PACT Analysis

People	Activity	Context	Technology
Age: 18 – 60+ Students: The system will analyze and detect the behavior of individual students during lectures, providing insights into their emotional states and engagement levels. Teachers: The system aims to support teachers in evaluating and understanding student behavior, enabling them to adapt their teaching methods accordingly.	Data collection: Capturing real-time video footage of students during lectures using cameras or webcams.	Language: The system is limited to English language.	Computer vision: Leveraging computer vision algorithms and techniques to process video footage, detect facial expressions, and analyze body language.
Teachers: Required to have minimal cognition to understand basic system usage.	Facial expression recognition: Utilizing computer vision techniques to identify and interpret facial expressions exhibited by each student.		Deep learning: Utilizing pre-trained deep learning models or developing custom models for accurate facial expression recognition.

Persona: Improve educational strategy for better learning and understanding.	**Body language analysis:** Analyzing students' body language, including posture, gestures, and engagement levels, to enhance behavior detection.		**Data processing:** Employing data processing techniques to aggregate and analyze the collected data, calculating the percentage of each emotion or behavior.
	Data processing and analysis: Calculating the percentage of each detected emotion or behavior for each student and generating text files for evaluation.		**Camera:** A camera will be located in front of students.
	Reporting and feedback: Providing teachers with the generated text files to facilitate evaluation and improvement of teaching methods.		The data will be real time videos **Student:** Emotions and face detection. **Teacher:** Detect teacher skeleton and classify if he/she is explaining or sitting.

			The camera will detect if the person is a teacher or student using TUIO markers based on this it will load the content. Communication: The camera will communicate between person to classify if he/she is student or teacher.