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**AI-Assisted Evaluation System with Manual and AI Options**

**Teacher’s Perspective.**

# 1. Evaluation Options for Assignments and Quizzes

**Objective:**  
As a teacher, I want the flexibility to either manually evaluate student assignments and quizzes or to use AI-assisted evaluation. This allows me to apply my expertise where needed, while also leveraging AI to streamline routine assessments.

**User Story: Choosing Evaluation Mode for Each Assignment/Quiz**

**As a** teacher,  
**I want to** select either manual evaluation or AI-assisted evaluation for assignments and quizzes,  
**So that** I can ensure evaluations align with my teaching objectives while saving time on more routine assessments.

**Scenario**: Teacher selects evaluation mode for a new assignment or quiz

* **Preconditions**: Teacher is creating a new assignment or quiz.
* **Actions**:
  + Teacher navigates to “Assignments” or “Quizzes” in the course menu and selects “Create New.”
  + Enters assignment or quiz details, including title, due date, weightage, and instructions.
  + In the “Evaluation Mode” section, the teacher chooses one of the following:
    - **Manual Evaluation**: The teacher will review and score each submission personally.
    - **AI-Assisted Evaluation**: The AI will provide scores and feedback based on preset criteria and rubric.
  + For AI-Assisted Evaluation, the teacher sets additional preferences such as:
    - **Rubric Criteria**: Key points or concepts the AI should consider.
    - **Feedback Style**: Supportive, neutral, or critical tone.
    - **Threshold for Manual Review**: AI will flag submissions below a certain score for teacher review.
  + Saves and publishes the assignment or quiz.
* **System Actions**:
  + The system saves the selected evaluation mode and preferences.
  + For AI-Assisted Evaluation, it stores rubric criteria and feedback style to apply once submissions are received.

# 2. Manual Evaluation Process

When choosing **Manual Evaluation**, the teacher has full control over grading, feedback, and assessment style. This option is especially useful for assignments that require nuanced feedback or subjective analysis.

**User Story: Manually Grading Assignments and Providing Feedback**

**As a** teacher,  
**I want to** review student submissions and provide personalized feedback manually,  
**So that** I can apply my judgment and tailor feedback to each student’s work.

**Scenario**: Teacher manually evaluates a batch of assignments

* **Preconditions**: Students have submitted their assignments, and the teacher has chosen manual evaluation.
* **Actions**:
  + Teacher navigates to the “Assignments” tab and selects “View Submissions.”
  + Chooses a student submission to review and opens the grading interface.
  + Reviews the content of the submission, marking relevant sections with comments or feedback.
  + Assigns a score based on the rubric and provides detailed feedback, including any improvement suggestions.
  + Saves and moves to the next submission.
  + After completing all submissions, the teacher has an option to “Publish Grades and Feedback” to the students’ dashboards.
* **System Actions**:
  + The system saves the teacher’s score and comments.
  + Once all feedback is saved and published, students are notified of their grades.
* **Outputs**:
  + Students view detailed, teacher-provided feedback for each assignment in their dashboard.
* **Notes**:
  + Teachers retain full flexibility in feedback, tailoring responses to individual performance and learning needs.

# 3. AI-Assisted Evaluation of Assignments/Quizzes

## 1. Setting AI Evaluation Parameters (Teacher Input)

**As a** teacher,  
**I want to** configure specific parameters for AI-assisted evaluation,  
**So that** the AI evaluation aligns with my grading standards and feedback style.

**Scenario**: Teacher sets up AI-assisted evaluation with custom parameters

* **Preconditions**: Teacher is setting up an assignment or quiz with AI-assisted evaluation enabled.
* **Actions**:
  + The teacher inputs key parameters to guide the AI evaluation process, including:
    - **Grading Criteria**:
      * Rubric elements or points of emphasis (e.g., clarity, argument strength, grammar).
      * For objective questions (e.g., MCQs, true/false), correct answers and scoring weight per question.
      * Weightage for each rubric criterion, if applicable.
    - **Feedback Style**:
      * Supportive, neutral, or critical (affects tone and depth of AI feedback).
    - **Threshold for Manual Review**:
      * Score threshold (e.g., below 60%) for AI to flag submissions requiring additional teacher review.
    - **Preferred Feedback Focus**:
      * Key areas for the AI to emphasize in feedback, such as content mastery, organization, and relevance to learning objectives.
  + The teacher saves these settings, which the AI will apply during the evaluation process.
* **System Actions**:
  + The system logs the teacher’s inputted criteria and weights, using them to evaluate each submission and apply feedback accordingly.

## 2. AI Evaluation Execution and Scoring

After students submit their work, the AI performs evaluation tasks based on the criteria set by the teacher. It analyzes each response, compares it to the rubric, and assigns scores.

