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Innovative Pedagogies in Competency Based Learning: A Critical analysis between the Traditional and the CBC Curriculum

Dr. Joshua Manduku[1], Dr. Hellen Sang[2]
University of Kabianga, P. O Box 2030-20200, Kericho, Kenya
Email jmanduku@kabianga.ac.ke[1], sanghellen@yahoo.com[2]

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Abstract

In basic terms, Competency Based Education (CBE) means that, instead of focusing on grades and yearly curriculum schedules, the main focus is placed on how competent each student is in the subject. This means that students can only move forward when they can demonstrate mastery of concepts. Competency based education and personalized learning really go hand-in-hand. By personalizing the learning experience for each individual student, teachers ensure that each student has full mastery before they can move forward. This way, the goal of equity is achieved: students move forward at their own pace but everyone in the class achieves mastery. Competency based education gives a clear focus on preparing students for the next stage of their life, whether it be college or a career.

This paper was based on library research where literature concerning the CBE curriculum was reviewed. The paper seeks to look at the major differences between the CBE curriculum and the traditional curriculum in reference to its structure, learning outcomes and grading. It will also look at the pros and cons of the CBE curriculum and conclude by highlighting the Six main principles of CBE the main focus being the 21st century skills which are communication, creative thinking, critical thinking and problem solving, social responsibility, positive personal and cultural identity and personal awareness and responsibility.

Keywords: *Competency Based Curriculum, 21st Century skills.*

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1. Introduction

The search for better teaching strategies will never end. As a school leader, you probably spend too much of your time thinking about how to improve the learning experience of the students that pass through your school throughout the years.

After all, what they learn (and how they learn it) will become a part of these students as they grow, hopefully helping them become successful adults.

This is the main goal of competency-based education: giving each student equal opportunity to master necessary skills and become successful adults.

2. What is competency-based education?

In basic terms, competency-based education means that, instead of focusing on grades and yearly curriculum schedules, the main focus is placed on how competent each student is in the subject.

This means that students can only move forward when they can demonstrate mastery.

Competency based education and personalized learning really go hand-in-hand. By personalizing the learning experience for each individual student, teachers ensure that each student has full mastery before they can move forward.

This way, the goal of equity is achieved: students move forward at their own pace but everyone in the class achieves mastery.

Competency based education gives a clear focus on preparing students for the next stage of their life, whether it be college or a career.

In Kenya the Competency Based Curriculum (CBC) is a new system of education designed by the Kenya Institute of Curriculum Development (KICD) and launched by the Ministry of Education in 2017. The CBC is designed to emphasize the significance of developing skills and knowledge and also applying those competencies to real life situations.

Competence based curriculum is aimed at emphasizing the complex outcomes of learning process (i.e. Knowledge, skills and attitudes to be applied by learners) rather than mainly focusing on what learners are expected to learn about in terms of traditionally- defined subject content.

The approach is in such a way that a person must demonstrate the ability to perform a job's specific task. This is an approach to teaching and learning of measurable skills rather than abstract learning.

The essentials are therefore to allow students to advance based on their ability to master a skill or competency at their own pace regardless of environment. This method is tailored to meet different learning abilities and can lead to more efficient student outcome.

3. Core Competencies of CBC

1. Communication and collaboration.
2. Critical thinking and problem solving
3. Imagination and creativity
4. Citizenship
5. Learning to Learn
6. Self-efficacy
7. Digital literacy

4. CBC Life Values.

A learner should be modeled to have the following values as he/she grows within the system

Love,

Responsibility

Respect

Unity

Peace

Patriotism

Integrity

5. What's the difference between competency-based education and traditional education?

Let's discuss three main differences:

Structure

In traditional education, the year is set out in advance for every student. Thus, at the end of each unit, every student must move forward, whether or not they fully understand the material or have mastered the necessary skills. All students in a classroom must be the same age.

On the other hand, competency-based education is flexible to the students and where they are in the learning process. That means students are given the support they need individually to move forward and master the subject and inherent skills. Instead of moving forward based on age, students move forward based on where they are and what they are capable of.

