

# Competency- Based Education in Belize:

Educators' Perspectives  
From the 2023-2024 Pilot School Year



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# Executive Summary



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Conclusion



In 2022, the Belizean government set forth a vision for education reform that leverages competency-based education (CBE)<sup>1</sup> to transform teaching and learning experiences and prevent dropout in secondary schools. As part of this educational reform, secondary schools piloted CBE in lower secondary classes during the 2023-2024 school year. With the end of the pilot year, the Belizean school system has entered a critical period in which data on the drivers of successful CBE implementation are needed to support the institutionalization of CBE.

To assist the Government of Belize in realizing its vision for education reform, IREX, an international development and education nonprofit, partnered with the Belize-based LevelEd research consultancy from May to June 2024 to study key factors for successful CBE implementation among principals and teachers in government-aided schools.<sup>2</sup> In line with the National Curriculum Framework, which articulates the importance of “technology as a learning tool,” the study included a specific focus on the availability and

use of technology to implement CBE. Guided by the Research on Improving Systems of Education (RISE) framework,<sup>3</sup> the study focused on frontline educators’ perspectives, needs, and behaviors related to CBE and explored teachers’ perceptions of how educational authorities have aligned key aspects of the system to facilitate teachers’ shift toward the CBE innovation.

Using a mixed methods triangulation design, the study team recruited educators from all six districts of Belize and conducted focus group discussions (FGDs) with teachers (n=9; participants=46), surveys with teachers (n=163), and technology inventories with principals (n=13). Quantitative data were analyzed descriptively and differences across teacher gender and locality (i.e., urban; rural) were explored. Qualitative data were analyzed using rapid qualitative analysis of pre-defined constructs from the RISE framework. The Ministry of Education, Culture, Science and Technology (MoECST) provided ethical approval for the study. Below, study findings and potential solutions are summarized and the full text and study results can be found here.

1. The Belizean National Curriculum Framework defines competency as “the ability to use learned knowledge, skills, and attitudes appropriately in real situations and contexts and within a defined set of values” and provides multiple strategies that teachers should use for competency-based education including peer communication and interaction, authentic artifacts, kinaesthetic, project-based, problem-based, and inquiry-based learning, and performance assessment approaches.
2. This study selected government-aided schools because they comprise nearly half of Belize’s secondary schools. Teachers in these schools may have diverse insights because although their schools receive public grants, the schools are owned and managed by different religious or community groups.
3. Silberstein, J., & Spivack, M. (2023). *Applying systems thinking to education: Using the RISE systems framework to diagnose education systems* (Report No. 2023/051). [https://doi.org/10.35489/BSG-RISE-RI\\_2023/051](https://doi.org/10.35489/BSG-RISE-RI_2023/051)



# Study results

## OVERALL THE STUDY FOUND

**Teachers are familiar with CBE in the National Curriculum Framework and engaged in a range of foundational CBE practices.** In surveys, 55% of teachers self-reported that they were very or moderately familiar with Belize's National Curriculum Framework. In surveys, teachers most frequently reported engaging in strategies such as allowing students to take extra time to finish a topic (61%; n=90) and least frequently reported creating written, individualized learning plans for learners (25%; n=36).

Overall, teachers were most likely to use technology to perform tasks that did not rely on learner engagement. For example, teachers most frequently reported using technology to track student grades or credits (59%; n=94) on a weekly basis. Teachers were least likely to use technology to deliver online classes to students remotely; only 9% (n=14) of teachers used technology for online classes on a weekly basis.

**Limited finances for devices, quality internet, and materials for project-based learning within and beyond the classroom create barriers to full and equitable CBE implementation.** Approximately 65% (n=98) of teachers felt that they lacked the materials and resources needed to implement CBE. Despite government investment in Chromebooks for students and internet upgrades, 56% (n=89) and 44% (n=70) of teachers reported that lack of access to devices and having insufficient internet access were key barriers to implementation of CBE, respectively. Additionally, many teachers noted that they lacked materials to engage in project-based learning, a core CBE strategy, and that many students could not afford to purchase these materials on their own. Limited student access to resources at home and at school inhibited the ability of some students, especially students of lower socioeconomic status, to participate in CBE assignments, assessments, and core CBE strategies.

**There are small but important differences across teachers by gender.** Female teachers reported higher levels of familiarity with CBE (59%; n=57) compared to male teachers (49%; n=27). Female teachers were also more likely to report using any CBE strategies and to have received sufficient training on CBE. However, female teachers were also less likely (35%; n=34) to report that CBE will lead to improved learning outcomes for students compared to male teachers (45%; n=24).



### Rural teachers report greater barriers to CBE implementation and reduced motivations to implement CBE compared to urban teachers.

Rural teachers were less likely (41%; n=12) to report familiarity with CBE compared to urban teachers (59%; n=72). Rural teachers were also less likely to report positive beliefs and motivations about CBE and less likely to use CBE strategies, especially those that involve technology, compared to urban teachers. Finally, rural teachers were far less likely to report having sufficient materials to conduct CBE compared to all other groups examined (i.e., urban, male, and female teachers).

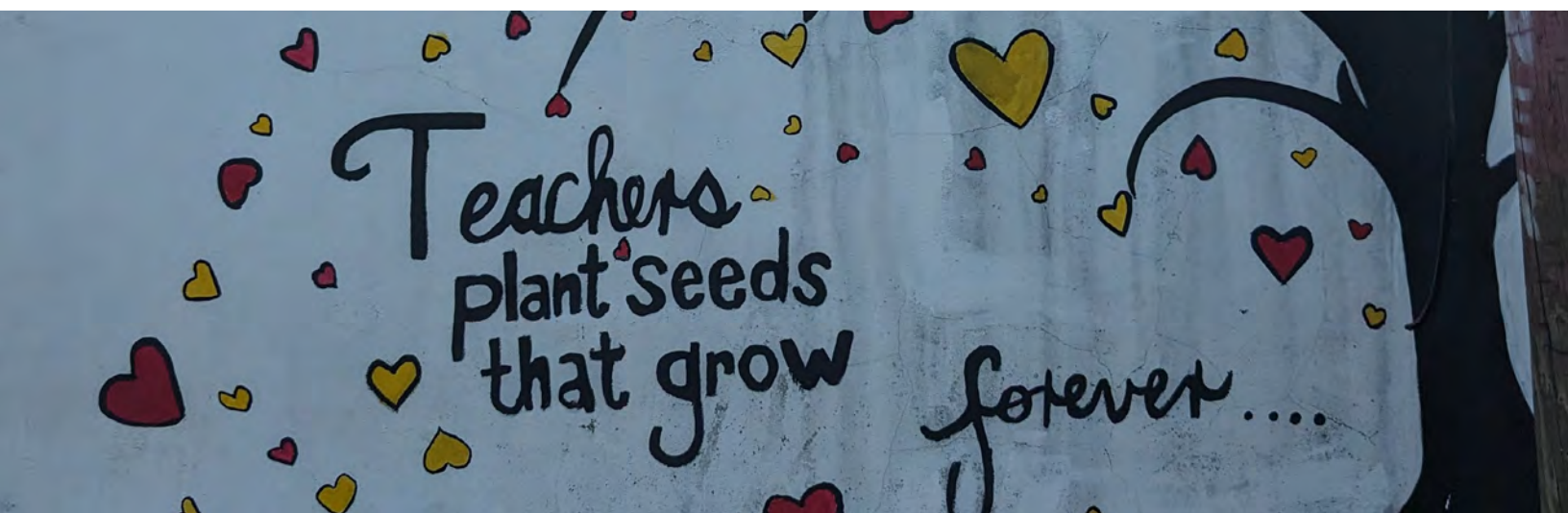
### Teachers express intrinsic motivations for CBE but lack extrinsic motivations and often cannot describe how, if at all, they are held accountable for CBE implementation.

Approximately three in every four teachers (78%; n=123) expressed that they were motivated to engage in CBE because it provides concrete methods for connecting learning to the real world. However, only 20% (n=30) of teachers believe that they would be evaluated more positively by school leadership if they could implement CBE successfully. Many teachers described limited understanding of specific expectations from supervisors regarding what CBE should look like in the classroom. Few teachers could articulate how, if at all, their performance on CBE would be factored into their evaluation or

qualifications for advancing in rank, suggesting a low level of extrinsic motivation.

### Teachers may resist CBE adoption in lower secondary classes because of pressure from the education system, parents, and employers to prepare students for the content-heavy Caribbean Secondary Education Certificate (CSEC) implemented by the Caribbean Examinations Council (CXC).

Teachers expressed incoherence between the CBE-based curriculum in lower secondary (Forms 1 and 2) and the exam-based and content-heavy curriculum that is oriented to the CSEC in upper secondary (Forms 3 and 4). In addition, teachers reported feeling pressured to move students on to new subjects before they achieve competency, often because of pressure to teach to the CSEC. Approximately 50% (n=74) of all teachers reported that students frequently moved on to the next topic, unit, or competency area along with their classmates, regardless of whether they had achieved mastery. This pressure, imposed by the CSEC's high stakes and potential consequences on student opportunities after secondary school, is also reinforced by parents and private sector employers who expect numeric grades and excellent performance on the CSEC. These misalignments reduced teachers' motivation to engage in CBE because teachers were concerned about the extent to which existing CBE curricula prepares learners for future requirements.





# Potential solutions

Findings from this study point to several potential solutions that may facilitate CBE implementation, which are offered to the Ministry of Education, Culture, Science and Technology (MoECST) and its partners for consideration. These findings are relevant to government-aided secondary schools and may not necessarily reflect the needs of educators at private or public schools.



## Address teachers' concerns around misalignments between CBE and the CSEC.

The Ministry may consider several pathways to address the potential resistance among teachers to implement CBE because of pressures associated with the CSEC. First, the Ministry may consider adjusting the CBE curriculum to better align with the CSEC in upper secondary and articulating these linkages to teachers. Second, the Ministry may consider providing curricular materials and professional development on the use of CBE strategies to implement the CSEC-based curriculum in Forms 3 and 4, which could support the implementation of CBE in a more consistent manner throughout secondary schools. Finally, while this would be a substantial reform, the Ministry could consider an alternate testing regime that would test competencies acquired, thus incentivizing CBE curriculum uptake.



## Strengthen and articulate systems of accountability and incentives for CBE implementation to enhance teachers' extrinsic motivations.

To address teachers' desires for clear, written guidance on how CBE performance factors into teacher evaluation and advancement, the Ministry may consider 1) clarifying expectations around CBE (e.g., including CBE expectations in job descriptions); 2) formalizing how CBE performance factors into appraisals, teacher rank, and/or pay grade; 3) creating a framework that outlines professional development practices and needs and equitably serves teachers; and 4) developing data reporting tools and accountability metrics for school leaders and district/regional education officials related to CBE implementation.



## Engage with employers and families to raise awareness of changes to curriculum and how they might relate to the CSEC.

Teachers expressed a great deal of pressure to support students in meeting the expectations of parents and employers while also adhering to the values of CBE. To alleviate this pressure, it may be beneficial for the Ministry and school leaders to develop a community and family awareness plan to raise awareness of and buy-in for CBE among parents, students, and employers who are accustomed to the grading and testing systems associated with the CSEC and prior curricula.





**Strengthen local professional development (PD) support for CBE implementation so that teachers, especially rural and new teachers, have ongoing, regular, and hands-on support.** Regular PD activities could be provided through professional learning communities, peer-to-peer mentorship, and when needed, engagement with external subject matter experts. Based on teacher responses, content areas for consideration in future PD may include: 1) subject-matter specific CBE strategies; 2) tangible methods of assessing learners' progress; 3) strategies for deciding when to move learners to a new topic, unit, or subject area; 4) approaches for supporting learners with disabilities to engage with CBE; 5) applications of different technological devices and applications to facilitate effective student learning ; 6) approaches for implementing project-based learning with resource constraints in mind; and 7) strategies for monitoring students' use of technology in the classroom to prevent academic misconduct and to support their focus on education-related tasks. Although pre-service training was not explicitly examined in this study, findings suggest that the Ministry may also consider integrating CBE strategies into pre-service training so that newer teachers can enter the workforce prepared to implement CBE.



**Support equitable learning opportunities for students by increasing finances for technological devices, project-based learning, and internet for teachers and students within and outside of school hours.** Teachers applauded efforts that have increased the distribution of devices (e.g., laptops, projectors etc.) and internet and improved access for both teachers and students. At the same time, they identified persistent gaps in access that disproportionately affect learners of low socio economic status and rural teachers. To maintain current levels of device access, it may be beneficial to invest in maintenance of current technological devices. To further extend access and advance equitable learning opportunities and outcomes, it may be beneficial to expand distribution of devices to teachers (such



as projectors) and to students (such as laptops and tablets) through loaning programs, and to improve internet access within classrooms and across communities. Finally, the Ministry and school leaders may consider providing additional materials and/or professional development to facilitate project-based learning opportunities.





# Study strengths and limitations



Several strengths underpin this study. First, the study triangulated data from multiple sources (surveys, technology inventory, and focus groups) and stakeholders (principals and teachers) to support the validity of the findings. Second, although the study had varying degrees of participation across schools, participants across all six districts were engaged in either FGDs, surveys, technology inventories, or a combination of methods supporting the generalizability of findings. Third, the study checked key results with multiple key stakeholders involved in the education system, further contributing to the validity of the findings.

One key limitation of this study is that research was only conducted in government-aided secondary schools, excluding those schools designated as private or public, which may have brought further nuance to these findings. Furthermore, in some instances, LevelEd staff had provided professional development training to teachers involved in FGDs, which may have contributed to rapport building but also had the potential to lead to social desirability bias. Participants were assured that their responses would not impact their relationships with LevelEd or the education system. Their responses regarding professional development trainings reflected a wide range of opinions, suggesting that this limitation did not substantively impact the study results.



## Conclusion

Findings from this study suggest that initial progress has been made in supporting teachers to implement CBE strategies in government-aided secondary schools: frontline educators are using some CBE strategies and generally perceive the envisioned goals of CBE in a positive light. Teachers have also articulated real concerns around feasibility that, with the continued leadership of the Ministry and

local education officials, can be addressed through systems alignment to realize the promise of CBE. Future studies should engage with other key stakeholders, including students, parents, master teachers, principals, and supervisors, to explore their unique perspectives on CBE to increase the uptake, impact, and sustainability of the CBE innovation.

# Study Team



IREX is an independent nonprofit organization dedicated to building a more just, prosperous, and inclusive world by empowering youth, cultivating leaders, strengthening institutions, and extending access to quality education and information. Through IREX's Education Practice, IREX works with individuals, institutions, and governments around the world to improve the quality of teaching and learning, inside and outside the classroom. This research was commissioned to inform IREX's education strategy and approach within Belize during a time of rapid education systems transformation. IREX guided the overall approach to this research, developed the study tools, and led the analysis and write-up of the findings.

LevelEd is a Belize-based research consultancy led by an experienced educator and trainer. LevelEd provided

insights into the data collection approach and tools, collected the data, conducted sense-checking sessions with local experts to validate the findings, and provided insights into the findings.

The study team would like to thank the following contributors and reviewers (in alphabetical order): Brian Batayeh, Lisa Carballo, Jeannie Garbutt, Consuelo Godfrey, Kevin Hardy, Jackie Jena, Naidra Mahmud, Natasha Mantock, Marcel Ricou, Rachael Spencer, and Mary Kate Wise. The study team also expresses gratitude for the support of Ms. Yolanda Gongora, Chief Education Officer of the Ministry of Education, Culture, Science and Technology, and Mrs. Deborah Domingo, Chair of the Belize Association of Principals of Secondary Schools.



# Introduction



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Background

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RISE framework



In 2021, the Government of Belize set forth a vision for education reform that leverages competency-based education (CBE)<sup>4</sup> to transform teaching and learning experiences and prevent dropout in secondary schools. As part of this education reform, CBE was piloted in lower secondary classes during the 2023-2024 school year. With the end of the pilot year, the Belizean school system enters a critical period in which data on the drivers of successful CBE implementation, including the needs, perceptions, and beliefs of educators, are needed to support the institutionalization of CBE.