**Workflow for AI Evaluation Execution**:

* **Objective Questions**:
  + **MCQs/True-False**: The AI checks student responses against the correct answers and calculates scores.
  + **Score Calculation**: AI applies the weightage assigned by the teacher, providing a percentage score and highlighting incorrect answers for feedback.
* **Subjective Questions**:
  + **Short Answer/Essay Evaluation**:
    - **Relevance Check**: AI identifies key concepts and checks if the student has covered the required topics.
    - **Rubric Application**: AI scores each section based on the rubric criteria set by the teacher (e.g., coherence, argument strength).
    - **Grammar and Syntax Analysis**: AI evaluates grammatical accuracy, clarity, and coherence.
    - **Structure & Flow**: AI assesses if the response follows a logical structure and if transitions between points are smooth.
  + **Score Calculation**: Based on rubric adherence and the presence of required concepts, AI assigns a score to each section of the answer and compiles the total score.
* **System Actions**:
  + AI calculates final scores for each assignment and flags submissions below the specified threshold for further teacher review.
  + AI stores scores and preliminary feedback, ready for teacher review or direct publishing.

## 3. AI-Generated Feedback Creation

Once scoring is complete, the AI generates feedback for each submission. This feedback is tailored to match the teacher’s specified style and focus areas, ensuring constructive and personalized responses.

**Feedback Workflow**:

* **Feedback Style and Tone**:
  + **Supportive**: Focuses on encouraging remarks with gentle suggestions for improvement.
  + **Neutral**: Provides factual feedback, pointing out areas for improvement without an emotional tone.
  + **Critical**: Highlights areas of weakness with firm language, offering direct suggestions for improvement.
* **Feedback Focus**:
  + **Content Mastery**: AI evaluates and comments on the student’s understanding and knowledge.
  + **Structure & Organization**: AI provides feedback on how well the answer is organized, covering transitions and logical flow.
  + **Grammar & Clarity**: AI suggests grammar corrections or rephrasing for better clarity.
  + **Additional Resources**: For students scoring below the threshold, AI suggests extra resources or topics for review.
* **System Actions**:
  + AI saves feedback for each submission based on the chosen focus and style.
  + Feedback and scores are displayed in the teacher’s review dashboard, allowing the teacher to approve or refine.

## 4. Teacher Review and Customization of AI Evaluations

Before finalizing, teachers can review and customize AI-generated scores and feedback for any submission. This step ensures alignment with course standards and provides teachers control over the evaluation process.

**User Story: Reviewing and Adjusting AI Evaluations**

**As a** teacher,  
**I want to** review and modify AI-generated scores and feedback as needed,  
**So that** I can ensure each evaluation accurately reflects the student’s performance.

**Scenario**: Teacher reviews AI evaluations and makes adjustments.

* **Preconditions**: AI has completed initial scoring and feedback generation.
* **Actions**:
  + Teacher navigates to “Review AI Evaluations” on the dashboard.
  + Reviews flagged submissions (below threshold) first, with AI suggestions for improvement areas.
  + For each flagged or low-scoring submission, the teacher can:
    - Modify scores based on personal review.
    - Adjust AI feedback, adding additional comments for clarity.
  + For high-scoring submissions, the teacher can approve the AI evaluation without modification.
  + Teacher finalizes and publishes grades and feedback to the students’ dashboards.
* **System Actions**:
  + The system logs teacher adjustments, saving modified feedback and scores for future AI reference.
  + Publishes final scores and feedback to each student.
* **Outputs**:
  + Students receive personalized, AI-enhanced feedback, with teacher-specific adjustments if applicable.

**Summary of Inputs, Parameters, and Outputs in AI Evaluation**

* **Inputs from Teacher**:
  + Grading Criteria and Rubric: Specific points for AI to consider when scoring.
  + Feedback Style: Determines AI’s tone (supportive, neutral, or critical).
  + Threshold for Review: Sets the score level at which AI flags submissions for teacher review.
  + Focus Areas: Indicates where feedback should concentrate (content mastery, structure, clarity, etc.).
* **Parameters for AI Evaluation**:
  + **Objective Questions**: AI matches responses to answer keys and applies weightage.
  + **Subjective Questions**: AI analyzes text based on rubric criteria, grammar, structure, and coherence.
  + **Feedback Generation**: Based on scoring and focus, AI generates targeted feedback per the teacher’s instructions.
* **Outputs**:
  + AI-generated scores and detailed feedback for each assignment or quiz.
  + Notifications of flagged submissions for teacher review.
  + Finalized grades and feedback appear on the student’s dashboard once approved.