Learning Outcomes

Traditionally, learning outcomes are focused on memorization and comprehension with the goal of passing tests.

In competency-based learning, the focus is placed on deep understanding that is demonstrated through application. This means that learning outcomes are proven by action, and focus on building the skills students need to become better learners into adulthood.

Grading

Traditional grades are made up of test scores, assignments, and behavior. Competency based education scores are based on the performance levels of each student, without bias.

Credit: Educational Technology and Mobile Learning
With personalized and creative assessments, teachers are able to collect and understand data on student progress. Then, they use this data do develop scores that are transparent and help both students and parents to understand what's really going on. The grading system is based on 4 areas i.e exceeding expectation, meeting expectation, approaching expectation and below expectation.

6. Competency Based Education Pros and Cons

There are both benefits and disadvantages to using a competency-based education system in your school.

Pros

- Flexibility for all types of students, no matter their knowledge backgrounds or literacy levels
- Bias is removed, and equity is achieved
- Students are better prepared with the skills necessary to succeed as adults
- Students learn how to be better learners, and take responsibility for their education

Cons

- Key competencies must be determined and defined for each class, which is difficult
- Assessments must be more meaningful and creative
- Teachers must be constantly aware of student progress, and thus be ready to jump in and help a student who doesn't understand or isn't on track to graduate at 18

All this being said, the disadvantages mentioned above can be overcome. By building a well-informed, research-based system, competency-based education can succeed.

This will present challenges for school leadership. But the end result will be students who are better prepared for life as adults.

7. The 6 Main Principles of Competency Based Education:

7.1 Equity is Set Before All Else

Equity does not mean giving each student the same thing as everyone else. Instead, it means giving each student what they need to reach the same end goal. This is a main principle of

competency-based education because it purposely seeks to understand and remove bias in school leadership. Students are taught and supported based on their personal strengths and weaknesses, giving each individual the same chances for success. Thus, the predictability of achievement based on culture, social class, household income, or language is completely removed.

Competency based education also helps create an inclusive culture where all students feel safe and respected.

7.2 Classes Emphasize Measurable Competencies That Help Build Skills for Life

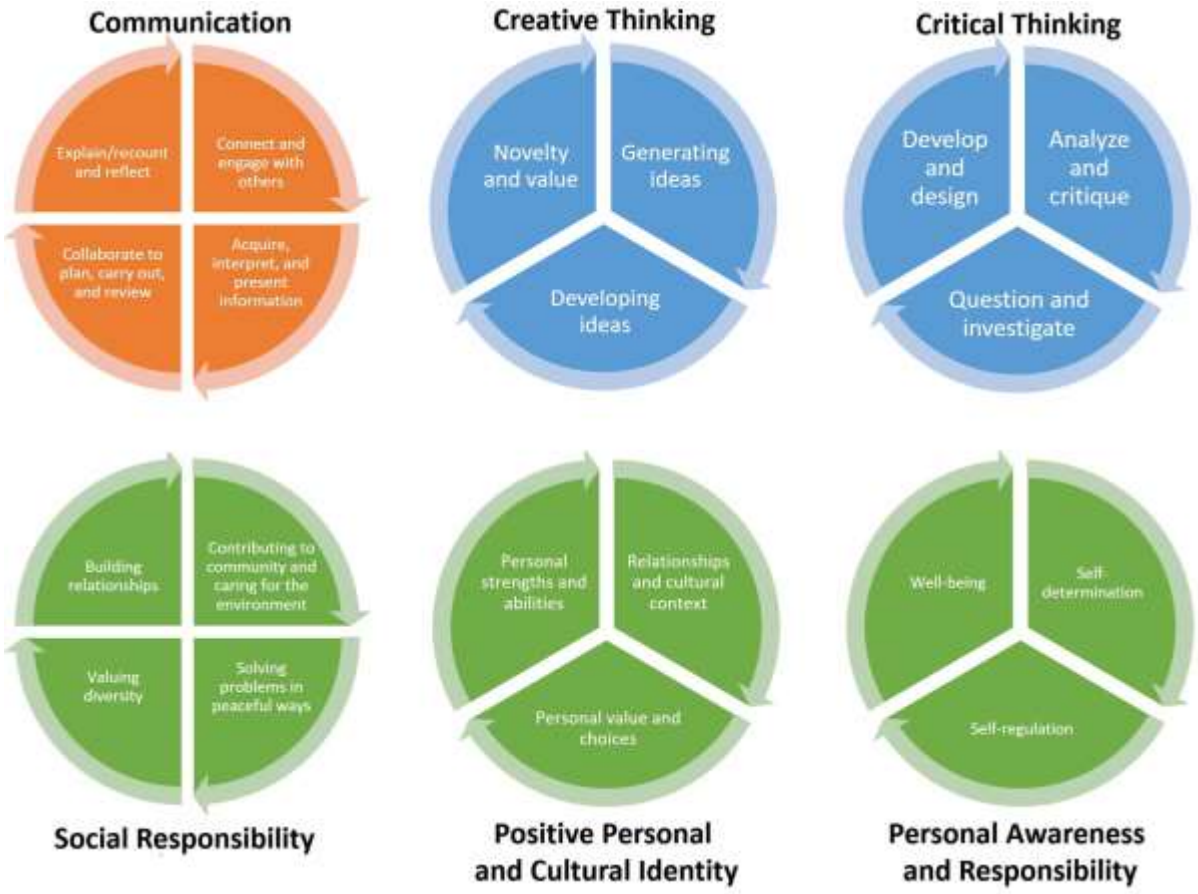
Competencies must be defined in advance and set as learning objectives for each student.