To aid the Government of Belize in realizing its vision for education reform, IREX, an international development

and education nonprofit, partnered with the Belize-based LevelEd research consultancy to study key factors for successful CBE implementation among principals and teachers in government-aided schools.<sup>5</sup> In line with the National Curriculum Framework, which articulates the importance of “technology as a learning tool,” the study included a specific focus on the availability and use of technology to implement CBE. Guided by the Research on Improving Systems of Education (RISE) framework, the study focused on frontline educators’ perspectives, needs, and behaviors related to CBE and explored teachers’ perceptions of how educational authorities have aligned key aspects of the system to facilitate teachers’ shift toward the CBE innovation.

4. The Belizean National Curriculum Framework defines competency as “the ability to use learned knowledge, skills, and attitudes appropriately in real situations and contexts and within a defined set of values.”

5. This study selected government-aided schools because they comprise nearly half of Belize’s secondary schools. Teachers in these schools may have diverse insights because although their schools receive public grants, the schools are owned and managed by different religious or community groups.

## Background



In 2022, the Ministry of Education, Culture, Science and Technology (MoECST) published the Belize National Curriculum Framework and began a year-long pilot of CBE in lower secondary classes. This pilot has yet to be studied rigorously, leaving important gaps in knowledge about how teachers perceive the innovation and the opportunities and challenges associated with the new CBE curriculum. Furthermore, gaps persist in how CBE in lower secondary aligns with other critical aspects of secondary education, namely the Caribbean Examinations Council's (CXC) Caribbean Secondary Education Certificate (CSEC), an exam that measures proficiency at the end of secondary school using a traditional grading system.

A search of the literature found a limited number of studies exploring teachers' use of technology to facilitate learning, most of which were conducted at the outset of the COVID-19 pandemic. Studies conducted in the 2020-2021 school year revealed a shift to blended learning in secondary schools; however, this was uneven with school-level internet nearly universal in urban schools and absent in roughly 20% of rural schools. Device access was similarly uneven between urban (62%) and rural (40%) secondary students. While approximately 80% of Belizean teachers had access to reliable internet and a computer at home, less than half expressed high levels of comfort in using technology to accomplish basic tasks.<sup>6</sup> Now, more than four years since the COVID-19 pandemic began, new information is needed to better understand the current state of technology integration in teaching and learning.

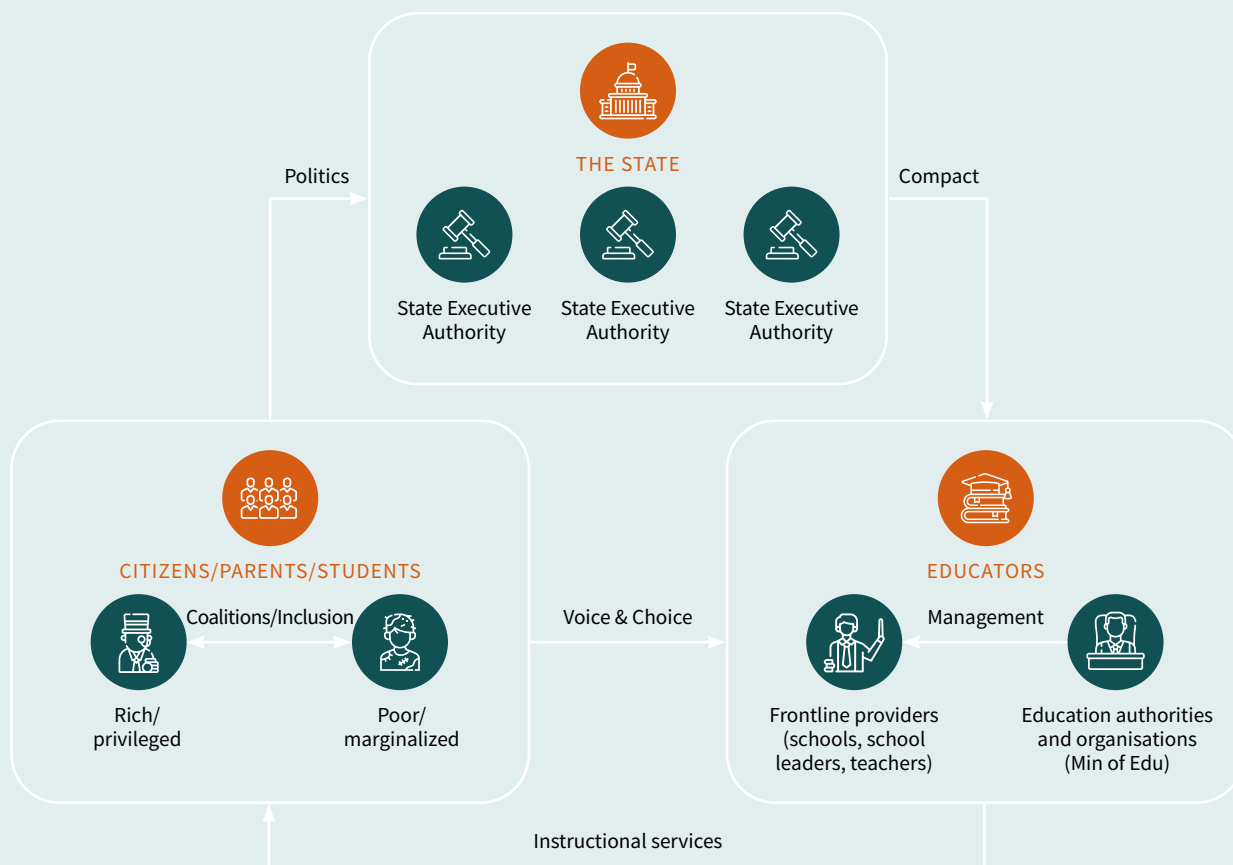
6. Ministry of Education, Culture, Science and Technology, 2021. Belize Education Sector Plan 2021-2025.

# RISE framework

The Research on Improving Systems of Education (RISE) framework<sup>7</sup> provides a useful structure to explore how and to what extent Belizean education systems are designed to support teachers in government-aided secondary schools to implement CBE. The RISE framework identifies three categories of actors that have power to influence the education system, including 1) the state such as legislators; 2)

educators such as teachers and Ministry of Education; 3) citizens, parents and students. The framework then describes four key relationships among these actors: Politics, Compact, Management, and Voice and Choice (Figure 1). Through these relationships, teaching and learning is influenced when an actor in a position of authority or power (the *principal*) tasks another actor (the *agent*) to perform a certain task.

FIGURE 1



Source: Silberstein, J. & Spivack, M.

7. Silberstein, J., & Spivack, M. (2023). *Applying systems thinking to education: Using the RISE systems framework to diagnose education systems* (Report No. 2023/051). [https://doi.org/10.35489/BSG-RISE-RI\\_2023/051](https://doi.org/10.35489/BSG-RISE-RI_2023/051)



Within each relationship, the RISE framework anticipates that a principal details expectations for the agent and describes how the agent will be held accountable for the task through design elements. These design elements (definitions provided in Table 1 below) include 1) Delegation, 2) Finance, 3) Information, 4) Support, and 5) Motivation. By exploring different design elements within and across key relationships, it is possible to identify areas of alignment and misalignment that either facilitate or hinder the agent's ability and motivations to perform the task.

**TABLE 1: RISE FRAMEWORK SYSTEM DESIGN ELEMENTS**

Design Element	Definition <sup>8</sup>	Application to this study
Delegation	What the principal wants the agent to do.	What has been delegated to teachers in terms of implementing CBE and how teacher behaviors might reflect this understanding.
Finance	The resources the principal has allocated to the agent to achieve their assigned task.	Resources, including technology-based resources, to implement CBE.
Support	The preparation and assistance that agents receive.	Teachers' perceptions, needs, and experiences of assistance to implement CBE, including professional development.
Motivation	How the principal motivates the agent, including the ways in which the agent's welfare is contingent on their performance against objectives. This can be extrinsic (mediated by principal) or intrinsic (mediated by agent).	Teachers' intrinsic incentives around CBE and teachers' perceptions, needs, and experiences of educational authorities' efforts to incentivize and hold them accountable for CBE.
Information	How the principal assesses the agent's performance.	Teachers' perceptions and experiences of how they will be assessed on their implementation of CBE (e.g., what data).

This study focuses on the RISE framework's Management relationship, which in the context of this study, refers to how education authorities including the Ministry of Education, Culture, Science and Technology (MoECST) in Belize have tasked frontline providers, including teachers in government-aided secondary schools, to implement CBE in lower secondary classes. By exploring the different design elements within this key relationship, it is possible to understand how the system is aligned to influence teachers' ability and motivations to implement CBE and to identify the key potential solutions that may support a shift toward this important innovation in Belize.

8. Design element definitions are copied directly from the [RISE Systems Framework](#).

# Research Methodology



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Study overview

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Setting and sample



# Study Overview

Guided by the RISE framework, this study focuses primarily on the Management relationship through the lens of perspectives, needs, and behaviors related to CBE among teachers and principals in government-aided schools. Further, this study examines the ways in which educational authorities have aligned system design elements to facilitate teachers' shift toward the CBE innovation.

This study, conducted from May-June 2024, utilized a mixed-methods triangulation approach<sup>9</sup> with data collected across 15 schools, including surveys of teachers (n=163), focus group discussions (FGDs)

with teachers (n=9; participants=46), and technology inventory interviews with principals (n=13). Quantitative data were analyzed descriptively, while qualitative data were analyzed using rapid qualitative analysis based on pre-defined constructs, including those outlined in the RISE framework.

All data collection tools were reviewed and adapted for relevance and clarity by Belizean education experts. Approval for the study was received from MoECST and the study additionally sought support and collaboration from the Belize Association of Principals of Secondary Schools.

9. Creswell, J. W., & Plano Clark, V. L. (2011). Choosing a mixed methods design. *Designing and conducting mixed methods research*, 2(1), 53-106.



## Setting and Sample

The study took place within 15 government-aided secondary schools distributed across the six districts of Belize: Belize City, Cayo, Corozal, Orange Walk, Stann Creek, and Toledo (Table 2). The study selected government-aided schools for two key reasons. First, government-aided schools comprise nearly half of Belize's secondary schools. Second, the schools receive government grants, but are owned and managed by different religious and community groups and this study expects that the teachers in these schools will have diverse perspectives and experiences. Using a sampling frame of all government-aided

schools, the study contacted 18 principals to request their schools' participation in the study. Schools were selected purposively and the study sought proportional representation by district and locality (i.e., urban, rural). Of those schools approached, 83% (n=15) participated in at least one method of data collection. All principals who gave permission for their school to join the study were asked to participate in the technology inventory and 87% (n=13) completed the technology inventory. Two declined because of challenges associated with the end of the school year and staffing.

**TABLE 2: DISTRIBUTION OF PARTICIPATING SCHOOLS**

District	Recruited schools	Participating schools	Schools participating in surveys	Schools participating in Focus Group Discussions	Schools participating in Technology Inventory
Belize City	4	4	3	3	4
Cayo	5	4	4	3	4
Corozal	3	2	2	0	0
Orange Walk	2	2	2	2	2
Stann Creek	2	2	2	0	2
Toledo	2	1	1	1	1
<b>Total</b>	<b>18</b>	<b>15</b>	<b>14</b>	<b>9</b>	<b>13</b>

## SURVEY SAMPLE AND RESPONSE RATE

All 15 schools were invited to participate in the survey. Ninety-three percent (n=14) of principals provided complete lists of all current teachers at their schools by gender, subject matter taught, and number of years at the school. Among the participating schools, 36% (n=5) were rural. Across districts, the teacher survey response rate ranged from 27% in Stann Creek to 66% in Cayo.

**TABLE 3: SURVEY RESPONSE RATE BY SCHOOL**

District	Number of schools	Percent urban (n)	Teachers recruited	Teachers surveyed	Survey response rate
Belize City	4	100 (4)	94	32	34%
Cayo	4	50 (2)	70	46	66%
Corozal	2	50 (1)	66	38	58%
Orange Walk	2	50 (1)	42	18	43%
Stann Creek	2	100 (2)	88	24	27%
Toledo	1	0 (0)	8	5	63%

Of the 368 teachers invited to participate, 44% (n=163) agreed to take the survey (Table 4). On average, the teachers who responded to the survey were majority female (63%; n=102)<sup>10</sup> and taught in urban schools (83%; n=133). Teachers had an average of 13.5 (SD 8.5) years of teaching experience. Most teachers had earned at least a bachelor's degree (81%; n=132), had a teachers' certificate (87%; n=142), and taught multiple grades and subjects. Female teachers were more likely to have earned at least a bachelor's degree (91%; n=93) than male teachers (65%; n=39). Female teachers were less likely to teach information technology (5%; n=5) than male teachers (17%; n=10).

10. The proportion of female to male teachers was similar to that of the overall teacher population recruited for this study; approximately 64% (n=237) of teachers recruited for the study were female.

**TABLE 4: DESCRIPTIVE STATISTICS OF COMPLETE CASE SAMPLE (GENDER STRATIFIED)**

	Total Sample (n=163)*	Female (n=102)	Male (n=60)
Urban Locality, %	83%	80%	85%
Years of Teaching Experience, Mean (SD)	13.5 (8.5)	13.8 (8.3)	12.7 (9.0)
Person with Disabilities, %	4%	5%	2%
Teacher's Certificate, %	87%	90%	82%
<b>Highest degree completed, %</b>			
Secondary School	3%	3%	3%
Associate	12%	6%	23%
Bachelor	64%	71%	52%
Master	17%	20%	13%
Other/Unknown	4%	1%	8%
<b>Subjects Taught, %</b>			
Belizean Studies	16%	17%	13%
English	19%	25%	8%
Information Technology	9%	5%	17%
Literature	9%	13%	3%
Math	16%	8%	28%
Religion	15%	15%	15%
Science and Technology	19%	18%	20%
<b>Grades Taught, %</b>			
Form 1	60%	59%	60%
Form 2	63%	63%	63%
Form 3	66%	66%	65%
Form 4	66%	62%	70%

\*One participant preferred not to indicate their gender and to preserve anonymity, their data is not presented in a unique column in this table.

## FOCUS GROUP DISCUSSIONS

A subsample of 10 schools was invited to participate in virtual Focus Group Discussions (FGDs) conducted by LevelEd education experts. Schools were purposively selected from among the 15 that agreed to participate for proportional district representation and diversity of locality type (i.e., urban, rural). Two schools, one in Stann Creek and the other in Corozal, declined or were not able to make teachers available for FGDs. Due to

the limited numbers of government-aided schools in these districts, the study conducted an FGD with a replacement government-aided school in Belize City district. Teachers were selected into the FGDs purposively, with the intention of seeking diversity by gender, seniority, and teaching subject. In total, 46 teachers participated in the FGDs with an average of five participants per FGD. Among the 46 teachers who participated in FGDs, 35% (n=16) were rural teachers (Table 5).

**TABLE 3: SURVEY RESPONSE RATE BY SCHOOL**

District, % (n)	Total teachers (n=46)
Belize City	28 (13)
Cayo	35 (16)
Corozal	0 (0)
Orange Walk	26 (12)
Stann Creek	0 (0)
Toledo	11 (5)
Rural, % (n)	35 (16)

# Findings



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Conclusion



Study findings largely center on the Rise framework Management relationship and alignments between design elements through the lens of teachers' needs, perspectives, and behaviors. Differences by teacher gender and locality (urban vs. rural) are explored using survey data.<sup>11</sup> Other relationships, such as Voice and Choice (the relationship between teachers and citizens, including parents, students, and other private sector actors), are also articulated as they were identified organically within the study.



## Design elements within the management relationship

### 1.1 DELEGATION

This section focuses on the delegation element of the Management relationship, meaning how CBE has been defined and communicated to stakeholders and is expected to be implemented within the education system. This section includes teachers' understanding of what they have been tasked to do as well as the behaviors that may reflect this understanding.

