Reflection Report

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1. CBC, CBE, and CBA as a System

1. CBC is a curriculum based on knowledge and practical skills. It emphasizes clear objectives, interdisciplinary and real-world learning, active engagement, flexible pacing, and authentic assessment. CBE is an instructional approach focused on developing essential and effective skills. It ensures equity by giving each student an equal chance to succeed. It takes into account individual characteristics, skills, and learning preferences. It helps define learning goals and assessments and allows learners to move at their own pace toward mastery. CBA is an assessment method that measures not what a student remembers, but what they can actually do. It changes the purpose of education—shifting from rote memorization to preparing students for life and developing 21st-century skills. Together, CBC, CBE, and CBA function as an integrated system. CBC identifies what students need to know and be able to do. CBE guides how learning should take place through meaningful tasks and active experiences. CBA determines how learning is measured by assessing skill mastery and competency. For example: "Eight dancers are traveling from Taraz to Astana to participate in a competition. They are accompanied by their dance instructor and two mothers. What is the most efficient mode of transportation?" This task prompts the following questions: – What knowledge is required? – How can students complete the task, and by which methods? – What do we assess, and which skills are being evaluated? This task is designed in line with the lesson objective and the higher levels of Bloom's taxonomy. Students research, collect, analyze, and organize information. They calculate travel time and costs and justify the most efficient option.

It can be done individually, in pairs, or in groups. The task evaluates cognitive, subject-specific, social, and metacognitive skills. Its real-life context made it accessible and engaging. However, unclear assessment criteria were a weakness. Creating a rubric would clarify expectations, define targeted skills, and help measure levels of development more accurately.

2. Curriculum Development and Learning Goals

2. In a competency-based system, learning objectives are a crucial tool. For teachers, they provide direction; for students, they serve as a function of growth. For example, when students plan their own tasks, their confidence increases, and their sense of responsibility strengthens. However, unclear or vague objectives may lead teachers to deviate from intended outcomes and create challenges in measuring success. Therefore, aligning learning objectives, activities, and assessment activates the principle of constructive alignment, forming a coherent learning process. When planning lessons, SMART objectives focus on specific skills or knowledge. For instance, the goal "The student improves problem-solving skills" is too general, while "The student identifies the structure of a math problem" is more precise. This includes recognizing the conditions, question, solution, and answer—demonstrating higher-order thinking in Bloom's taxonomy. Objectives are measured through tasks or assessments that prove student achievement. A realistic objective should reflect the learner's current skill level, learning environment, available time, and be measurable. Overly complex goals can discourage students, while overly simple ones reduce motivation. Considering students' capabilities and organizing active, problem-based, group, and hands-on learning effectively helps bridge the gap between theory and practice. It is also useful to apply feedback and reflection when discussing the skills gained through learning activities. Learning objectives should combine subject knowledge and essential life skills. For example, in Grade 3 "Science," the goal "Students propose their own model of a water purification filter" involves cognitive understanding of water composition and filtration. Through research, students also develop psychomotor and affective domain skills linked to real-life abilities. As a result, CBC contributed to planning by forming SMART objectives at higher cognitive levels. CBE enabled students to research and create models through experiential, problem-based learning. CBA provided feedback based on research outcomes. Successes included discussions on environmental protection, safety, and health. The shortcoming: assessments focused mainly on descriptors, without emphasizing the development of broader skills.

3. Assessment Quality: Validity, Reliability, and Fairness

In a competency-based education system, quality assessment must be reliable, valid, and fair. Reliability ensures that if a student takes the same test multiple times, the results will be consistent. It focuses on the student's understanding of the material. Validity measures whether a test accurately assesses a skill or ability in terms of content, criteria, and construct. Validity can be strengthened by varying question types. Fairness ensures that assessments are inclusive, unbiased, and based on equal opportunities, respect, and support. Example 1: "Based on the properties of the plant seed shown in the image, which human-invented item is inspired by it?"(The picture shows a burdock plant.) A) Button B) Velcro C) Strap D) Snap This question is part of a Grade 4 Science summative assessment in the "I am a researcher" unit. It aligns with Bloom's lower-order thinking and is worth 1 point. The task includes a reference image and is a multiple-choice question with one correct answer. The distractors are close to the correct answer, making students think. Thus, the question is valid. It is reliable, as it reflects the curriculum and corresponds with students' class responses. However, its fairness is questionable. The plant in the image grows in temperate regions, so students from arid areas may not recognize it. This could impact their ability to answer correctly, which conflicts with the principle of applying knowledge. Example 2: "List three benefits and harms of wind." This open-ended question is worth 3 points, assessing analysis and synthesis. Students earn one point for each correct example. It is reliable, valid, and fair, as it tests students' ability to apply prior knowledge and uses neutral, clear language.

4. Grading and Standard Setting

In competency-based assessment, the quality of test tasks, grading, and standard-setting is essential and requires careful attention. From my experience, I adhere strictly to quality criteria when designing tests with teachers. Relevance – the test must measure exactly what is intended; Objectivity – questions must be clear, with only one correct answer; Effectiveness – questions should be brief, clear, and not overly complex; Clarity – no ambiguity or irrelevant information should be present; Neutrality – the test must be fair, unbiased, and equitable. For multiple-choice questions, it is best to offer 4 or 5 answer options. The focus should be on the quality, not the quantity, of distractors. If the test includes open-ended questions, short, complete answers or essays are preferable. The effectiveness of the test increases when it aligns with the specific skills domain, as reading comprehension tests should include text-based questions. These insights have helped me in creating test tasks. After completing the RCEC course, I became familiar with grading and standard-setting methods and conducted a detailed analysis. I prepared a test for primary school students and conducted peer reviews with colleagues. Based on feedback, some questions were revised. The test was administered, and a qualitative and quantitative analysis was conducted. Equal opportunities and a supportive environment were created for students, and time allocation was appropriate.

However, the knowledge level of Class A students was significantly higher than that of Class B. This taught me that it is critical to select standard-setting methods that align with the goal. In the absolute method, a passing score is set at 55%, and a high score at 80%. In the comparative method, results are assessed relatively. The combined method incorporates elements of both. This standardization process reminded me of the entrance exams for NIS in Kazakhstan and the evaluation standards for primary school teachers in the "Altyn Tughyr" competition, where the passing score changes each year based on participants' capabilities. To improve, I would study classical test theory and statistical tools for test analysis, specifically working with Rit and Rir correlations to fully evaluate CBA.

5. Use of Rubrics

In CBC and CBA systems, rubrics are essential tools for fair feedback and self-assessment, focusing on expected outcomes and considering students' levels. They consist of criteria, performance levels, and descriptors. In my experience, rubrics are often prepared during summative assessments but not always presented to students. For example, I assigned a project on "Features of conducting design or research work in natural sciences" to groups. The goal was to explore the use of design or research in natural science subjects. Performance levels were: "satisfactory," "good," and "excellent," with criteria including alignment with the goal, formatting, presentation skills, and cooperation. Providing timely, quality feedback through rubrics helps improve learning. For instance, a group excelled in three criteria but performed poorly in cooperation. This could indicate that one member was doing most of the work, and others were less engaged. In this case, I would offer feedback like: "The group prepared the content well, connecting theory with practice, and demonstrated strong speaking skills. However, I noticed a lack of full cooperation, as several members were less involved. I recommend focusing on collaboration in future projects." In conclusion, I find rubrics useful in guiding general and group-based work, offering structure for achieving goals. However, providing rubrics in advance can limit creativity, so I now prepare rubrics specifically targeting measurable tasks with clear objectives.

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