals | Hyperlinked resources |
| | | List of Conference Publications | Hyperlinked resources |
| | | Plagiarism Check | Turnitin Software |
| 6 | Reproducible and Developed Further by Other Scholars | You-Tube Videos | You Tube Links |
| | | SlideShare | SlideShare Links |
| 7 | Clear Goals and Outcomes for appropriate methods | | |

**Co-ordinator** **HOD/IT**

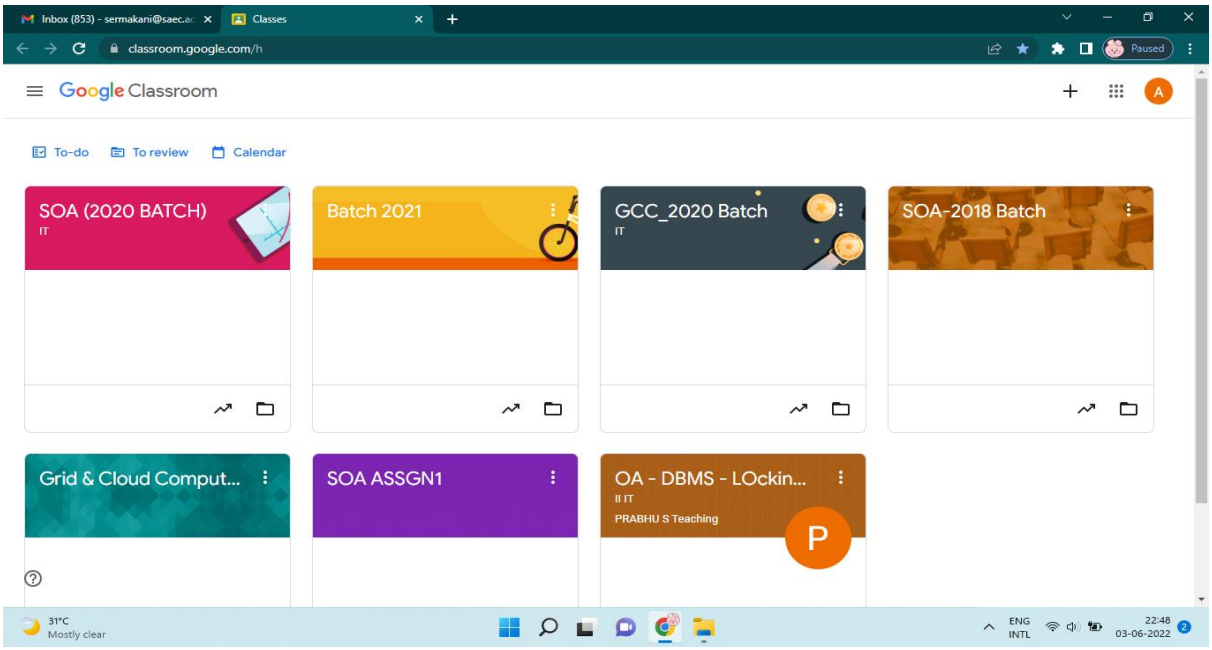
turnitin

*Sample Turnitin Software for checking the plagiarism*

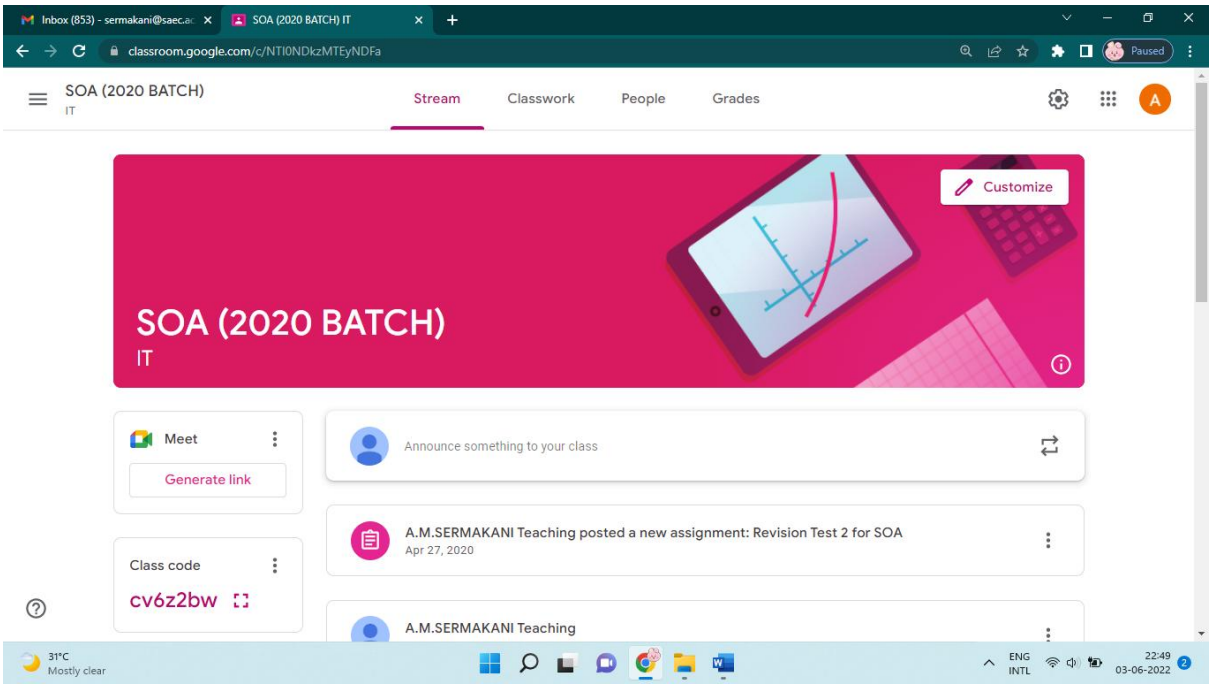



*Students and faculty can access Turnitin's plagiarism detection tool through the integrated LMS portal to ensure academic integrity. The platform enables users to submit assignments and receive comprehensive originality reports for evaluation. Turnitin provides accessible plagiarism checking capabilities directly within the learning management system for seamless assignment submission. Users can authenticate and utilize the tool to verify content originality and maintain scholarly standards.*