Overall, teachers understood that they were responsible for the implementation of CBE and were familiar with the National Curriculum Framework; however, many teachers shared gaps in knowledge about how to carry out effective CBE. In surveys, teachers self-reported a fairly high level of familiarity with Belize's National Framework for CBE. Female teachers reported slightly higher levels of familiarity compared to male teachers; 59% (n=57) of female teachers and 49% (n=27) of male teachers reported that they were very or moderately familiar with Belize's framework for CBE. Across localities, urban

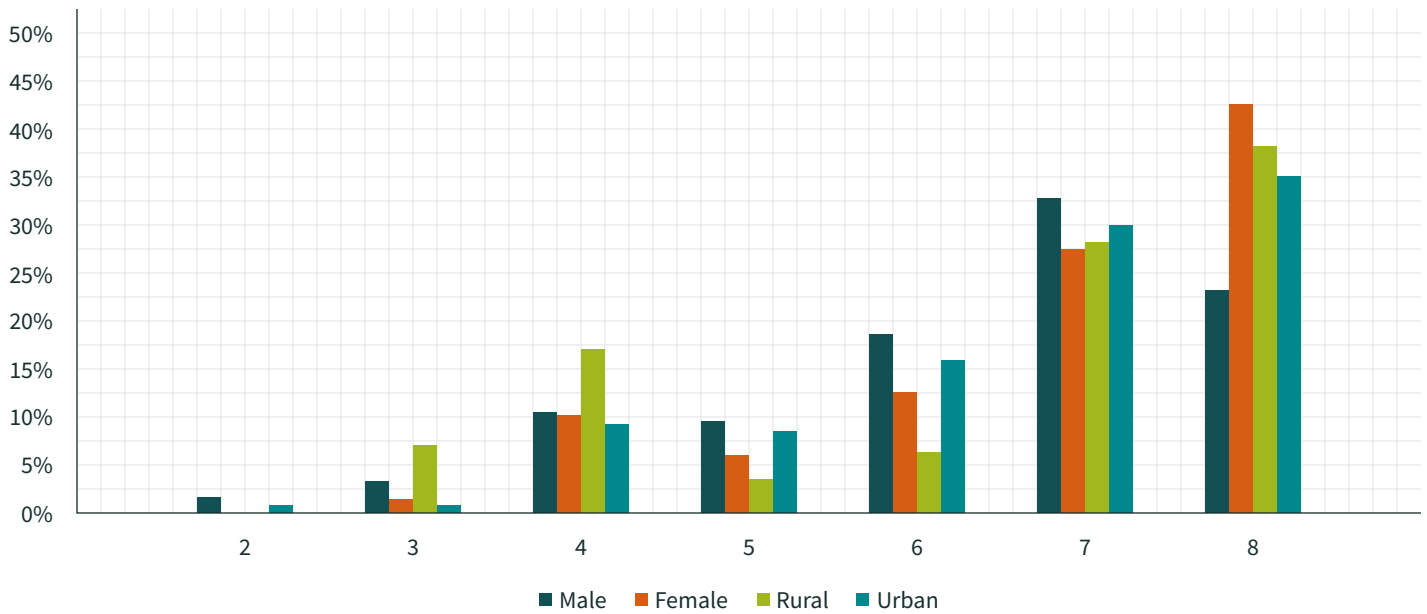
teachers were more likely to report that they were very or moderately familiar with CBE (59%; n=72) compared to rural teachers (41%; n=12).

When asked a battery of eight true/false questions about the National Curriculum Framework,<sup>12</sup> teachers answered an average of 6.6 (SD 1.5) questions correctly. On average, female teachers were slightly more likely to answer more questions correctly (average: 6.8; SD 1.4) than male teachers (average: 6.3; SD 1.5). Urban teachers were about as likely to respond to questions correctly (average: 6.7; SD 1.4) as rural teachers (average: 6.4; SD 1.7).

11. Statistics by district are not provided due to sample size disparities across districts.

12. The eight questions were: 1) Teachers are advised to use group activities to facilitate discussions between students (TRUE). 2) Teachers should assign students into groups of learners with similar learning abilities (FALSE). 3) Lessons should have direct real-world applications for students (TRUE). 4) Teachers should share grading rubrics with students prior to any assessment (TRUE). 5) Teachers should let learners revisit the learning activities and get re-assessed (TRUE). 6) Frequent standardized tests are a core component of CBE (FALSE). 7) Teachers should use lecture-based instruction as a key component of CBE (FALSE). 8) CBE relies on the amount of time students spend in class (seat time) to determine progress (FALSE).

**NUMBER OF CBE-FOCUSED QUESTIONS ANSWERED CORRECTLY BY GENDER AND LOCALITY (%)**



“I’m kind of lost when we look at this, when we speak about strategies, and I feel kind of disappointed because if I want to give it a full try to [implement] CBE, I would like to be involved in gaining more experience, more knowledge, and to bring it to my school, because I know this is a great outcome and the changes are inevitable, so we need to look for the positive change. So yes, I am limited. Well, most of us are limited. We have two new teachers that integrated themselves here this year, so they are still with this question ‘what is CBE?’ and ‘what they’re speaking about?’ because they were not in the training last year.”

**TEACHER, CAYO DISTRICT, RURAL LOCALITY**

In FGDs, overall, a majority of teachers demonstrated a conceptual understanding of CBE, describing CBE as a student-centered approach to learning in which the teacher facilitates students’ mastery of skills and knowledge for the purpose of real-world application. Teachers articulated several key strategies utilized in CBE, including personalized learning plans, project-based learning, rubric-based assessments,

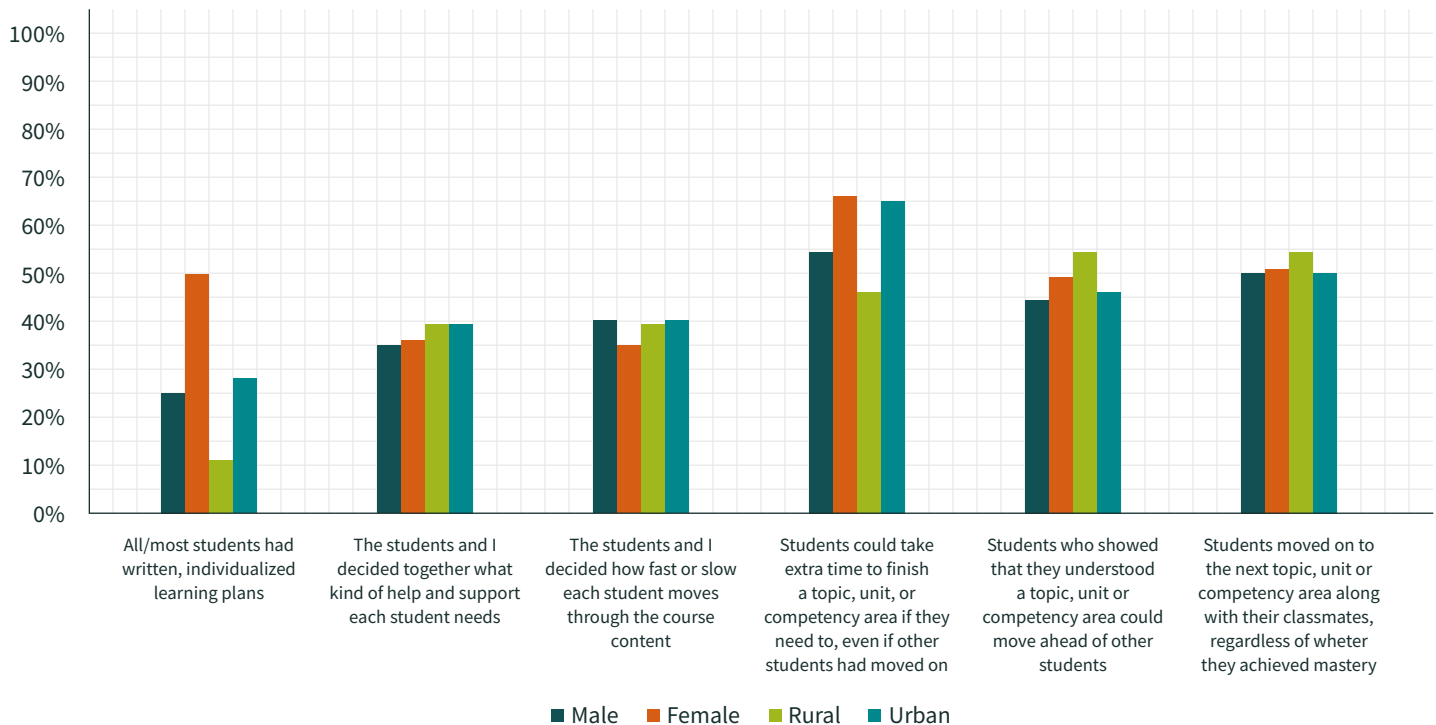
interdisciplinary projects, individualized learning goals, and hands-on learning. However, gaps in knowledge were reported on how to adopt CBE, including how to develop a lesson, how many times a student should be given an opportunity to try to achieve mastery of a topic, and how to grade a learner. Some participants indicated their own personal gaps in knowledge about CBE and also

described a lack of sufficient knowledge among other teachers, especially newer teachers. These concerns were rooted in beliefs that professional development had been provided when CBE was rolled out, but fewer trainings had been offered to teachers since the roll-out, coaching and mentoring was lacking, and practical guidance was missing to update and implement their skills throughout the school year.

**Overall, teachers' classroom management strategies reflect a diversity of understanding of and ability to engage in CBE. More information is needed to understand how and when teachers decide to move the class to a new topic or competency.** In surveys, teachers' CBE practices in the Spring 2024 semester were examined using five items. Response options were presented on a 5-point Likert scale ranging from Not at All (1) to Very Much (5). This study considered teachers to be using CBE practices frequently if they reported that the practices occurred somewhat or

very much. Overall, teachers most frequently allowed students to take extra time to finish a topic (61%; n=90) and least frequently created written, individualized learning plans for learners (25%; n=36). Across all items measured, female teachers were equally or slightly more likely to engage in CBE practices compared to male teachers. Urban teachers were more likely to create individualized learning plans with students (28%; n=33) compared to rural teachers (11%; n=3) and to allow students to take extra time to finish a topic, unit, or competency area (65%; n=77) compared to rural teachers (46%; n=13). Approximately 50% (n=74) of all teachers reported a fairly high level of frequency with which students moved on to the next topic, unit, or competency area along with their classmates, regardless of whether they achieved mastery. Since more than half of teachers also reported that students could take extra time to finish a topic, unit, or competency area, more information is needed to understand how teachers approach these competing strategies in practice.

**TEACHERS REPORTING FREQUENT USE OF CBE PRACTICES FOR CLASSROOM MANAGEMENT IN SPRING 2024 SEMESTER BY GENDER AND LOCALITY (%)**



During FGDs, many teachers recognized that individualized learner progress was an ideal of CBE, but also expressed that they found this ideal is often difficult to actualize given the diverse range of mastery among their learners. Further, teachers described teaching to learner needs as competing with their own need to keep up with existing curriculum delivery timeline expectations that have been delegated, with some naming the Caribbean Secondary Education Certificate (CSEC) explicitly.



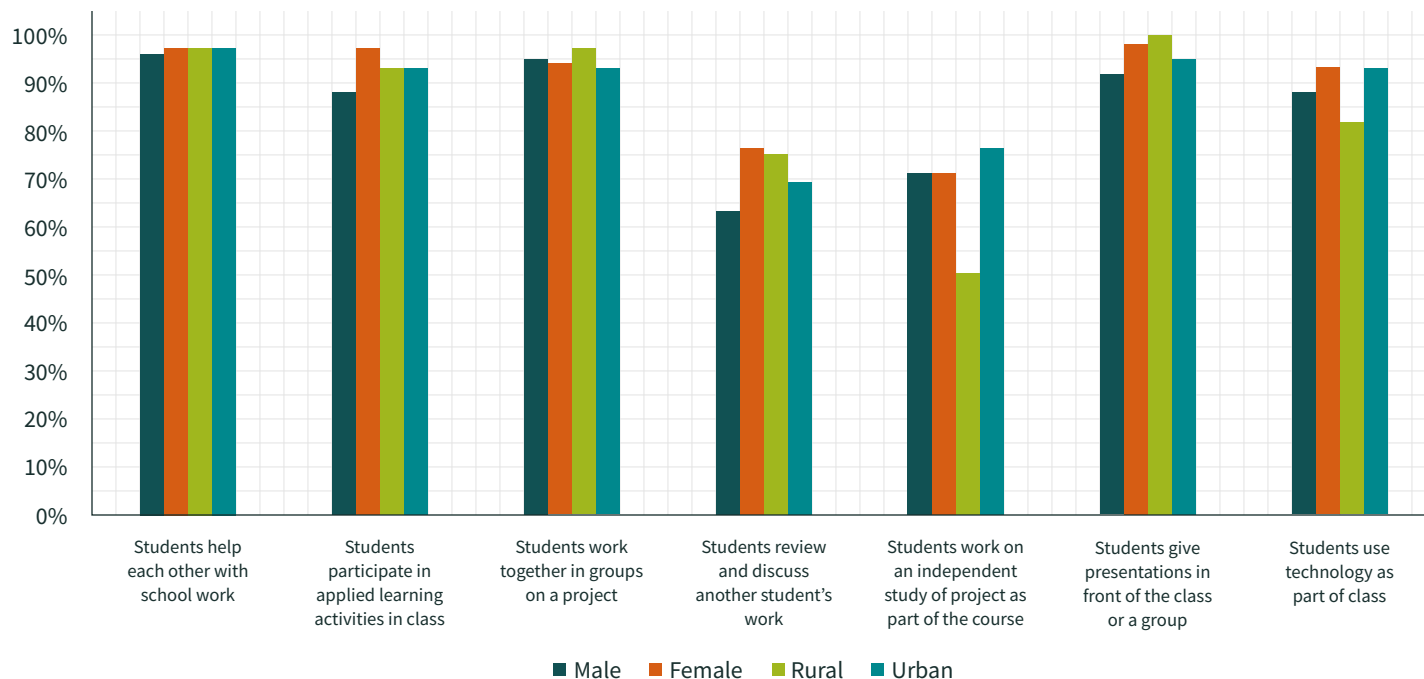
“The CSEC [Caribbean Secondary Education Certificate] exams, it’s a conflict as well, because in terms of resources, as teachers we’re limited in the number of times we meet with the students, so at the end it creates a little conflict[ing] results. Do we allocate time for the CXC [Caribbean Examinations Council], so when do we have time to create, design correctly, and [implement project-based learning]? That’s the question.”

TEACHER, CAYO DISTRICT, URBAN LOCALITY

Teachers regularly utilized a combination of CBE teaching strategies during the Spring 2024 semester, with peer-to-peer learning strategies among the most frequently utilized. In surveys, across seven strategies, teachers were most likely to have students help each other with schoolwork (97%; n=142) and were least likely to have students review and discuss another students’ work (70%; n=103). Across all items measured, female teachers were equally or slightly more likely to use the CBE practices measured on a weekly basis. Teaching practices varied across rural and urban localities. Urban teachers were more likely to have students use technology as part of class (92%; n=110) compared to rural teachers (82%; n=23) and to have students work on an independent study (76%; n=90) compared to rural teachers (50%; n=14).



**TEACHER REPORTS OF CBE TEACHING STRATEGIES UTILIZED WEEKLY IN SPRING 2024 SEMESTER BY GENDER AND LOCALITY (%)**



“It helps me as a teacher because I have had several instances where students help students... some students are slower than others to grasp these concepts, the tasks that they have at hand... they’re young, they have their own way of communicating and understanding each other. So when I can’t get to them, then that is where my students help me by making my job a little bit easier.”

**TEACHER, CAYO DISTRICT, URBAN LOCALITY**

In FGDs, several teachers described implementing differentiated instruction, with some giving concrete examples, such as one teacher who described video-based assignments for learners who may have difficulties expressing themselves in writing. Several teachers proudly shared stories of project-based learning<sup>13</sup> that they facilitated with their students. In many of these project-based learning experiences,

students were expected to work in groups to conduct research, utilize technology, develop products with real-world applications, and present their project to others.

