Reflection Report

Submitted by: ALTYNGUL SHADETOVA

Full Name:	ALTYNGUL SHADETOVA
External ID:	0925CbAT41
Gender:	Female
Age:	48
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1. CBC, CBE, and CBA as a System

Competency-Based Curriculum (CBC) is designed to support effective learning through specific skills and approaches centered around the learner. It emphasizes the development of competencies that are used in daily life, rather than focusing solely on theoretical knowledge. CBC provides clear learning directions and objectives for both teachers and students. The goal is to help students develop academic, social, and personal skills. Competency-Based Education (CBE) is a teaching method that guides students in achieving the objectives outlined in the curriculum. Students become active seekers, researchers, and problem-solvers, progressing at their own pace. CBE ensures deep understanding of content, allowing students to move on only once they've mastered the material. Teachers act as guides and supporters, facilitating this self-paced, mastery-based learning. Competency-Based Assessment (CBA) evaluates students by assessing their ability to demonstrate knowledge through practical tasks. This assessment method goes beyond testing, incorporating projects and practical work to show students' skills in real-life situations. These three components—CBE, CBC, and CBA—work together, making the learning process effective when integrated correctly. However, in primary school lessons, integration is often lacking. For example, in a second-grade math class, students were asked to draw a right angle. However, all students were forced to draw at the same pace and use the same method, which did not align with CBE principles. The assessment was limited to a single task, with no real-world application or individual feedback. As a result, some students fell behind, while others finished early and

became bored, which reduced motivation and hindered skill development.

2. Curriculum Development and Learning Goals

In the context of CBC, it is crucial to align learning objectives, activities, and assessments. Learning objectives, developed using the SMART principle (Specific, Measurable, Achievable, Relevant, Time-bound), must be clear and understandable for both teachers and students. Learning activities should be designed to help students meet these objectives. They need to be meaningful, engaging, and connected to real-life situations. Students actively participate, reflect, and apply their knowledge. Assessment must align with the learning objectives and should be fair and transparent. It is used not only to measure results but also to monitor students' development. The criteria for assessment clarify what is being evaluated and how it is being evaluated. For example, let’s examine a high-quality learning objective: "Dividing models of plane figures and creating compositions from them." This lesson aligns with the SMART principles. By the end of the lesson, students not only identify geometric figures but also create compositions from these models. The activities were designed to help achieve this objective, and students were engaged throughout the process. Assessment was aligned with the objective and used to monitor student progress. This lesson is effective because students are active participants who engage in thinking, acting, and reflecting on tasks. They apply their knowledge in real-life contexts, solving problems using what they have learned. The lesson also demonstrates "Consistency" — all stages of the lesson align with the goal. The learning objectives were clearly defined, and the activities were designed to achieve these objectives. Assessment was used to measure whether students reached the expected outcomes. Learning objectives are classified into three domains based on Bloom’s taxonomy: cognitive (thinking), affective (attitudes), and psychomotor (physical skills). For instance: - Cognitive Objective: Identifying geometric figures, understanding how to construct models, and explaining one's work. - Affective Objective: Working in groups, expressing opinions, evaluating peer work, and showing interest in the lesson. - Psychomotor Objective: Cutting, folding, and gluing paper to accurately create shapes. By aligning the lesson's activities with these domains, each part complements the other, leading to an integrated and effective learning experience.

3. Assessment Quality: Validity, Reliability, and Fairness

The three main principles of assessment are reliability, validity, and fairness. These principles ensure that students' knowledge and skills are assessed accurately, consistently, and fairly. Let’s examine the test item I analyzed in terms of reliability, validity, and fairness. Question