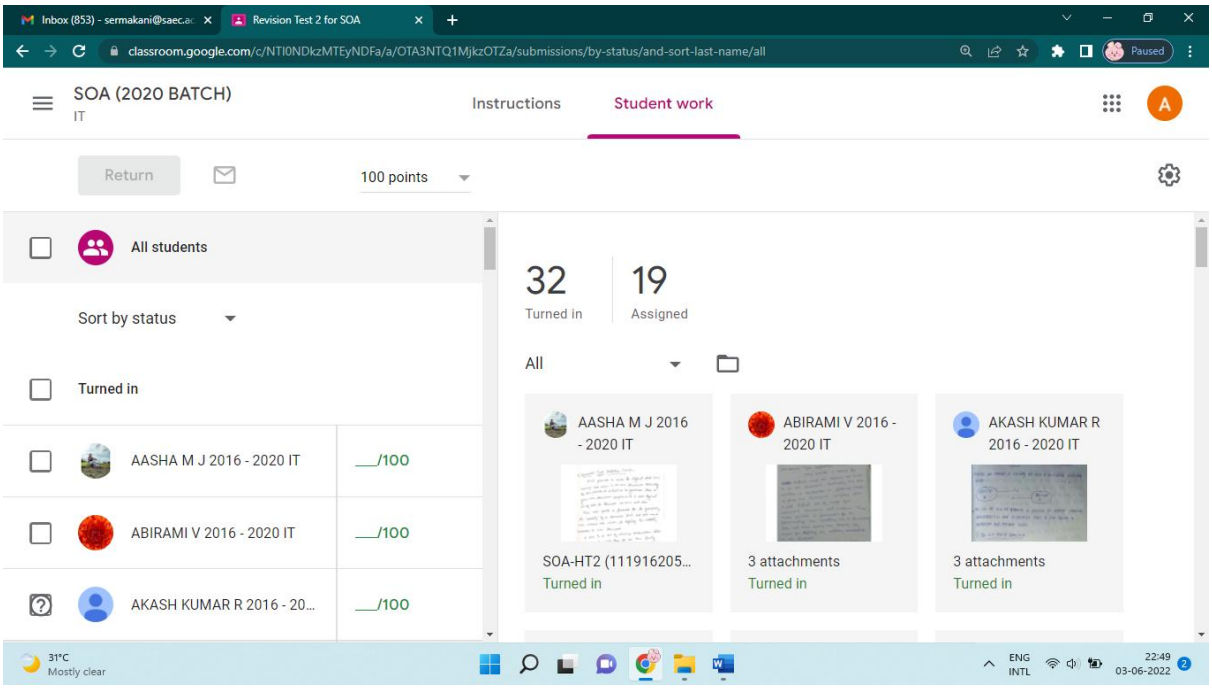
# ICT-BASED TOOLS & E-LEARNING



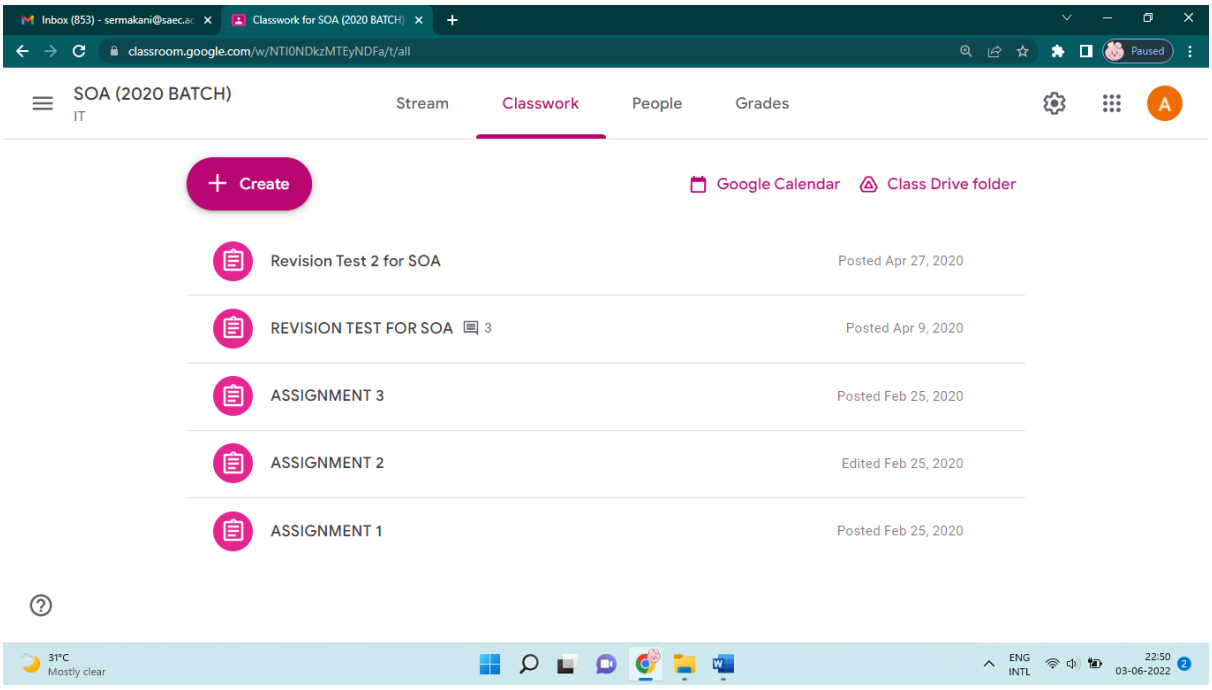

*Google Classroom subjects through educator access*



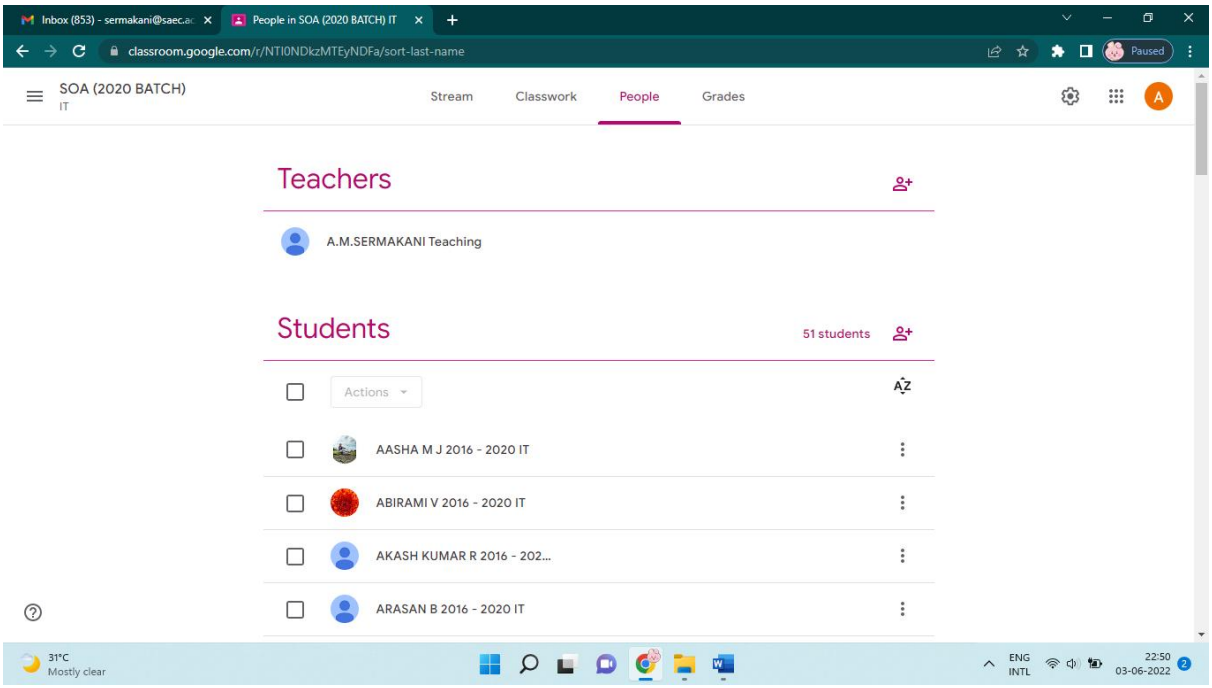