Some teachers did not share a combination of strategies, but rather narrowed in on one that they used most, such as using games with students to

13. Stories are not included in this report to maintain teacher confidentiality.

reinforce knowledge, having students give class presentations, using group work to facilitate peer-to-peer learning, and technology-facilitated group work through collaboration platforms such as Google Docs. Fewer teachers mentioned implementing strategies such as self-guided learning and research.

**In general, teachers perceived technology to be a core part of CBE and utilized technology to facilitate CBE frequently; however, technology use differed across localities.** In our survey, teachers reported near universal computer use for the purpose of teaching in Spring 2024 (99%; n=158), which included using computers to prepare for class (e.g., lesson planning) or during class (e.g., to give lectures).

Content-specific tools (e.g., graphing calculators, science equipment) and tablets or iPads were least likely to be utilized for teaching, reported by 32% (n=50) and 35% (n=54) of teachers respectively. Except for smartphones, female teachers were slightly less likely to utilize all forms of technology for teaching. Rural teachers were slightly less likely to use a tablet or iPad (27%; n=8 ) than urban teachers (37%; n=46). Further, rural teachers were less likely to use a smartphone (73%; n=22) than urban teachers (80%; n=102). In FGDs, it was not common for the teachers to describe their use of specific technological devices. However, teachers did describe using visual projectors to engage students during class. Levels of access to these projectors varied across the participating schools.



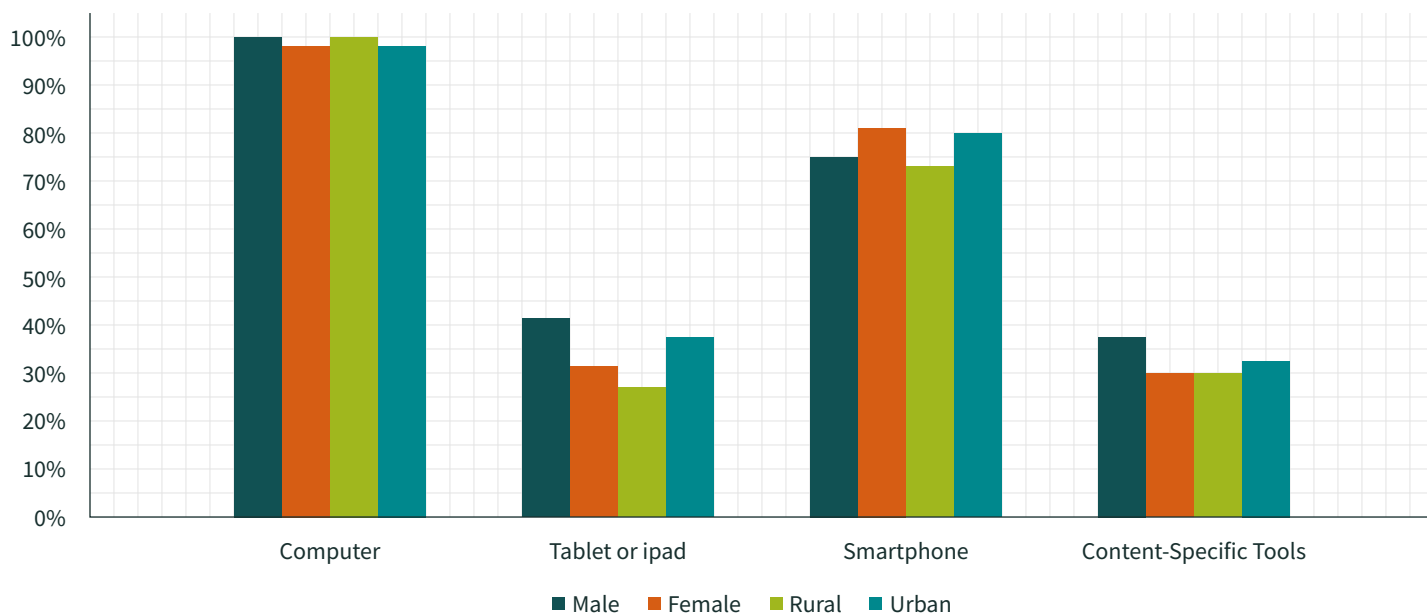
“In this school we only have one projector to use. Our teachers cannot use just the one projector at the same time, so we have to find other ways to interact with students in the classroom. We print out handouts and whenever I have the chance to use the projector, I use [it] because some students may not learn by just me dictating; we know some children have to learn visually. For example, we use videos so that they can understand what the teacher may be delivering to them.”

TEACHER, TOLEDO DISTRICT, RURAL LOCALITY

“The technology as I see it is very important, in the sense that there needs to be a more hands-on approach to what is covered. For example, I believe that in the vocational subjects that I teach, they should have access to the different types of equipment and tools and be able to manipulate them. Not just learn about them from a PowerPoint or something, but actually do it through integrated technology.”

TEACHER, BELIZE CITY DISTRICT, URBAN LOCALITY

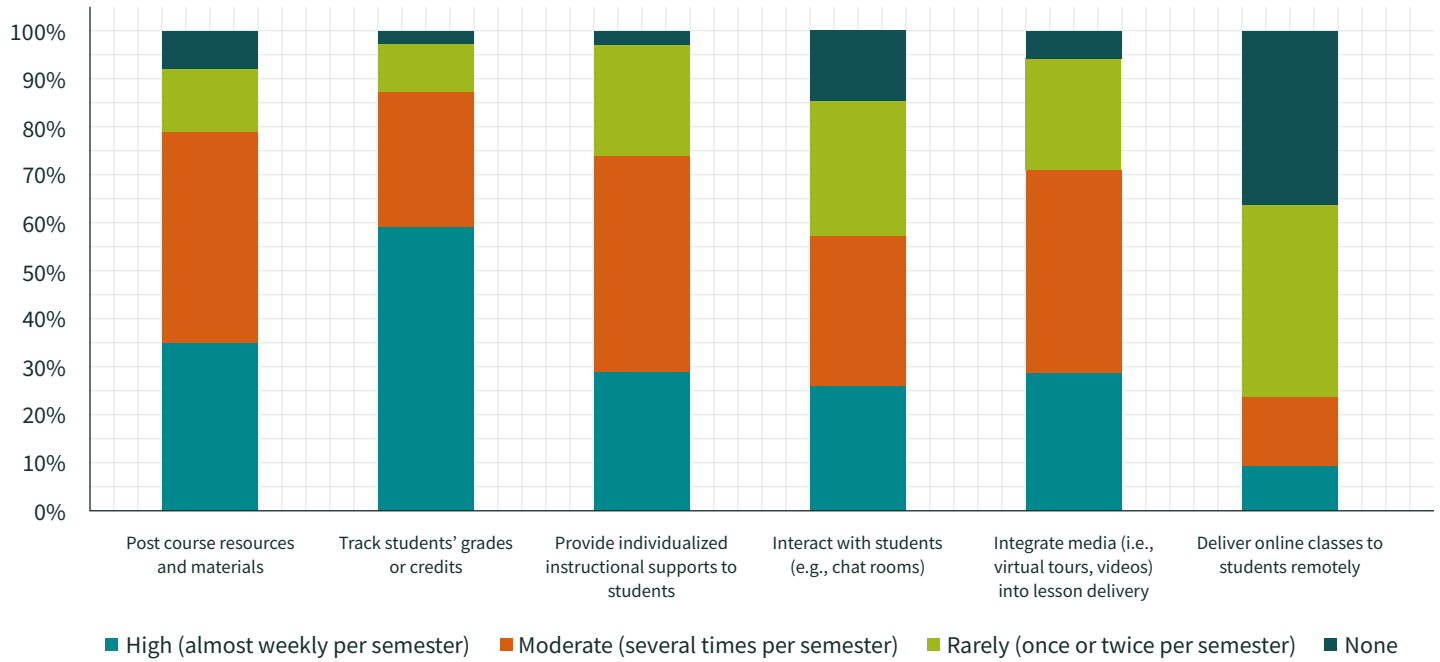
TEACHER USE OF TECHNOLOGY IN SPRING 2024 SEMESTER BY GENDER AND LOCALITY (%)



In surveys, six teaching practices were measured that involved technology utilization. Teachers were asked how frequently they used these strategies in the most recent semester, ranging from high frequency (almost weekly) to none. Overall, teachers were most likely to use technology to perform tasks that did not rely on learner engagement. For example, teachers most frequently reported using technology to track student grades or credits on a weekly basis (59%; n=94). Teachers were least likely to use technology to deliver online classes to students remotely; just 9% (n=14) of teachers used technology for online classes on a weekly basis.

14. The six technology-based teaching practices measured included: posting course resources and materials; tracking students' grades or credits; providing individualized instructional supports to students; interacting with students; integrating media into lesson delivery; and delivering online classes to students.

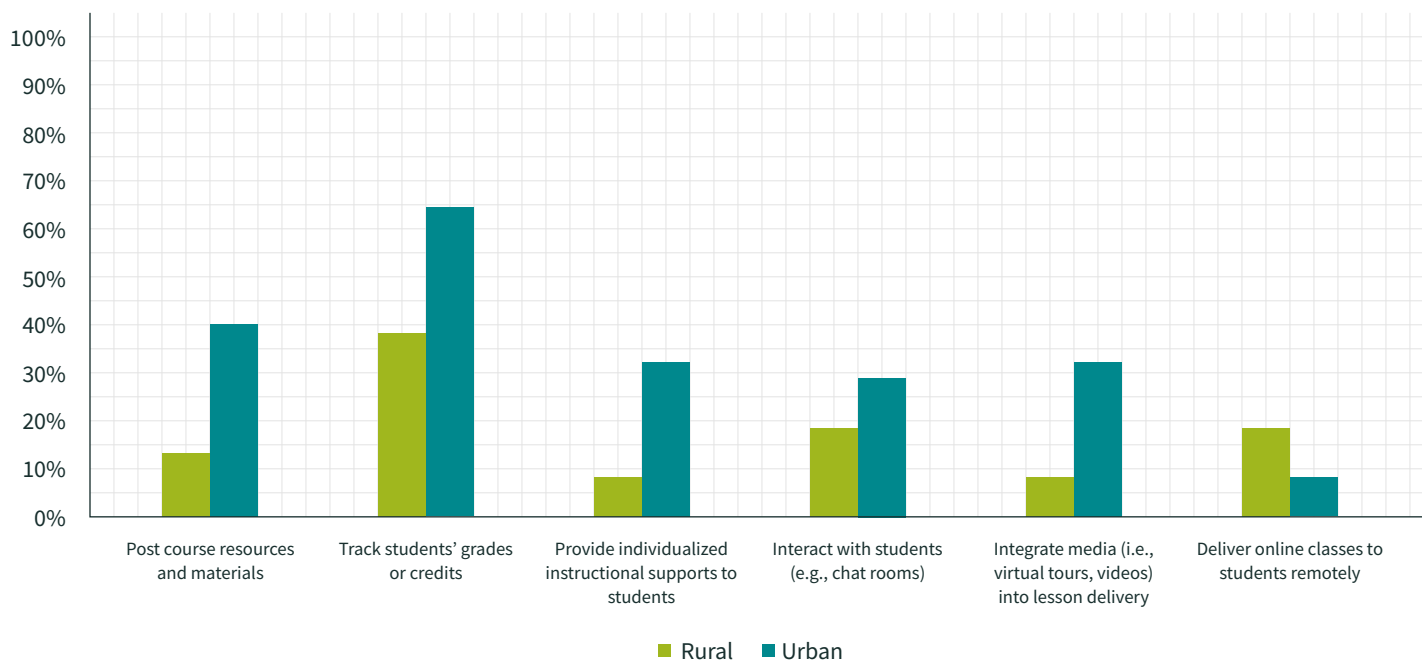
**TEACHER USE OF TECHNOLOGY IN SPRING 2024 SEMESTER BY GENDER AND LOCALITY (%)**





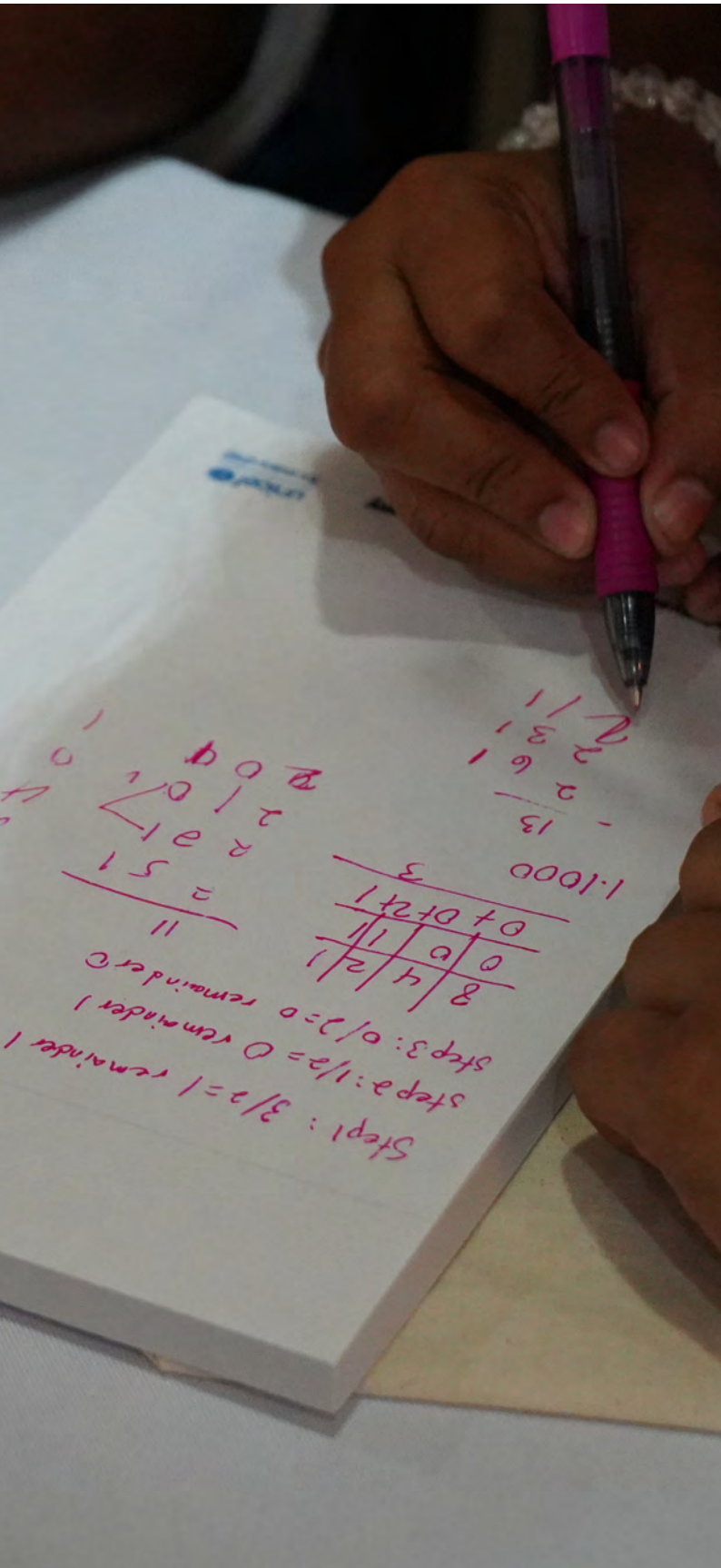
Urban teachers were more likely than rural teachers to utilize technology in Spring 2024 at a high frequency for almost all practices examined, with one exception. Rural teachers were more likely to deliver online classes to students remotely at a high frequency (17%; n=5) compared to urban teachers (7%; n=9).

**TEACHER TECHNOLOGY PRACTICES IN SPRING 2024 SEMESTER BY LOCALITY (%)**



“I am concerned that we are not taking advantage of the advancement of technology, social media, and now we have AI [artificial intelligence]. So the students don’t learn to use these things positively [and] so they post nonsense on social media because we don’t train them how to use it commercially. And then we take away their phones because we don’t trust them and it’s for good reasons, because they use it for many distracting reasons, because the education system has not trained them to use it... I would like to see more use of the present technology and even the use of AI more in the classroom setting in a controlled, constructive way, because I think we’re failing young people in that aspect. They don’t know how to use it, so they just use it for all kinds of mischief.”

