

Teachers' Perception: Implementing Competency-Based Education for Grade Ten Students in East Berbice Corentyne, Guyana

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Abstract

This study delves into the burgeoning realm of Competency-based Education and Training (CBET), a pedagogical framework characterised by students' demonstration of mastery of specific topics. Focused on the educational landscape of Guyana, where CBET adoption is on the rise, the research investigates educators' perceptions of implementing CBET methodologies in classrooms. The study comprises 31 participants selected through purposive sampling, employing a convergent, interpretive approach within a quantitative, non-experimental design framework. Comprehensive literature reviews on CBET methodology, its historical evolution, a juxtaposition with traditional educational approaches, implementation strategies, and the inherent challenges are central to the investigation. Findings reveal a consensus among teachers, irrespective of status or gender, regarding the efficacy of CBET techniques in instructional practices. However, a generational divide emerges, with younger educators exhibiting greater receptivity towards transitioning to CBET methodologies, contrasting with their more seasoned counterparts' reluctance to embrace the requisite changes. In essence, this study illuminates the dynamic landscape of educational methodologies in Guyana, shedding light on the evolving role of CBET and the divergent perspectives shaping its integration within classroom settings.

Keywords— Competency-Based Education and Training, Perception, Teachers, Guyana, Students

I. INTRODUCTION

A system of instructional strategies and evaluation known as competency-based education emphasises students demonstrating their subject-matter mastery (Voorhees, 2001). This method strongly accentuates pushing students to demonstrate what they understand and utilise what they have learned in exams, which shows their in-depth comprehension of the subject. Using the Competency-based Education and Training (CBET) framework, institutions can distinguish between time in the seat and academic competence. The students worked ahead and proved knowledgeable without waiting for the other learners to master the subject matter if they were familiar with a subject through earlier study or experience. Said pupils can demonstrate their knowledge at the appropriate time.

The concept of CBET is both old and new, with many details already being worked out, notably in institutions of higher learning and professions. Competency-based educational programmes were first implemented in the USA in the late 1960s, beginning with teacher education (Salajan, 2023).

Council for Technical and Vocation Education and Training (CTVET) implemented Competency-Based Education throughout Guyana. The TVET Act of 2004 gives the Council the authority to serve Guyana in line with the Act's requirements, even if it is still in its initial stages of development (Frick, 2022).

By supplying the human capital required to meet the demands of Business and Industry and the country, education is expected to contribute to national development, according to the government. Thus,

Technical and Vocational Education and Training were restructured to directly contribute to a favourable return to economic stability and, eventually, a higher quality of life. TVET programmes strongly emphasise developing essential human resources and technology capabilities to meet current and future demands (Jules & Arnold, 2021).

In August 2022, the Ministry of Education Guyana announced that the Caribbean Vocational Qualification (CVQ) was offered in 34 secondary schools in addition to the eight schools currently offering the CVQ throughout Guyana. The Ministry of Education underlines that the 34 institutions were prepared to deliver regional occupational standards and integrated the CXC quality management requirements to training candidates for CVQ certification programmes through competency-based education (CBET) and training methodology (Salajan, 2023).

The Ministry of Education offered CVQ programmes in every secondary school in Guyana, allowing each child to graduate with a CXC and a CVQ certificate. This plan paved the way for teachers and classroom instructors to adopt Competency-based education and training methodology and, to some extent, abandon the methodology known and used by teachers to deliver content in the classroom. Given the unavailability of legally published data as it relates to the effectiveness of the problem, this research must be conducted at this time with the education sector of Guyana progressing in the direction of CBET.

The following questions guided the research:

1. What relationship exists between teachers' gender and their perceptions towards integrating the CBET methodology to teach Grade 10 students in East Berbice Corentyne - Guyana?
2. Is there a relationship between teachers' status and barriers to integrating the competency-based education methodology in East Berbice Corentyne – Guyana?

II. METHOD

The study will take an interpretive approach, putting it within the quantitative non-experimental design category. This design entails accumulating large quantities of information from a limited number of people and analysing the data statistically. In one specific approach, it will collect information about participants' thoughts and feelings. Large groups work on quantitative projects, focusing primarily on the number of concrete responses. Responders are asked identical questions, and data analysis is then done following their responses. The statistical method will be used to accept data in a

numerical format and examine it in a quantifiable manner. Closed-ended questions are typically preferred in quantitative research, and respondents usually cannot offer detailed, open-ended comments unless a predetermined list of possibilities is given.

This approach ensures that the quantitative research method is far more effective than it would be if open-ended questions of the qualitative type were used. The interpretive study was chosen because it is a study that addresses teachers' attitudes; therefore, it will address Teachers' Perception: Integrating Competency-Based Education and Training Methodology to Teach Grade Ten Students.