type: Choose one correct answer. Content: Choose the word that is not included in the annotation algorithm: A) Setting the topic B) Highlighting the main idea in each section C) Paraphrasing the main idea D) Naming the main ideas and issues E) Indicating the meaningful parts of the text Correct answer: A) Setting the topic 1. Reliability (producing consistent results). The question is clear, with only one correct answer, which supports reliability. A student relying on their knowledge would likely choose the same answer consistently. However, if a student confuses the annotation algorithm with the summary algorithm, reliability could decrease. Conclusion: Reliability is moderate — clear structure, but confusion over terminology can impact consistency. 2. Validity (measuring what is intended). This task tests knowledge of the annotation algorithm, corresponding to the curriculum for 6th–7th-grade students. However, answers like "naming the main ideas and issues" may confuse students if they interpret the question differently. Conclusion: Validity is moderate — it tests the intended skill, but the similar wording of answers may cause confusion. 3. Fairness (providing equal opportunity for all students). The question is culturally and socially neutral. The language structure is clear, with no complex or specialized terminology. May seem unfair: If a student has not worked with the annotation algorithm before, this question may appear unfair to them. Conclusion: Fairness is at a moderate level, but if the topic has been taught in a specific grade, it can be considered fair. Final summary of this test item: Reliability: Moderate – good (clear structure, but possible confusion); Validity: Moderate (tests the skill, but alternative answers are similar); Fairness: Moderate (fair if based on taught material, but may be challenging in certain contexts).

4. Grading and Standard Setting

End-of-course tests should not only assess the recall of facts but also measure the knowledge, skills, and competencies students have acquired and can apply in practice. These tests form the basis for certification decisions, so their quality must be high, fair, and authentic. Transparency is essential for end-of-course tests. The test structure, content, and assessment criteria should be clear from the beginning, helping students understand what to expect. Fairness ensures that the test offers equal opportunities to all students, regardless of their background. These tests determine passing scores (cut scores) through a criterion-referenced approach, which is the fairest way to assess whether learning objectives have been achieved. Several factors influence the cut score: - Learning Objectives: The test should cover all levels of the learning objectives—knowledge, understanding, application, and analysis. The passing score reflects how well these objectives have been met. - Task Complexity: If the test consists mainly of lower-level tasks, the cut score may be set higher. Higher-level tasks (analysis, application) might result in a lower cut score. - Classical Test Theory: The cut score can be justified statistically using the test items' discrimination index, difficulty level, and reliability. To

improve test quality, both qualitative and quantitative analysis are needed: - Qualitative Analysis: Collect feedback from teachers, analyze test instructions for clarity, evaluate alignment with content, and assess the time allotted for completing the test. - Quantitative Analysis: Measure reliability (Cronbach's alpha ≥ 0.70), difficulty index (0.4–0.6), discrimination index (≥ 0.30), and effectiveness of distractors (how appealing the incorrect answers are). End-of-course tests are designed to reflect students' learning outcomes. They must be valid, reliable, and fair, with continuous improvements to test items and alignment with learning objectives.

5. Use of Rubrics

I use rubrics as a tool to assess participants' work. During the course, I develop specific rubrics for evaluating written assignments, reflections, lesson plans, micro-lessons, and group projects. I teach teachers how to create rubrics. Together with the participants, we learn the 4 steps of rubric development through practice. I guide them in creating effective, practical rubrics that they can use in their own subjects. Teachers assess their work using the rubric, allowing them to see their current level and identify areas for improvement. For example, a teacher may write a lesson plan during the course, and it is assessed based on criteria such as "Alignment with Learning Objectives," "Structure of Lesson Phases," and "Student Activities." If the teacher's plan doesn't meet the "Professional" level, they can adjust the alignment between objectives and tasks, improving the quality of their lesson planning. Key factors for successful rubric development and use include: - Alignment with Goals: The rubric should match the learning objectives; - Clear Descriptors: Use specific, descriptive terms rather than vague words like "good" or "average"; - Sharing in Advance: Provide rubrics to students before starting a task to help them understand the expectations and develop self-regulation; - Balanced Criteria: Use 3–5 criteria for the most effective rubrics—too few or too many can undermine their clarity; - Quality Feedback: Rubrics should provide clear, actionable feedback in a timely manner; - Differentiation: Rubrics can help tailor tasks to students at different levels of understanding. A rubric is not just an assessment tool but also a means to enhance the quality of learning and to develop both students and teachers. When constructed correctly, it clarifies the learning objective, outlines the steps for development, and shows the path for each learner to achieve success.

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