**TEACHER, CAYO DISTRICT, URBAN LOCALITY**



“Technology is essential, for it is one of the primary resources that we use to find our information and to display our information so that we can have an understanding of which way we are heading. Because at the end of the day, I see that we are coming into an era where technology is everything, and the incorporation of technology is definitely an advantage for this type of education. It’s very crucial because if we don’t have the technology, then we are left with a disadvantage as individuals, institutions, schools, and teachers.”

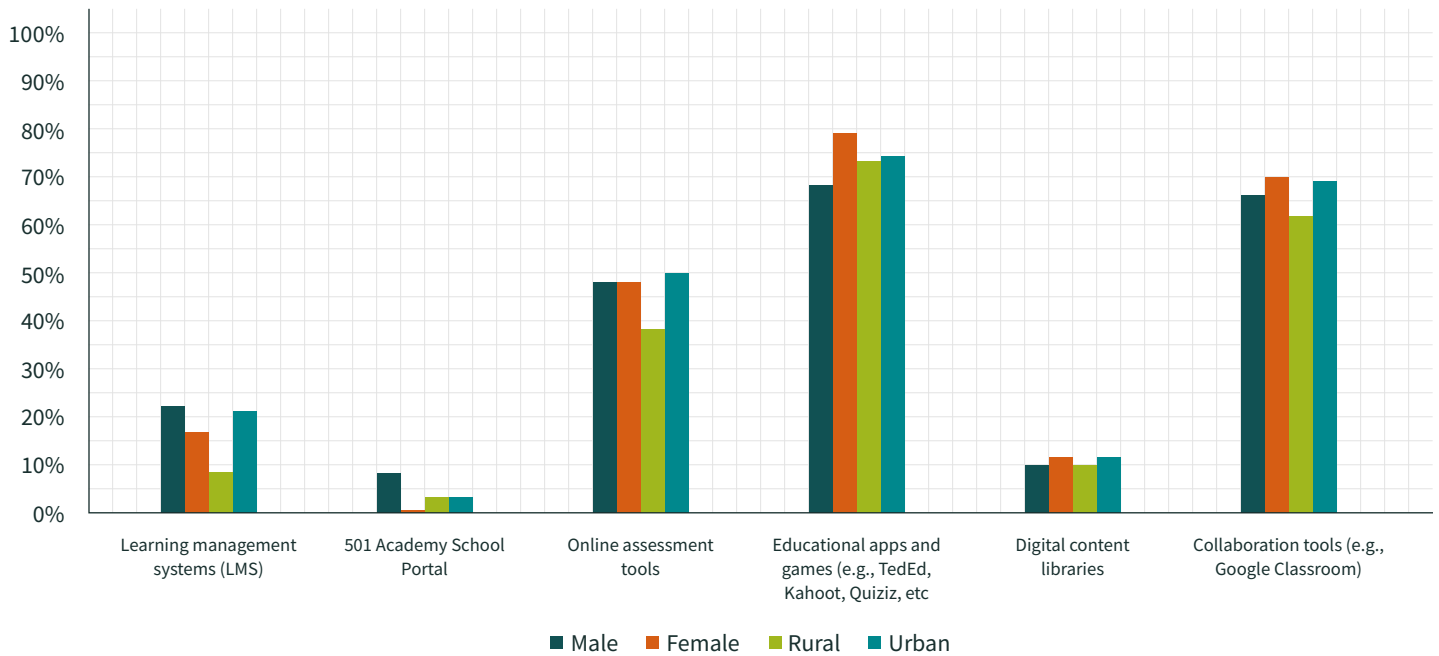
TEACHER, CAYO DISTRICT, RURAL LOCALITY

In FGDs, teachers described the use of technology as “essential” for implementing multiple components of CBE, including developing and implementing lessons, supporting students to conduct research or demonstrate knowledge, executing project-based learning, and facilitating individual, self-paced learning, or peer-to-peer learning. At the same time, some teachers expressed concerns that not all students have access to devices outside of the classroom to participate in learning, and that students may not use technology responsibly with regard to maintaining focus in the classroom and upholding academic integrity.

Teachers’ limited engagement with government-provided CBE resources suggests that delegation regarding these tools may need to be clarified. Teachers were surveyed about the technology tools to facilitate learning that they might use for CBE and reported that they most frequently used educational apps and

games. Approximately 68% (n=109) of surveyed teachers reported use of collaborative tools like Google Classroom and 74% (n=75) reported use of educational apps and games like TedEd, Kahoot, and Quiziz. Of the learning tools mentioned, teachers were least likely to use the 501 Academy School Portal (3%; n=5). Female teachers were slightly more likely to use educational apps (78%; n=78) than male teachers (68%; n=40). Across localities, urban teachers were more likely to use learning management systems (21%; n=27) than rural teachers (7%; n=2). Urban teachers were also more likely to use online assessment tools (50%; n=64) than rural teachers (37%; n=11).

**TEACHER USE OF LEARNING TOOLS BY GENDER AND LOCALITY (%)**





Within the FGDs, several teachers mentioned the utilization of different technology tools to facilitate learning across different media, such as supporting learners to collaborate on Google Slides and engage in gamification of learning and through videos and PowerPoint presentations. Some teachers felt that engaging with students over technology was insufficient because students did not take ownership over their learning and accountability for engaging with materials online.

“I used [technology] to my advantage because mainly for [my subject], my students really struggle to want to read what I would post online. Let’s say, for example, if I would post just that chapter for them to read with these infographic books and eBooks that we had, along with the PowerPoint presentation that we had in class, we could visualize [my subject] and we were able to, you know, get content given to the students without having it be the basic reading and comprehension, but more we would watch videos, we would do games, we would have drawings, and we would take the information in different mediums.”

TEACHER, CAYO DISTRICT, URBAN LOCALITY

## 1.2 FINANCE

This section focuses on the element of finance, or resources that have been allocated to implement CBE. Overall, there was wide variability in resources for CBE across schools, with a specific lack of resources in rural schools contributing to inequitable learning opportunities among students.

“When it’s CBE, not only do the students need help, but the teachers as well. Honestly, here in this room right now, there are some teachers that do not have a working computer or laptop that they can do their lesson plans on or their yearly plans on.”

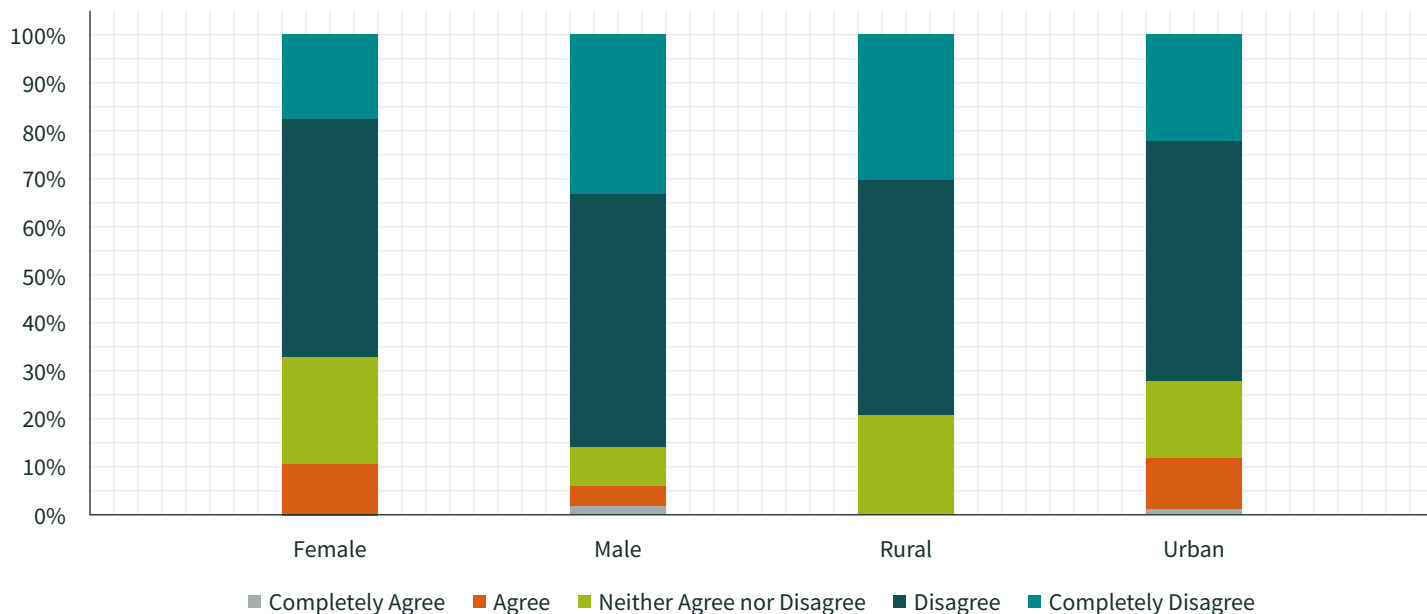
TEACHER, TOLEDO DISTRICT, RURAL LOCALITY

Most teachers, but especially rural teachers, indicated that they lacked sufficient material resources to implement the CBE model.

Among teachers surveyed, approximately 67% (n=68) of female teachers and 85% (n=32) of male teachers disagreed or strongly disagreed with the statement “I have all the material resources (e.g., content-specific tools, technology, etc.) that I need to implement the CBE model.” None of the 29 rural teachers agreed or completely agreed with this statement, while 13% (n=15) of urban teachers indicated that they had all the material resources they needed to implement the model. Overall, our study suggests that teachers may be considering the access that they and their students have to project-based learning materials, technological devices, and internet access when responding to this question.



**TEACHER'S RESPONSES TO THE STATEMENT "I HAVE ALL THE MATERIAL RESOURCES I NEED TO IMPLEMENT THE CBE MODEL" BY GENDER AND LOCALITY (%)**



### 1.2.1 PROJECT-BASED LEARNING AND OTHER RESOURCES

In FGDs, fewer teachers referenced topically specific technology access needs for subjects like vocational training and science. One teacher recommended allocation of resources toward student enrichment experiences, such as project-based learning or field trips to facilitate more engaged learning opportunities, and another teacher recommended the allowance of teachers' stipends to better facilitate project-based learning, a key approach within CBE.

“You cannot evaluate me on something where I don’t have the resources or administration doesn’t provide resources to me.... Taking it into account in evaluation or evaluation performance, you cannot evaluate me when you don’t provide for me. I know we all have constraints when it comes to economical constraints. Because since CBE is based on project...in the location where we are living, there are some students that don’t have monetary funds to buy things when it comes to the project.”

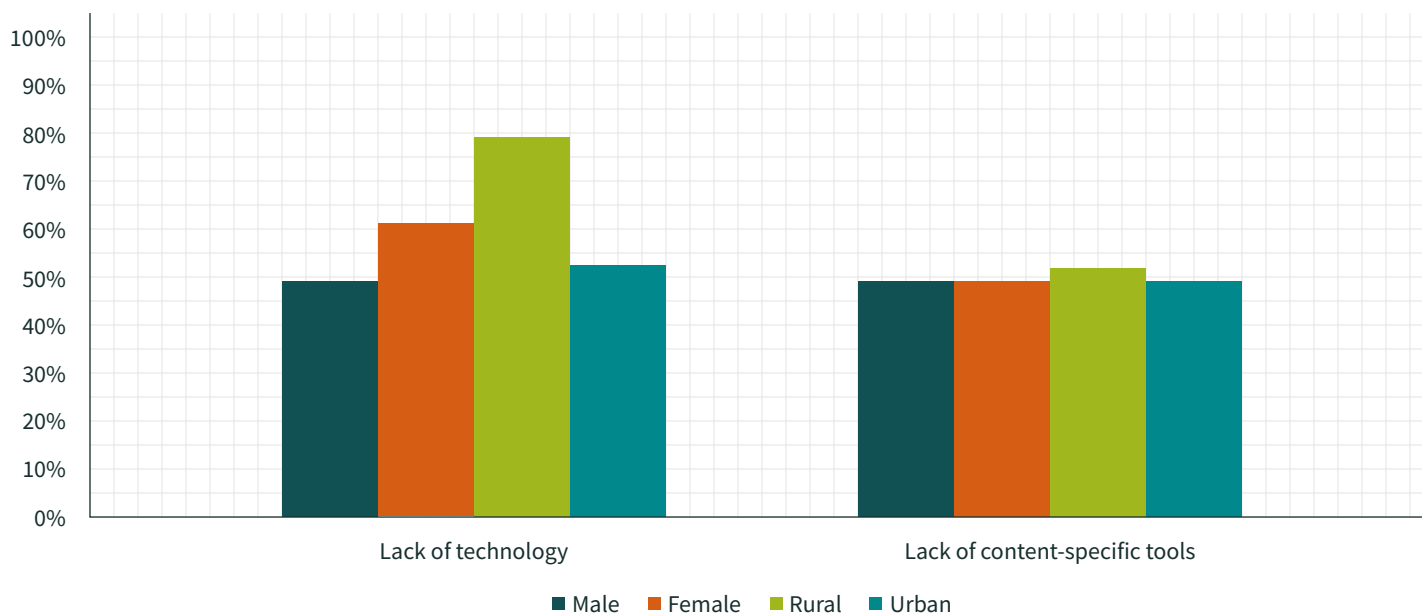
TEACHER, CAYO DISTRICT, RURAL LOCALITY



## 1.2.2 TECHNOLOGICAL DEVICES

In general, teachers and principals indicated that the limited number and quality of technological devices created barriers to successful implementation of CBE. In surveys, when asked about barriers to successful CBE implementation, teachers most frequently indicated lack of access to technology impeded successful CBE implementation (56%; n=89). Female teachers were more likely than male teachers to report lack of technology (female: 61%; n=62, male: 49%; n= 27) and curriculum constraints (female: 33%; n=34, male: 27%; n=15) as barriers to CBE implementation. Across localities, rural teachers were much more likely to report lack of technology as a key impediment to CBE implementation (79%; n=23) compared to urban teachers (52%; n=67).

**TEACHER’S REPORTS OF RESOURCE CHALLENGES TO CBE IMPLEMENTATION BY GENDER AND LOCALITY (%)**



The principal technology inventory suggests that the quality of technological devices may also be lacking. Most principals reported that computers met their school’s instructional needs to a small or moderate extent (77%; n=10) while only 23% (n=3) found that computers met the instructional needs to a large extent.

**Lack of access to technological devices for students in school and at home is a further impediment to teachers’ implementation of CBE.** As reported by principals in the technology inventory, only three schools (23%) had a computer

for every student in the school and all three of those schools were in urban locations. Further, only 31% (n=4) of the schools allowed students to borrow computers on a short-term basis if needed to complete schoolwork. A total of 11 principals provided complete data on the student-to-computer ratio. On average, there were 45 computers for general student use per school and an average of 12 students per computer.

In FGDs, teachers noted that many students do not have access to devices at home to prepare homework, participate in project-based learning, or engage with materials posted online by teachers. Many teachers

lauded the government's effort to provide Chromebooks for every student as a major achievement toward improving access to technology; however, many students still lacked access to technology at home because of their financial circumstances. Similarly, several teachers were appreciative of their schools' recent efforts to expand access to classroom projectors and computer resource centers, though other schools highlighted lack of access and/or proper maintenance of these resources as a key challenge.

“We are very uncertain if each student has access to a device or much less internet at home. I had some cases of some students not being able to...do my assessments online because...they didn't have access to internet at their home or have access to a device. So like strategies when the Ministry had given out Chromebooks, I think that assisted a lot of students in being able to get their work done either at school or at home, but it is not something that is certain that all students have access to these devices....In a digitalized era, most of the teachers are using online assessment programs or they're submitting work online.”