What are these competencies based on?

Rather than just testing for head knowledge, competencies focus on the practical understanding that a student has of the subject.

These competencies can be based on:

- Understanding of key concepts
- Ability to apply knowledge to meaningful problems
- Mastery of relevant skills



Credit: My Riverside

In order for the results to be measured, competencies must be defined in advance by school leadership. Don't try to do this alone: get the input of the whole teaching staff to develop ideas on what knowledge and skills are necessary to determine mastery.

7.3 Transparency Helps Students Take Ownership

What is the end goal for each student in a particular class?

The answer to this question shouldn't only be available to teachers.

The learning objectives that are set for the class (and the school as a whole) should be clear to both students and parents.

In a competency-based education system, students understand these three things when starting the class:

- **What they need to learn**
- **How mastery is defined**
- **How they will be assessed**

When each student has the end goal clear in mind, they'll take more responsibility for their own education.

For example, a student understands that he needs to take his understanding of math and apply it by completing the project of designing a small garden. He needs to use math skills to measure the size of the area and determine how many plants will fit.

If the student clearly understands what he needs to do in order to be proficient and move forward in the class, he'll take more ownership over his education. Then, when he hits a snag in the project or lacks the knowledge to finish it properly, he'll realize on his own that he needs help.

Transparent goals and outcomes thus help students take responsibility for their learning path. This ownership, in turn, helps them become better learners now and into adulthood.

7.4 Students Get the Support They Need Individually

Following our example above, let's say the student has a problem with his garden project and comes to the conclusion that he needs help.

This is where teacher availability comes into the picture. In a competency-based education environment, students should have a framework to understand how long they should work on a problem before asking for help, and when in the class time they can approach the teacher.

Curriculum-aligned math programs like Prodigy Game are used by millions of teachers and supported by thousands of school leaders for this very reason: they help support individualized instruction while making learning fun and engaging.

Competency based education works through bias and produces equity, as discussed above. So, as teachers work with students through their different weaknesses and help them draw on their strengths, each student is moved forward towards mastery on a unique (but equally effective) path. This personalized learning experience gives each student an equal opportunity for success.

For this process to work smoothly though, teachers must be available to help students. Also, they can't just rely on students asking for help: teachers need to be fully aware of each student's progress.