Participants

The participants were 31 teachers (16 males and 15 females) from secondary schools implementing the competency-based education and training (CBET) methodology in East Berbice Corentyne, Guyana. The population comprised persons aged 19 to 50 from various racial and social origins and those with different educational achievements and religious ties.

Data Collection

Data was collected using a Google Forms survey. Approval was sought from the Chief Education Officer of Guyana and the Regional Education Officer for Region 6 – Guyana before collecting data. After validation, a pilot test was done to determine the instruments' reliability by conducting a Cronbach alpha test using SPSS version 23 software. With a Cronbach alpha value of 0.82, the instrument was deemed reliable. As such, the Google Forms survey link was forwarded to the participants to complete and submit. The participants were requested to complete and return the survey within three days. An automated gentle reminder was sent if the participant did not complete the survey within the stipulated time.

III. PRESENTATION OF DATA

Table 1 presents insights from a descriptive statistics test involving 31 instructors, of which 15 are female, and 16 are male. Among them, 11 teachers perceive Competency-Based Education and Training (CBET or CEB) as significantly beneficial for enhancing learning. Interestingly, a higher agreement rate is observed among females compared to males. This observation suggests a potential gender disparity in how educators evaluate the effectiveness of CBET, with 11 females concurring compared to a lower number of 7 males.

The data also reveal variations in teachers' preferences regarding the CBET methodology. While responses vary, a trend emerges that more male educators

(15) support CBET than their female counterparts (9). This discrepancy hints at a divergence in acceptance of CBE between genders within the teaching profession.

Additionally, the table highlights teachers' perceptions regarding using CBET methodology to facilitate realistic learning experiences. The responses show a mix of opinions, with a slightly higher number of male respondents indicating agreement (15) than females (9).

Moreover, the table underscores teachers' views on the Ministry of Education's role in preparing them to implement CBET effectively. Notably, a significant

proportion of respondents, particularly males (14), express neutrality. This suggests a need to examine further the support and resources provided to educators in implementing CBE practices.

Overall, the findings emphasise the importance of considering gender dynamics in adopting and implementing educational methodologies such as CBET. They also point towards a potential need for targeted support and professional development initiatives to ensure equitable implementation and acceptance of innovative teaching approaches across all demographic groups within the teaching profession.

Table 1 - teachers' perception of using CBET Methodology

Descriptives Statistics				
	Response	N	Minimum	Maximum
CBET methodology greatly facilitates new ways to enhance learning	Agree	11	Female	Male
	Strongly Agree	20	Female	Male
	Total	31		
CBET methodology is a far more favoured method of teaching Grade 10 students.	Disagree	2	Male	Male
	Neutral	7	Female	Male
	Agree	15	Female	Male
	Strongly Agree	7	Female	Male
	Total	31		
Realistic learning goals are created using the CBE methodology.	Neutral	7	Female	Male
	Agree	15	Female	Male
	Strongly Agree	9	Female	Male
	Total	31		
The Ministry of Education has gone above and beyond to prepare teachers to use the CBET methodology.	Disagree	9	Female	Male
	Neutral	14	Female	Male
	Agree	5	Female	Female
	Strongly Agree	3	Female	Male
	Total	31		
CBET methodology is the most appropriate teaching methodology that can be used to teach students at the Grade 10 level.	Disagree	3	Male	Male
	Neutral	12	Female	Male
	Agree	13	Female	Male
	Strongly Agree	3	Female	Male
	Total	31		

Table 2 - Linear Regression- ANOVA test

Anova							
Model		Sum of Squares	df	Mean Square	R	F	Sig.
1	Regression	28.090	8	3.511	0.716 ^a	7.895	.023 ^b
	Residual	26.684	22	1.213			
	Total	54.774	30				
a. Dependent Variable: Status							
N 31 teachers 15 males 16 females, df 22							

The ANOVA test indicated a regression model with a p-value of 0.023b (compared to the significance level of 0.05), supporting the alternative hypothesis of a relationship between teachers' status and barriers to integrating competency-based education for grade 10 students in East Berbice Corentyne, Guyana. This relationship was further substantiated by the strong association ($R=0.716a$) observed between status and instructors' preferences, validated by the F-test result 7.90.

The research explored instructors' perspectives on implementing competency-based education in East Berbice Corentyne, Guyana. Competency-based education prioritises student mastery of specific skills over a fixed curriculum, necessitating teaching methods and curriculum design changes. The study sought to understand teachers' challenges in adopting this approach and their correlation with status.

Despite the sample size of 31 instructors, it sufficed for the study's objectives and audience. The regression analysis confirmed a significant correlation ($p=0.023$) between teachers' status and barriers to implementing competency-based education, indicating a likelihood of less than 0.05 for this relationship to occur by chance.

Accepting the alternative hypothesis underscores the influence of teachers' status on their ability to implement competency-based education. The linear regression model supported this, showing a strong relationship between status and instructors' preferences ($R=0.716$). These findings underscore the importance of considering teachers' preferences and status when designing competency-based education programs.