TEACHER, BELIZE CITY, URBAN LOCALITY





### 1.2.3 INTERNET ACCESS

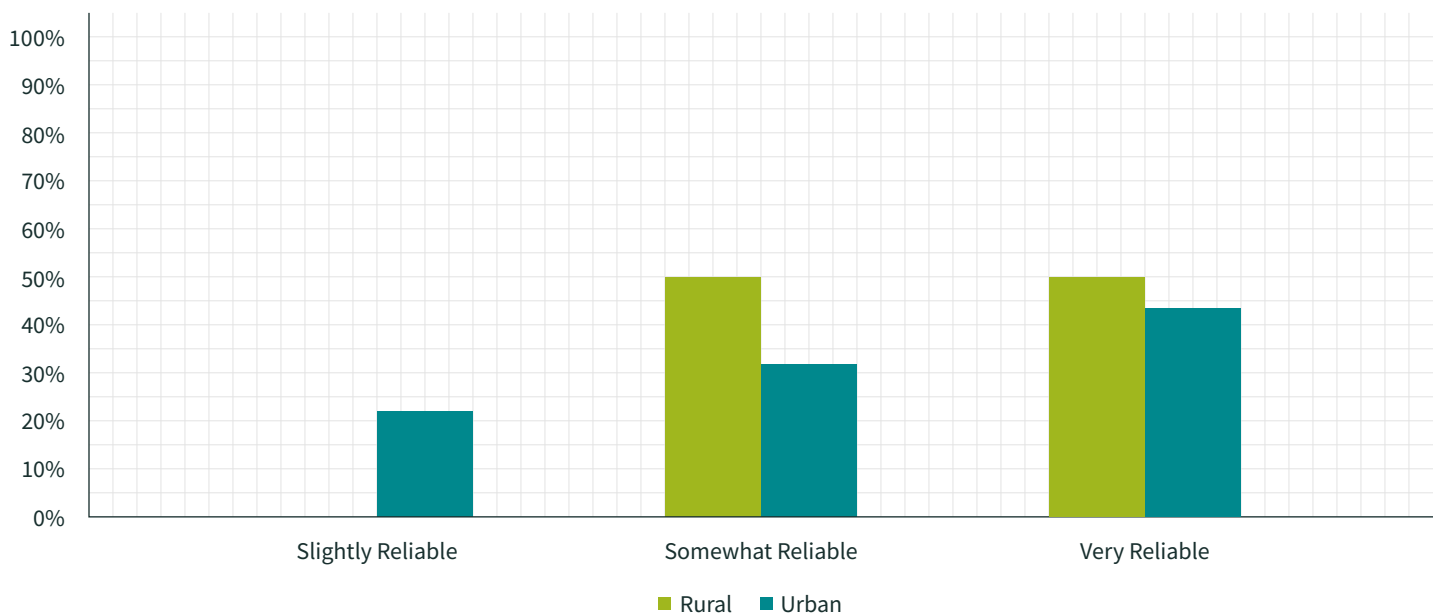
In general, teachers and principals reported access to internet at school, although the quality and reach of internet access differed by locality. Among teachers surveyed, internet access was fairly common with 91% (n=146) reporting internet access in their classrooms. Rural teachers were less likely to report having internet in their classroom (70%; n=21) versus urban teachers (96%; n=125). In FGDs across both urban and rural localities, teachers shared challenges regarding internet access, including speed and reliability of the internet. Some schools had internet, but teachers could not utilize the internet in their classrooms reliably.

In general, principals reported that the internet was somewhat or very reliable in instructional areas, with rural principals reporting somewhat higher levels of reliability. These findings may contradict reports from teachers in rural versus urban areas, suggesting more information may be needed to gain a deeper understanding of internet reliability both broadly across the school and within specific classrooms.

“We have a lot of trouble with our internet this school year. That has affected us when it comes to CBE... What I find most beneficial would be the internet. There are so many things that you can access, so many videos, but again if the internet isn't working then CBE seems to not work as well... We have the devices, yes, but we really need the internet.”

TEACHER, BELIZE CITY, URBAN LOCALITY

PRINCIPALS' REPORTS OF INTERNET RELIABILITY BY LOCALITY (%)



Overall, this study finds that students have disparate access to the internet, contributing to inequities in learning. In FGDs, many teachers noted that students' lack of internet access at home was an important barrier to the effective realization of CBE aims. Among principals, only 15% (n=2; one rural and one urban) provided students with mobile hotspots or web-enabled devices so they could access the internet.

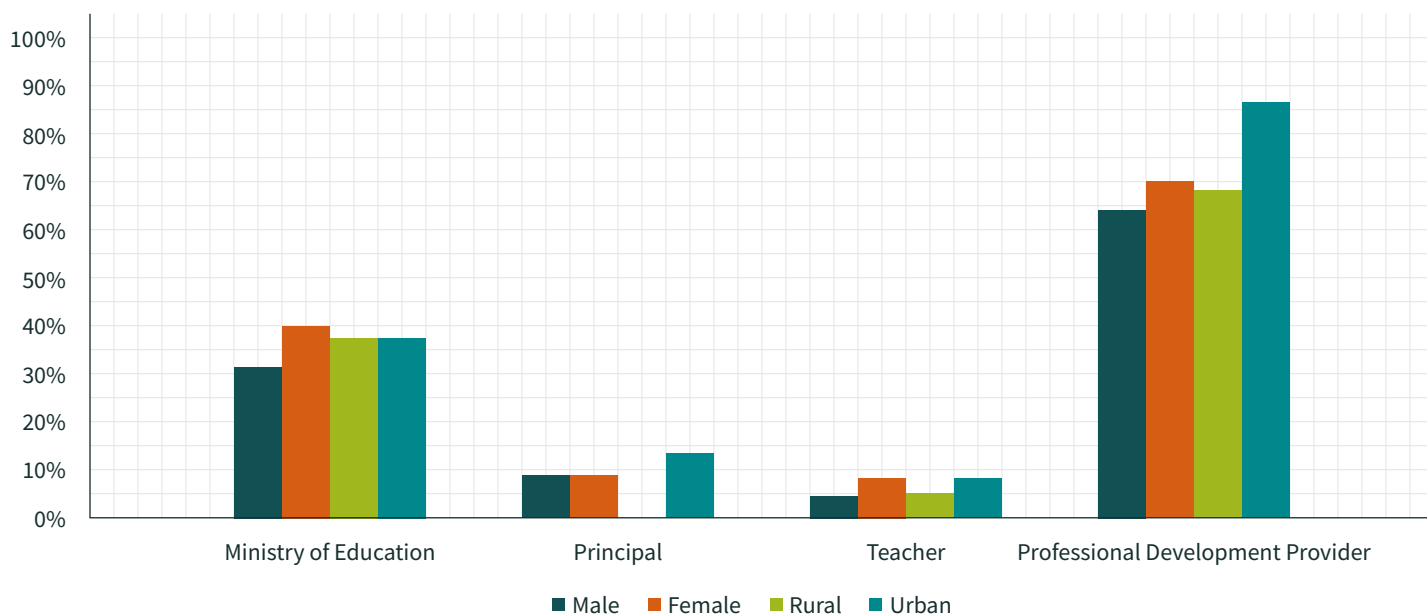
### 1.3 SUPPORT

This section focuses on support, defined as the preparation and assistance that teachers receive to implement CBE. In general, teachers expressed a need for hands-on, regular professional development (PD) opportunities that provide concrete strategies and guidance on CBE. The reported need for PD is slightly higher among male and rural teachers.

Teachers, especially male and rural teachers, reported a significant need for ongoing training on CBE that covers concrete strategies for implementing CBE and engaging learners with disabilities. Approximately 82% (n=125) of teachers reported receiving professional development (PD) or training on CBE, with little difference in training experiences between male (80%; n=44) and female teachers (83%; n=80). Across localities, rural teachers were less likely to report receiving training on CBE (66%; n=19) compared to urban teachers (86%; n=106).

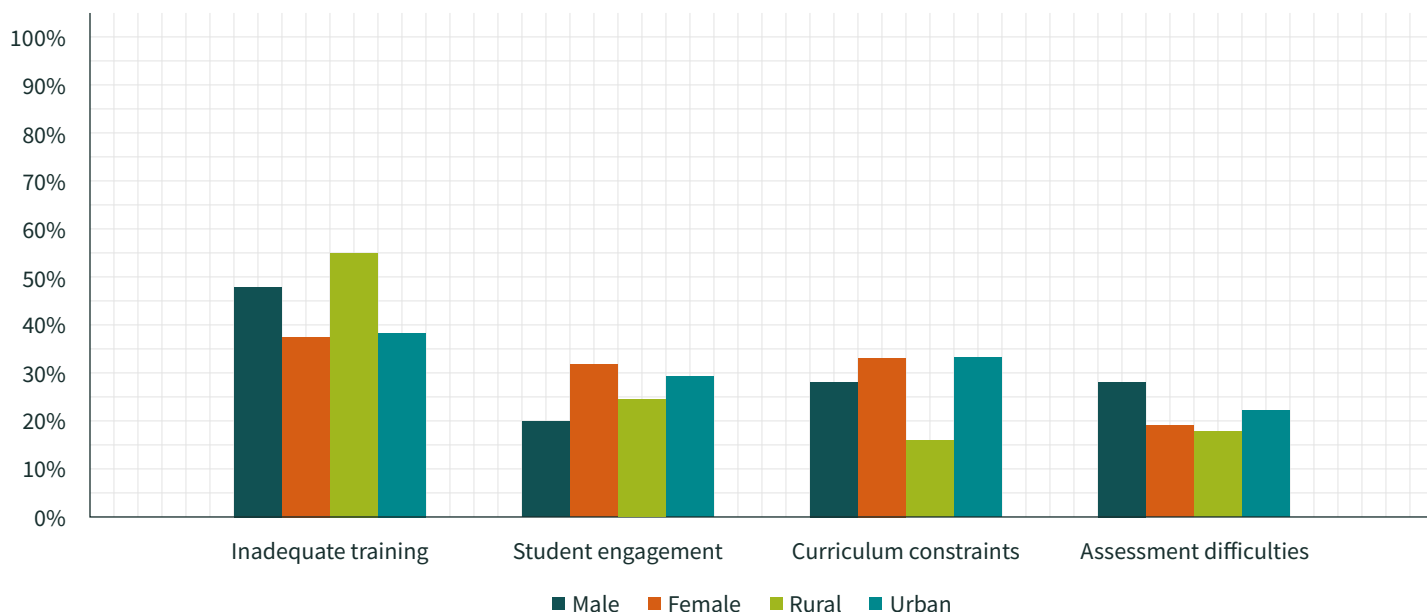
Teachers most frequently reported receiving CBE training from professional development providers (68%; n=103), followed by the Ministry of Education (37%; n=46). Among the 125 teachers who reported receiving professional development on CBE, 65% (n=81) reported that the training had a focus on the use of technology in CBE practice.

**TEACHER'S REPORTS OF CBE PROFESSIONAL DEVELOPMENT PROVIDERS BY GENDER AND LOCALITY (%)**



Lack of training was particularly challenging for rural teachers (55%; n=16) and male teachers (47%; n=26). Female teachers (33%; n=34) and urban teachers (33%; n=43) were more likely to report curriculum constraints as a barrier to CBE implementation compared to other populations.

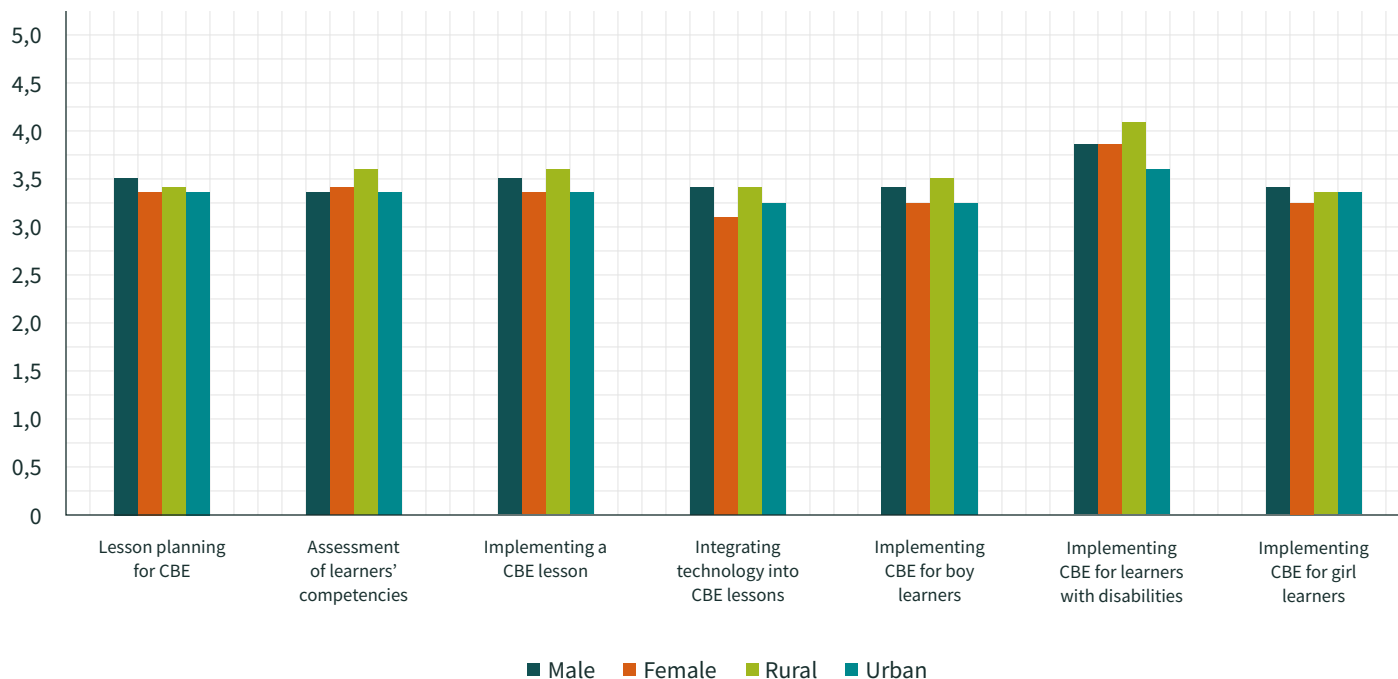
**TEACHER’S REPORTS OF CHALLENGES TO CBE IMPLEMENTATION BY GENDER AND LOCALITY (%)**



Teachers rated their perceived need for training in implementing various aspects of CBE (e.g., lesson planning, assessing learners’ competencies etc.) on a scale ranging from very low (1) to very high (5). A higher score indicates a higher level of need for training. Overall, teachers reported the highest level of need for training to implement CBE for learners with disabilities (average score 3.7; n=152) and for assessing learners’ competencies (average score 3.4; n=151). On average, male teachers were slightly more likely to report a higher level of need for training compared to female teachers across most items measured. Compared to urban teachers, rural teachers were equally or more likely to report need for training on CBE, especially with regard to teaching CBE to learners with disability (rural teacher average score: 4.1 versus urban teacher average score 3.6).



**TEACHER SELF-REPORTED LEVEL OF NEED FOR TRAINING ON CBE BY GENDER AND LOCALITY (%)**



During FGDs, teachers expressed varied levels of exposure to CBE-focused PD, including no exposures (this was particularly common for newer teachers, but not exclusive to them); exposures orienting them to the CBE theory and approach, but with no tangible strategies; and exposures to deeper and more specialized trainings focused on tangible strategies, such as technology integration and assessment rubric development. Given this lack of exposure among newer teachers, it may be important to explore the extent to which CBE is incorporated into pre-service teacher curriculum through future research, as this was not explored within this present study.

“Administrators did have a workshop... to understand CBE, but... there has not been a follow up to the training. It was just a limited amount of information... we were thrown into this....I believe we need more training, more time to prepare ourselves before we implemented CBE in our classrooms.”

TEACHER, BELIZE CITY DISTRICT, URBAN LOCALITY

Regardless of their level of exposure, the majority of teachers recognized that increased access to training, in terms of both frequency and depth of content, is needed to facilitate proper implementation of CBE. Generally, teachers who were exposed to more intensive training opportunities appreciated the actionable strategies that they learned through applied experiences (i.e., simulating project-based learning) and believed that adequate training was required for the confident implementation of CBE within their school. Similarly, teachers who reported lower exposures to professional development opportunities believed that intensive trainings with actionable strategies and applied experiences would be beneficial to their implementation of CBE.