7.5 Teachers Assess for Growth and Mastery

Assessments come in many shapes and sizes. Here are three types of assessments that are especially useful for competency-based education:

Formative Assessments

These assessments help teachers to determine where each student is in the learning process and adjust their teaching as necessary.

Formative assessments give teachers the ability to adjust in real time by clearly identifying the key areas where students need to improve.

For example, teachers may ask students to submit a video essay, or create a digital portfolio that can be shared online. These types of assessments allow students to demonstrate their understanding of the subject, which is the basis for competency-based learning. Then, the teacher can adjust the next lesson accordingly, or plan one-on-one time with students who showed less understanding of the subject.

Authentic Assessments

Getting students to take their knowledge and apply it to real world situations is another great way to demonstrate mastery. Plus, students get to develop skills that they'll need in the future.

Credit: It's Lit Teaching

Authentic assessments might include using English knowledge to write a cover letter for a job application, or using an understanding of physics to design and build a stable tower out of toothpicks and marshmallows.

Digital Content Assessment

When using tech in the classroom, assessment become a lot easier. Many classroom software's include assessment and progress reporting, which helps teachers see exactly where each student is in the learning process.

In Prodigy, for example, teachers can create spiral assessments by selecting certain topics to be covered, which are updated in-game for students. Then, they can check the Topic Coverage Report to see how much of each domain students have already covered and where they're struggling.

7.6 Students Move Forward When They Demonstrate Mastery

By including regular assessments and data-based progress reporting, teachers understand where each individual student is in the learning process.

When students demonstrate a clear understanding of the topic, prove their ability to apply that understanding, and show how they've developed important skills, it's time for them to move forward.

So, how is competency-based education organized? Let's discuss the four models of competency-based education.

Bibliography

Airasian, P. and Madaus, G. (1972) Criterion-referenced testing in the classroom, *Measurement in Education*. Special Reports of the National Council on Measurement in Education 3, No. 4, East Lansing, MI.

Albanese, M. and Mitchell, S. (1993) Problem-based learning: a review of literature on its outcomes and implementation issues, *Academic Medicine*, 68: 52–81.

Allen, M. (2009) Authentic assessment and the Internet: contributions within Knowledge Networks. http://netcrit.net/content/aaceauthenticassessment2009.pdf (accessed 2 February 2011).

Altbach, P.G., Reisberg, L. and Rumbley, L.E. (2009) *Trends in Global Higher Education: Tracking an Academic Revolution*. Report for the UNESCO 2009 World Conference on Higher Education, 5–8 July.

Anderson, J.R. (1976) *Language, Memory, and Thought*. Hillsdale, NJ: Erlbaum.

Anderson, L.W. and Krathwohl, D.R. (2001) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Addison Wesley Longman.

Angelo, T.A. and Cross, K.P. (1993) *Classroom Assessment Techniques*. San Francisco, CA: Jossey-Bass.

Ashworth, P., Bannister, P. and Thorne, P. (1997) Guilty in whose eyes? University students' perceptions of cheating and plagiarism, *Studies in Higher Education*, 22:187–203.

Atherton, J. (2010) Learning and teaching; SOLO Taxonomy. http://www. learningandteaching.info/learning/solo.htm (accessed 2 February 2011).

Ausubel, D.P. (1968) *Educational Psychology: A Cognitive View*. New York: Holt, Rinehart & Winston. Baillie, C. and Toohey, S. (1997) The 'power test': its impact on student learning in a materials science course for engineering students, *Assessment and Evaluation in Higher Education*, 22: 33–48.

Bain, K. (2004) *What the Best College Teachers Do*. Cambridge, MA: Harvard University Press.

Balchin, T. (2006) Evaluating creativity through consensual assessment, in N. Jackson, M. Oliver, M. Shaw and J. Wisdom (eds) *Developing Creativity in Higher Education: An Imaginative Curriculum*. Abingdon: Routledge.

Ballard, B. and Clanchy, J. (1997) *Teaching International Students*. Deakin, ACT: IDP Education Australia.