*Google Classroom assignments posted*




*Google Classroom assignment reports generated*



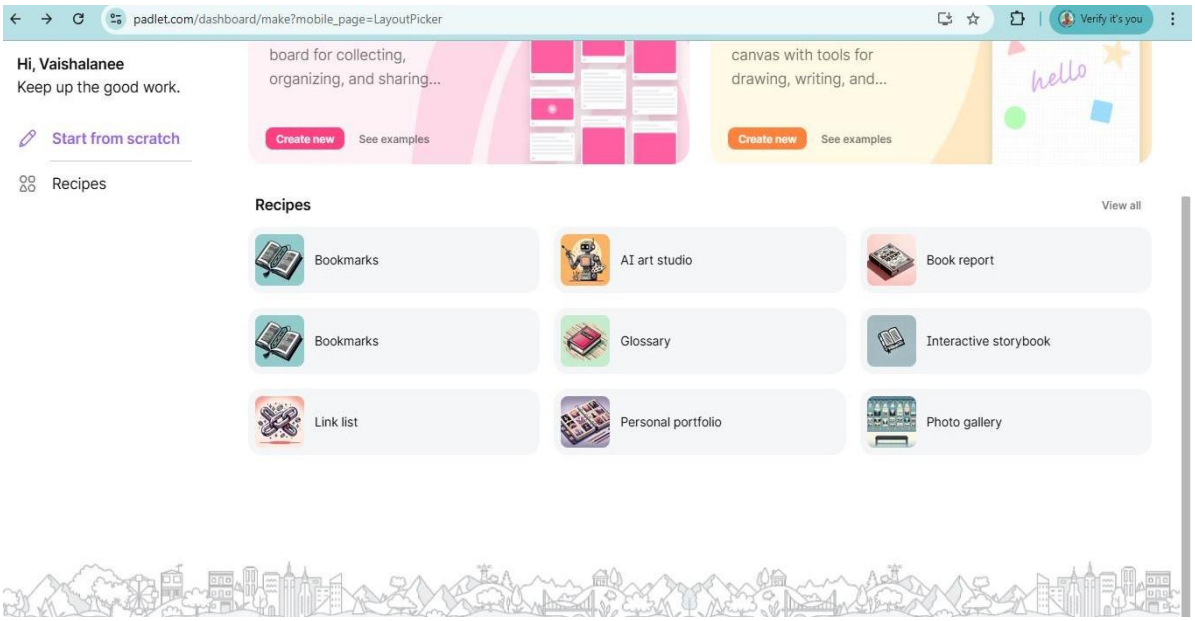

*Google Classroom classwork details exhibited*




***Google Classroom class participants registered***

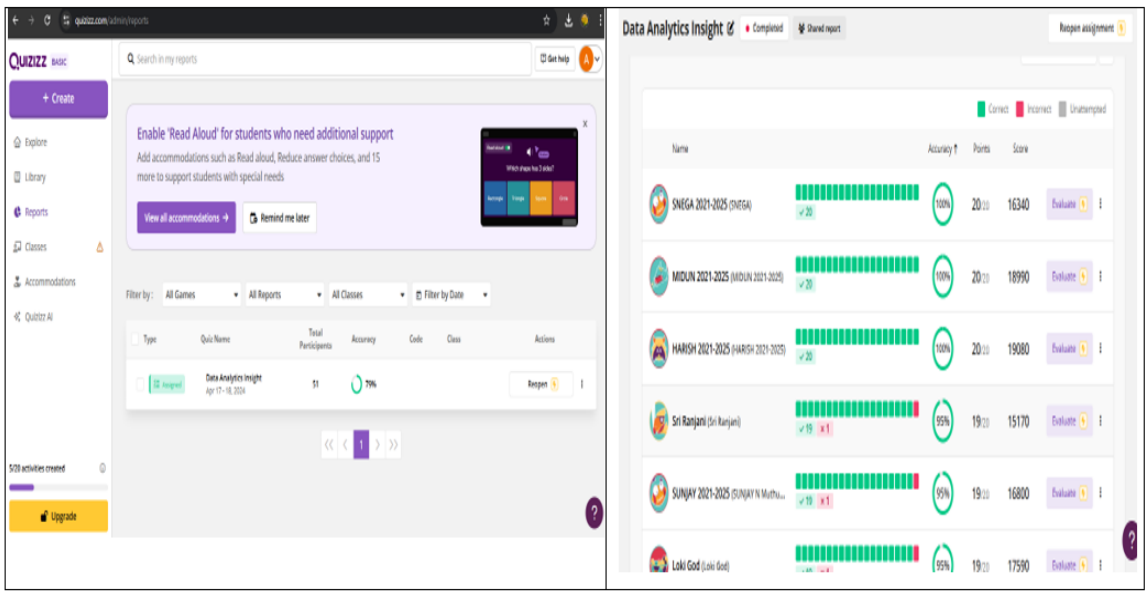
## PEER LEARNING & COLLABORATION

Padlet




*Students are utilizing Padlet's collaborative workspace for learning*

WAYGROUND formerly Quizizz




*Learners are collaborating through Quizz platforms*