“The training that we received was very generalized... I feel that there is a lack of individualized training for teachers... I believe that for the past summers that we’ve had two trainings on CBE, we haven’t been including technology in it. Not because we lack availability, because I think each teacher has a laptop or a computer available to them, but we haven’t been taught any strategies, any other stuff to use, or any other programs that we can use... we do need specialized training per content area.”

TEACHER, ORANGE WALK DISTRICT, RURAL LOCALITY



## 1.4 MOTIVATION

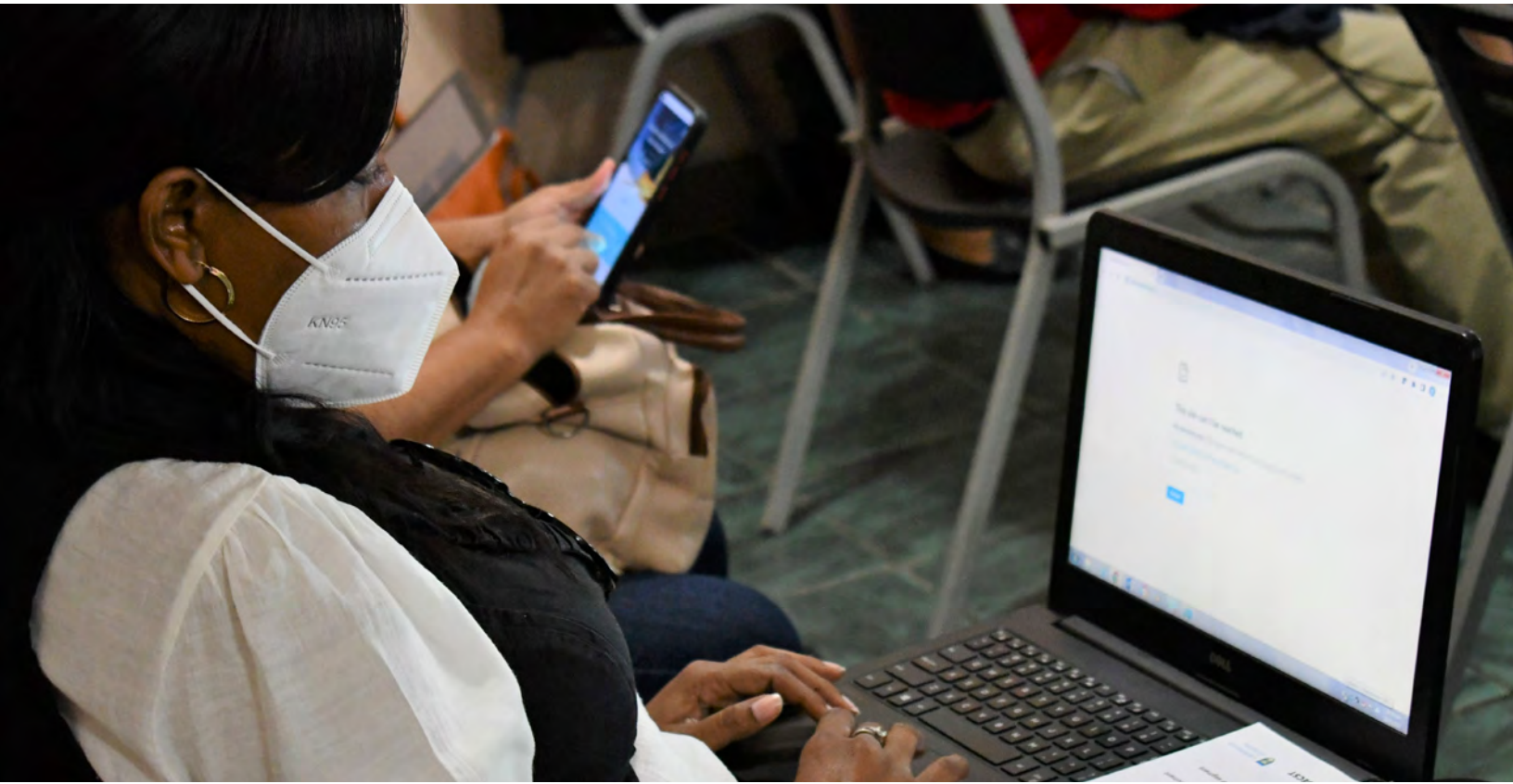
This section focuses on how and to what extent teachers perceive that educational authorities incentivize and hold them accountable for CBE. In general, teachers expressed intrinsic motivations that aligned with CBE. However, teachers lacked strong extrinsic motivations to implement CBE and clarity around how they would be held accountable for CBE implementation.



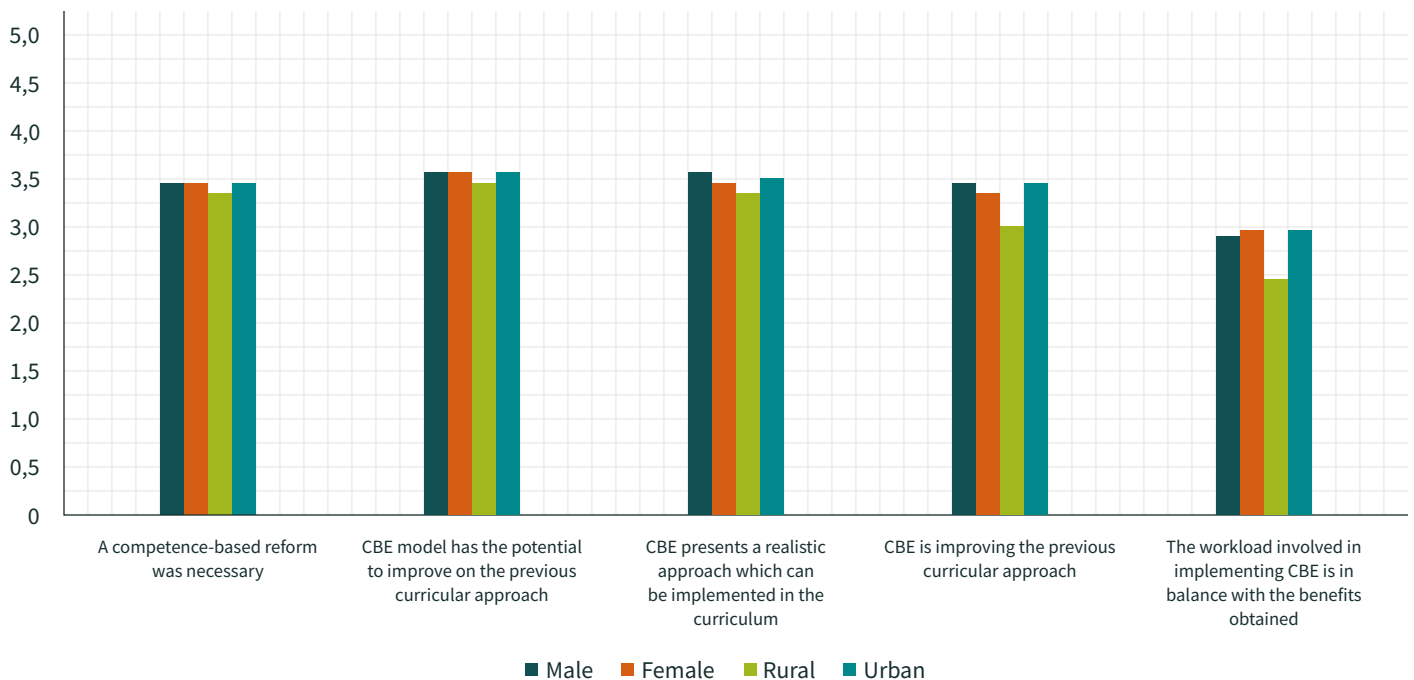
Overall, there was alignment between teachers' intrinsic motivations and CBE as a practical way of connecting learning to the real world; however, teachers indicated decreased enthusiasm for implementing CBE strategies because of the associated workload and feasibility challenges. In surveys, teachers' beliefs about the theoretical CBE model were measured using five items that had previously been validated among secondary school teachers in Spain.<sup>15</sup> Teachers were asked to what extent they agreed with statements about the CBE model and could respond using a 5-point Likert scale ranging from

Strongly Disagree (1) to Strongly Agree (5). Teachers could score as high as 25 points on the scale, which a higher score indicates greater support for the CBE model. Overall, teachers were fairly positive about the CBE model (average score 16.6; SD 4.2) but were least likely to endorse the statement that the workload was in balance with the benefits achieved. Belief scores were fairly consistent across female (average score: 16.6; SD: 3.9) and male teachers (average score: 16.8; SD 4.6). Overall, urban teachers were more positive about the benefits and the workload associated with CBE (average score: 16.6; SD 4.5) compared to rural teachers (average score: 15.5; SD 4.0).

15. García-López, L.M., Gutiérrez, D., Pastor, J.C. et al. Validity and reliability of a questionnaire on primary and secondary school teachers' perception of teaching a competence-based curriculum model. *J. New Approaches Educ. Res.* 7, 46–51 (2018). <https://doi.org/10.7821/naer.2018.1.255>

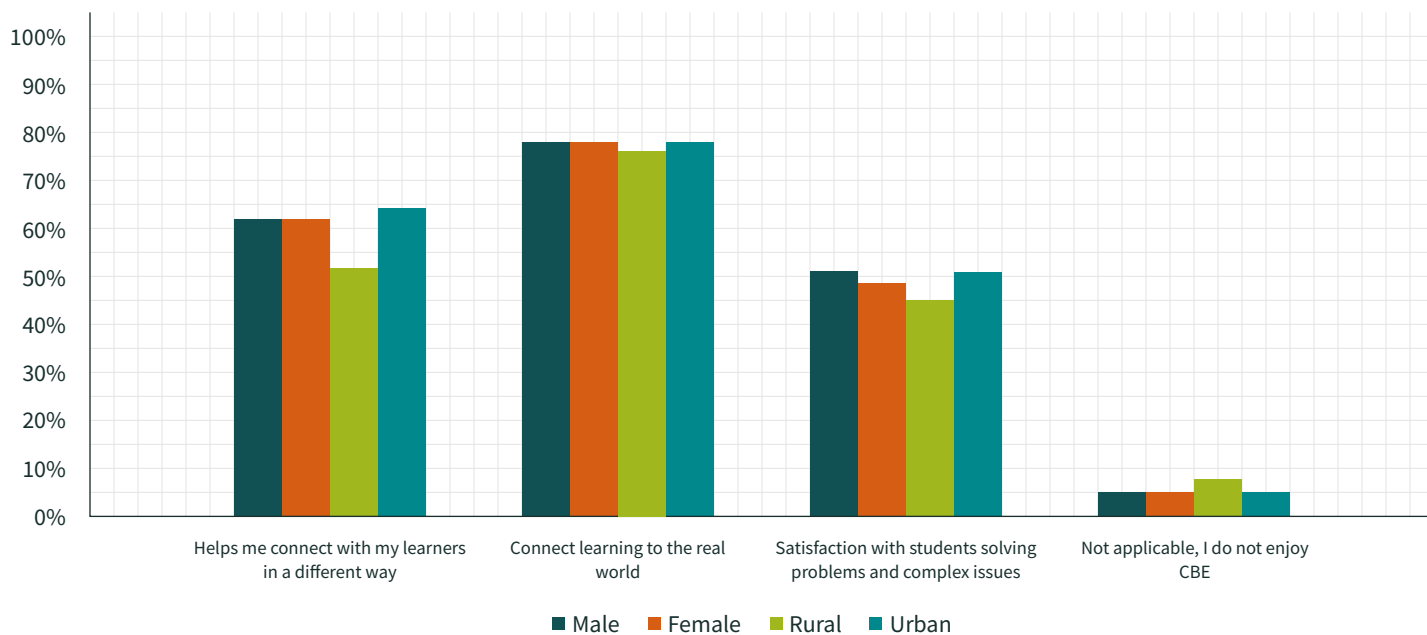


**TEACHER BELIEFS ABOUT CBE MODEL AVERAGE SCORE BY GENDER AND LOCALITY**



In surveys, teachers reported that they were motivated to implement CBE because it connects learning to the real world (78%; n=123); this was consistent across teacher gender and locality. Approximately 60% of female (n=63), male (n=34), and urban (n=82) teachers reported that they were motivated to implement CBE because it helped them connect with their learners in a different way. Rural teachers were slightly less likely to endorse this motivation (52%; n=15).

**TEACHER’S MOTIVATIONS FOR IMPLEMENTING CBE BY GENDER AND LOCALITY (%)**



“[CBE] is something beneficial for the students, where they can see the practical use of gaining knowledge at school... proving to themselves that they are capable of more than memorizing and learning a set of principles... As a teacher, I have the opportunity to open my way of thinking so that they – we – can find a sense [of] real-life education... in our daily lives.”

TEACHER, CAYO DISTRICT, RURAL LOCALITY

During FGDs, the majority of teachers suggested that CBE has the potential to be an improvement over prior curricular approaches, regardless of their level of exposure to it conceptually or practically. Specifically, many teachers valued the real-world application of learning for students and the critical thinking skills CBE aims to instill. Some teachers also expressed positive sentiments around the possibility of CBE facilitating students’ greater ownership of their own learning, strengthened collaboration skills and peer-to-peer learning, assessments that utilize a growth-based approach, and more technology-based engagement that may feel more relevant to the generation of students they are supporting. Beyond direct experiences with implementation, teachers felt motivated by the CBE curriculum’s promise to create more competent citizens who can better serve their communities, as well as CBE’s potential to facilitate responsible use of technology in the future of education.



“What motivates me to implement CBE would be seeing that students could... learn the different concepts at their own pace... I may say that it’s time-consuming, because the class [is] different [and] still moves at different paces. Some will get the concepts very quickly, some will achieve that mastery faster than others, and we are to wait for the others, so that the others could actually gain that knowledge and achieve the objectives. But the motivation is seeing them learn and achieve their objectives.”

TEACHER, BELIZE CITY DISTRICT, URBAN LOCALITY

Teachers discussed the workload associated with CBE as an inhibiting factor, highlighting the following as particularly burdensome and new compared to prior curricula: 1) creation of rubrics, as each rubric needed to be created from scratch; 2) development of projects that were locally relevant; and 3) multiple student assessments. Given the large class sizes in some districts, many teachers felt that multiple assessments were impractical.