Barrett, H.C. (2007) Researching electronic portfolios and learner engagement: the REFLECT Initiative, *Journal of Adolescent and Adult Literacy*, 50, 6: 436–49.

Barrie, S. (2004) A research-based approach to generic graduate attributes policy, *Higher Education Research and Development*, 23: 261–76.

Barrows, H.S. (1986) A taxonomy of problem-based learning methods, *Medical Education*, 20: 481–6.

Bath, D., Smith, C., Stein, S. and Swann, R. (2004) Beyond mapping and embedding graduate attributes: bringing together quality assurance and action learning to create a validated and living curriculum, *Higher Education Research and Development*,23: 313–28.

Beasley, C. (1997) Students as teachers: the benefi ts of peer tutoring. http://lsn .curtin.edu.au/tlf/tlf1997/beasley.html (accessed 2 February 2011).

Beetham, H. and Sharpe, R. (2007) *Rethinking Pedagogy for a Digital Age: Designing and Delivering e-learning*. London: Routledge.

Bereiter, C. and Scardamalia, M. (1987) *The Psychology of Written Composition*. Hillsdale, NJ: Lawrence Erlbaum.

Biggs, J.B. (1973) Study behaviour and performance in objective and essay formats, *Australian Journal of Education*, 17: 157–67.

Biggs, J.B. (1979) Individual differences in study processes and the quality of learning outcomes, *Higher Education*, 8: 381–94.

Biggs, J.B. (1987a) *Student Approaches to Learning and Studying*. Hawthorn, Victoria: Australian Council for Educational Research.

Biggs, J.B. (1987b) Process and outcome in essay writing, *Research and Development in Higher Education*, 9: 114–25.

Biggs, J.B. (1993a) What do inventories of students' learning processes really measure? A theoretical review and clarifi cation, *British Journal of Educational Psychology*, 63:1–17.

Cohen, L (2007) *Research methods in education*. London Routledge.

Dunnen, R (2005) *Effective Teaching*. London. Routledge.

East African Community (EAC) (2007). *Treaty for the establishment of East African Community* Arusha.

East African Community (EAC) (2012). *Regional Report on the Harmonization of East African Education Systems and Training Curricular,*

Arusha Edebile (2009) *The importance of teachers training*, Lagos, Nigeria.

Flinders D, S (2001) *The Curriculum Studies*. London: Routledge.

Kombo D & Tromp D, L (2006) *Proposal and Thesis Writing: An Introduction.* Nairobi, Paulin Publications Limited.

Kelly, (2018) *List of core competencies for educators,* sub urban News Publication, Ohio, U.S.A

Gilmore, A (2007) *Authentic Materials and Authenticity in foreign Language Learning,* University of Michigan Press.

Hayess A. (2010) *The complete Guide to Lesson Planning and Presentation.* London. Continuum.

Hall. G.E. (2007) *Competency Based Education: A process for the Improvement of Education*. Prentice Hall.

Harrison.C. (2001) *Feedback in Questioning and marking. The science teachers' role in formative assessment*, New York, U.S.A.

IBE-UNESCO (2015) *What makes a good quality curriculum*? In progress reflection No. 2. Geneva Switzerland.

IBE-UNESCO (2017) *External Report on Curriculum Pilot Implementation*, Nairobi, Kenya.

Jeng'ere et.al. (2017) *The Why, What and How of competency-based curriculum Reforms-the Kenyan experience*, Nairobi Kenya.

Kafyulilo A. C. (2012) *The implementation of competency-based teaching Approaches in Tanzania*. Arusha.

Rugambuka I.B. (2012) *The Implementation of Competency Based Curriculum in Tanzanian secondary schools*, Arusha.

Santrock K.W.J. (2011) *Educational Psychology 5thed.*, New York M. C.

Anilara.Stiggins. R. (2008*) Assessment Manifesto: A Call for the Development of a balanced assessment system*, Portland.

Sudha, (2018). *Tips for designing rubrics for assessment, Nalanda Education Institutions, Mumbai*, India