The study also underscores the need for professional development programs to address challenges in implementing competency-based education. Such programs should support teachers in adopting new teaching methods and curriculum development. Additionally, continuous review and assessment of competency-based education initiatives are crucial to

identifying emerging obstacles and evaluating the effectiveness of professional development efforts.

IV. DISCUSSION AND CONCLUSION

Competency-Based Education and Training (CBET) is an approach to learning that emphasises developing specific skills rather than just acquiring knowledge. In traditional schooling, success is often determined by a student's level of knowledge, whereas CBE focuses on applying that knowledge in real-world situations. Their study, *Competency-Based Education: Theory And Practice* by Açıkgöz and Babadoan (2021), highlights numerous factors that can affect success in CBET.

One of the key differences between traditional schooling and CBET is how success is measured (Evans, Landl & Thompson, 2020). In traditional schooling, students' performance is usually assessed based on their ability to memorise and regurgitate information (Evans, Landl & Thompson, 2020). In contrast, CBET focuses on applying knowledge and skills in real-world contexts. Students are evaluated based on their problem-solving ability, collaborative work, and ability to apply critical thinking skills to new situations. To be considered competent in CBET, students must demonstrate their ability to apply what they have learned in a particular situation (Olema et al., 2021). This is the very idea that the Council for Technical and Vocational Education and Training (CTVET) in Guyana seeks to achieve. According to the data generated from the study by Açıkgöz and Babadoan (2021), teachers who used the CBET methodology perceived it as the ideal approach to achieving educational goals. Teachers reported that students' performance at the Caribbean Secondary Examination Council (CSEC) improved significantly compared to students taught using the traditional method (Mohammed, 2021; Salajan, 2023).

One of the strengths of CBET is that it allows teaching and learning to focus beyond the simple

acquisition of knowledge, skills, and attitudes toward application, transfer, and impact assessment. According to Patrick (2021), when used effectively, CBET works as an advanced organiser that enables students to develop skills that can be applied in various real-world contexts. This can include skills such as problem-solving, critical thinking, and collaboration, which are essential for success in the modern workplace.

However, when implemented ineffectively, CBET can become little more than a bureaucratic checklist. This can restrict both students' and instructors' creativity and intellectual flexibility. To realise the full potential of CBET, teachers in Guyana are urged to change their practices from teacher-centric to learning-centric (Chappell, Gonczi, & Hager, 2020). This means placing a greater emphasis on enabling students to develop the skills they need to apply their knowledge in practical situations. One of the challenges of implementing CBET is that it requires a significant shift in how education is delivered. Teachers must move away from a content-focused approach to teaching and instead adopt a student-centred approach (Rogers, 2021). This means designing learning experiences tailored to each student's needs rather than delivering a one-size-fits-all curriculum.

Another challenge is ensuring students can access the resources and support needed to succeed in a competency-based learning environment (Rogers, 2021). This can include access to technology, mentors, and other resources to help students develop the skills they need to succeed. CBET offers a promising approach to education that focuses on developing specific skills rather than just acquiring knowledge. However, it requires a significant shift in how education is delivered and can present challenges for students and teachers. To realise the full potential of CBE, teachers in Guyana are urged to shift their practices from teacher-centric to learning-centric (Frick, 2022). This means designing learning experiences tailored to each student's needs and providing access to the resources and support they need to succeed.

Data gathered from this survey highlighted several indicators of how teachers perceived using the CBET methodology to deliver the curriculum to grade 10 students. The survey found that teachers aged 26-35 were more inclined to accept and use the methodology employed by CBET. The data further revealed that teachers who are Assistant Masters (AM) are also those who are welcoming to the idea of using CBET methodology in the classroom. This data dismisses the null hypothesis that There is no relationship between teachers' status and barriers to integrating the competency-based education methodology to teach grade 10 students in East Berbice Corentyne – Guyana.

It also highlights senior teachers who are long-standing educators and not readily open to using CBET methodology to teach grade 10 students. This is because senior teachers are less motivated to adopt the idea of students being responsible for learning at their own pace. Patrick (2021) asserts that teachers' beliefs are crucial to their educational practices and influence the change process. According to the theory of action, increasing people's motivation to act and alter their surroundings can help improve capacity (Evans, Landl & Thompson, 2020). This was noteworthy because it called for modifying conventional wisdom. The success of innovation required teachers to contribute, but their particular attention, support, and surroundings were routinely ignored (Fullan, 2006). Fullan argued that the theory of action argues that nothing will count until people acquire new capacities. Additionally, learning new abilities is a strategy to boost motivation. In this research, it is evident that teachers operating in seniority at the various schools across Region 6 required some form of motivation to be convinced that the methodology of CBET can adapt to their classrooms.

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CONFLICT OF INTEREST

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