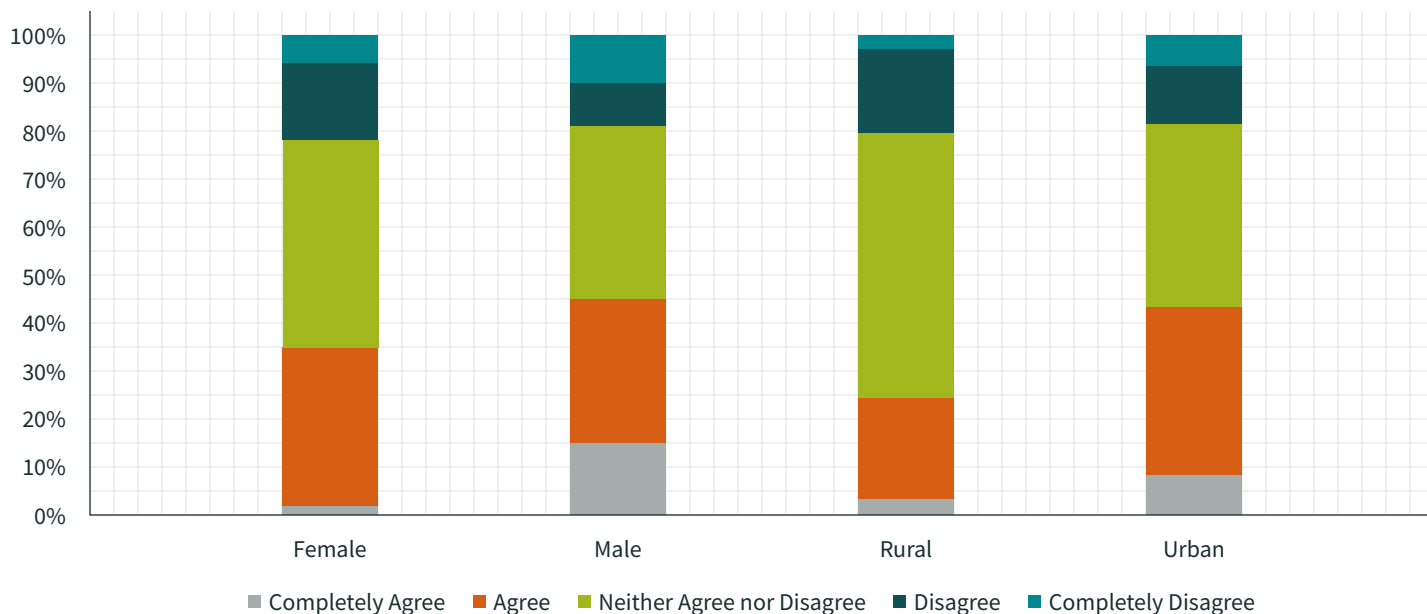
Overall, teachers indicate that they are ambivalent that CBE will produce better learning outcomes for their students, suggesting a misalignment between intrinsic and extrinsic motivations to help all children learn. Teachers were asked to what

extent they agree with the statement: “Teachers who can successfully implement competency-based education will achieve better student outcomes than teachers who cannot.” Response options were presented on a 5-point Likert scale ranging from Completely Disagree (1) to Completely Agree (5). Approximately 39% (n=58) agreed or strongly agreed with the statement. Male teachers were slightly more likely to agree or completely agree with the statement (45%; n= 24) compared to female teachers (35%; n=34). Across localities, urban teachers were more likely to agree or completely agree with the statement (42%; n=51) compared to rural teachers (24%; n=7), who expressed the least positive sentiment toward the statement of all groups measured.

“In as much as you try to use the competency-based learning theory, it is something that requires a lot of time, requires a lot of patience, requires a lot of assistance from the administration. It requires a lot of resources, and I’m quite sure that those are some drawbacks that hinder or make people think twice when they want to implement it in certain activities, because it takes double the time to do a task when you’re using competency- based.”

TEACHER, ORANGE WALK DISTRICT, URBAN LOCALITY

**TEACHER'S LEVEL OF AGREEMENT THAT CBE WILL PRODUCE BETTER STUDENT LEARNING OUTCOMES, BY GENDER AND LOCALITY (%)**



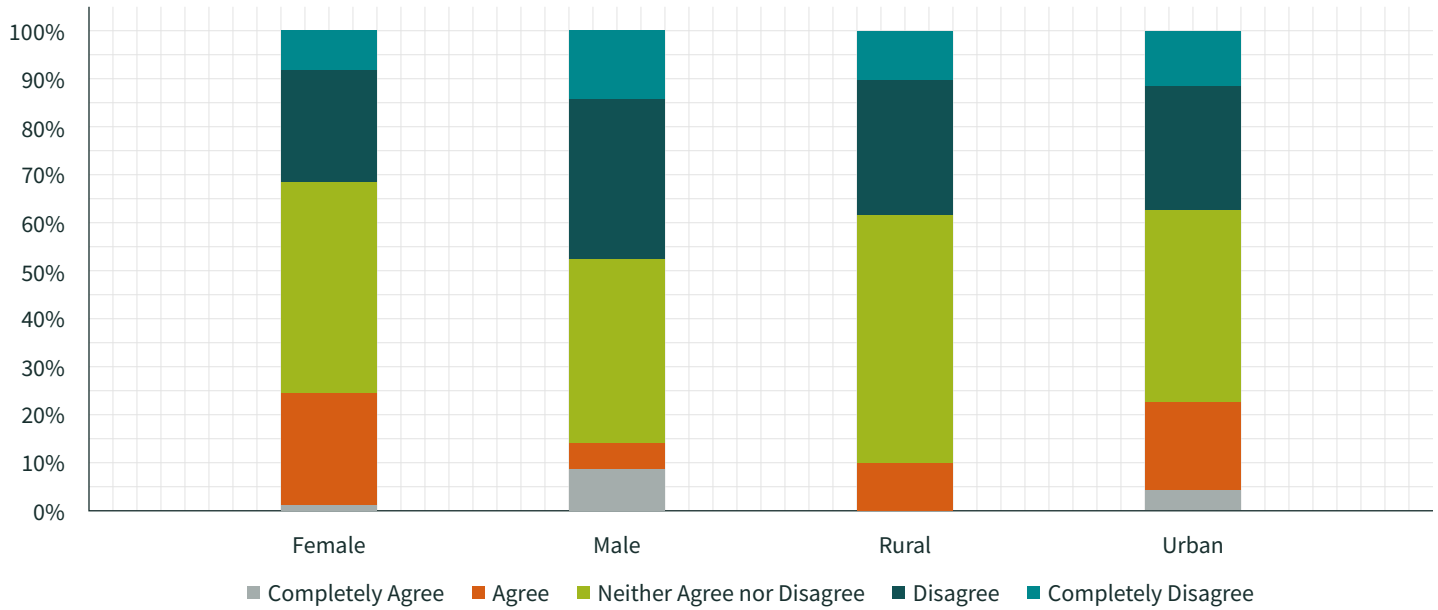
While more information is needed about why teachers overall are doubtful that CBE will produce better learning outcomes, the FGD data suggests some potential reasons. First, teachers may have negative beliefs about CBE and student learning outcomes because it is difficult to assess student learning outcomes through CBE. Second, teachers may perceive that students are not able to equitably realize learning outcomes associated with CBE due to disparate access to devices and materials. Third, teachers may perceive that CBE may not teach learners the content that is needed to achieve positive learning outcomes on tests that are meaningful outside of secondary school, such as the CSEC.

Overall, teachers lack a clear understanding of how CBE may factor into their performance appraisals, which suggests that educational authorities do not provide clear extrinsic motivations and mechanisms of accountability for CBE implementation. Teachers were asked to what extent they agree with the statement: “My school leadership evaluates the performance of teachers who can successfully implement competency-based

education more positively than teachers who cannot.” Response options were presented on a 5-point Likert scale ranging from Completely Disagree (1) to Completely Agree (5). Approximately one third (n=30) of teachers agreed or completely agreed with the statement. Female teachers were slightly more likely to agree or strongly agree with the statement (24%; n= 23) compared to male teachers (14%; n=7). Across localities, urban teachers were more likely to agree or completely agree with the statement (22%; n=27) compared to rural teachers (10%; n=3).



**TEACHER'S LEVEL OF AGREEMENT THAT SCHOOL LEADERSHIP EVALUATES TEACHERS MORE POSITIVELY IF THEY SUCCESSFULLY IMPLEMENT CBE, BY GENDER AND LOCALITY (%)**



“I don’t know if the evaluation forms request that. Since [the school] is having us trained, I am pretty sure that it’s going to be factored in somewhere in the evaluation.”

TEACHER, BELIZE CITY DISTRICT, URBAN LOCALITY

In FGDs, teachers described general considerations that their administrators should theoretically take into account, with several mentioning the diverse student pace of learning, rather than awareness of clearly established expectations on how they would be evaluated. Several teachers expressed that it would be reasonable for them to be eventually evaluated on their ability to implement CBE, though one teacher indicated that this assessment would be unfair because they felt they lacked the necessary professional development support and resources to adequately implement CBE.

“When it comes to figuring out if the administrator will consider this, we would not necessarily know, because since the beginning of this school year, we have not been appraised. We have not sat with the principal or gone through an appraisal form, or he has not visited our classes, sat through it, with him and somebody else, so we do not know how we are being evaluated.... Being there in the classroom instead of just asking around the students, ‘What did you do in this class? Oh, how did that go?’ Because at a certain point, just hearing what one student has to say can be subjective, as opposed to being seated in the classroom, observing everything that is happening. I think there needs to be more of that happening here at this school.”

TEACHER, TOLEDO DISTRICT, RURAL LOCALITY

## 1.5 INFORMATION

This section focuses on teachers' perceptions of the metrics and types of data that educational authorities use to assess teachers' performance in implementing CBE. In general, teachers indicated that they were not being assessed based on how their students moved through CBE projects or performed on rubrics, but rather on their students' performance on exams and assessments, including the CSEC.



“We are still giving traditional assessments as our internal system is still stuck in the past. I believe more work needs to be done in training VPs and Principals to understand CBE.”

TEACHER, COROZAL DISTRICT, URBAN LOCALITY

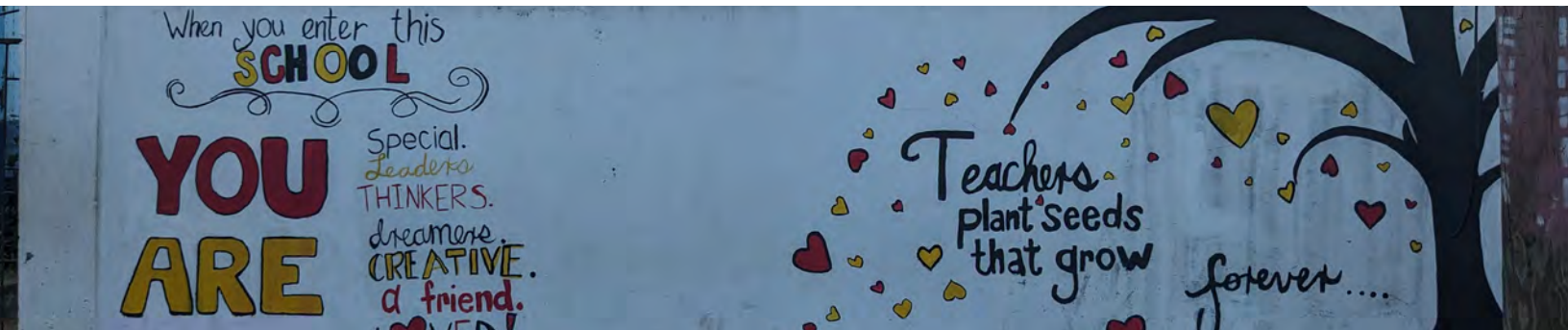
“[Parents and students] want to see grades, from their grades and their tests... [There’s] this expectation from parents [and] from students to do the CSEC, so they are geared towards these additional assessments. So it’s a little bit of a conflict here.”

TEACHER, CAYO DISTRICT, URBAN LOCALITY

In FGDs and in open-ended survey questions, teachers indicated that they were responsible for creating local and project-based rubrics to measure the success of CBE implementation; however, they still had to calculate and report exam grades for each student. In some cases, teachers converted rubric scores to exam grades, and in others, teachers continued to implement exams from prior curricula. The disconnect between CBE-based rubrics and traditional grading systems is exacerbated by the lack of consistent performance evaluation metrics to measure CBE progress, as well as misalignments between the rubric-based CBE system and the CSEC curriculum. One rural teacher in Orange Walk described the misalignments this way:

“Many of us have been trying to receive some form of standardized expectation of what CBE is... [for example], simple things such as proficiency scales; we have some managing authorities give us specific proficiency scales, maybe a five-point scale, we have the Ministry giving a four-point scale, and some schools are adopting even a six-point, eight-point, ten-point scale. So that is something that I believe we need to look at both locally and maybe nationally, so that we standardize the grading proficiency scales that we can use across the country. We heard that CBE will be carried from primary to secondary to tertiary. The tertiary level has already accepted some facets of CBE, but if we are not standardizing the proficiency scale then we’ll have a little issue with the teaching, the assessing, and also the transfer of credits on the 4.0 GPA scale. So that’s something that I believe we should look at.”

Beyond the educational authorities, teachers reported that parents, students, and private sector employers continue to use traditional grading systems to assess teacher performance. One urban teacher in Cayo District noted: “If things are not aligned properly with the Ministry and the government, it will be a problem. For example, this CBE does not cater to CXC [Caribbean Examinations Council] and just recently, a student needed to come back to school because he applied for a job and he was told he needs his math CXC. To me, things need to be aligned in order for students to fit into society.”



## Alignment challenges

Teachers reported a fairly good conceptual understanding of CBE as it had been delegated to them, and they implemented many key CBE strategies in the pilot year. However, key systems misalignments may inhibit full implementation of CBE, especially in rural areas. These systems misalignments include the following:

Teachers may resist CBE adoption in lower secondary classes because they are still assessed on student performance on the content-heavy Caribbean Secondary Education Certificate (CSEC), implemented by the Caribbean Examinations Council (CXC). In particular, teachers struggled to balance the need to move forward with CSEC content while assessing learners multiple times and giving learners additional time to engage with content. To facilitate the process, teachers sometimes reverted to online assessments, even though they provided less accurate measures of competency compared to paper-based or teacher-facilitated assessments. Even if learners did not demonstrate competency in a subject area, teachers struggled to react and respond meaningfully to the assessment results because of the pressures of CSEC. As a result, teachers may move students forward in a topic or unit, even if all of their learners have not yet achieved competency.

“The greatest challenge that I found when implementing CBE is the assessment and keeping up with the CSEC curriculum... the CSEC curriculum is very intensive in terms of content, but then the amount of... reassessing that we have to do, it really makes it difficult to keep on track with where we should be with the curriculum and it therefore creates a learning gap... We understand that some students could... move on. But the reality of the situation is that the majority of the students need to move at the same pace.”

TEACHER, BELIZE CITY DISTRICT, URBAN LOCALITY

Teachers also described incoherence between what is being delegated to them within the Management and Voice and Choice relationships articulated in the RISE framework. Specifically, the implementation of CBE may not align well with the expectations of parents and those in the private sector. These two groups may expect certain proof of educational progress and attainment, including performance on the CSEC.

Teachers emphasized that the delegation to implement CBE was misaligned with the types and frequency of support available to them, namely the professional development (PD) that they were receiving. In particular, teachers expressed the need to switch from one-off trainings to regular, hands-on training. Based on teacher

responses, content areas for consideration in future PD may include: 1) subject matter-specific CBE strategies; 2) tangible methods of assessing learners' progress; 3) strategies for deciding when to move learners to a new topic, unit, or subject area; 4) approaches for supporting learners with disabilities to engage with CBE; 5) applications of different technology devices and tools to facilitate effective student learning in the classroom; 6) approaches for implementing project-based learning with resource constraints in mind; and 7) monitoring of student technology use in the classroom to prevent academic misconduct and to support learners' focus on education-related tasks. Teachers who were fortunate to have greater exposures to these support elements named them as crucial to ensuring effective implementation of CBE.

“Sometimes, we are in the classrooms and the internet is not working. We don't have that access to the internet to open our files... to have students access the videos... I was in class [proctoring] an exam and some students who don't have a device to do their examination, an IT examination... Some of them come from... families who cannot afford these devices. So, if we want to implement competency-based learning in the classroom, then probably [part] of the assistance that the government can give schools is allowing devices to the entire student population, so we can move forward... with education... I don't know if one of the reasons why students don't have a device is because of poverty or because they come from rural areas compared to urban areas, and it has to be related to the income of their parents as well. All these things affect the implementation of CBE in the classroom.... I understand, and I am aware that an internet provider went to the school and tried to assist us with internet accessibility, but up to this point internet is not working as we expect it to be working at school.”

TEACHER, ORANGE WALK DISTRICT, URBAN LOCALITY

Teachers understand technology integration, internet usage, and project-based learning to be key components of CBE and are intrinsically motivated to use them because they connect learning to the real world; however, the lack of consistent and equitable access to relevant resources creates multiple misalignments that inhibit CBE engagement. Access to technology, internet, and materials to facilitate project-based learning varied among the schools and among learners within schools based on socioeconomic status. Without adequate access to quality resources, teachers could not realize their motivation to connect learners to the real world through CBE and often reverted to prior curricula. While teachers applauded the existence of government-issued Chromebooks, they reported that disparities in socioeconomic status created inequitable access to devices, and therefore learning, among students.

## Potential solutions

Findings from this study point to several potential solutions that may facilitate CBE implementation, which are offered to the Ministry of Education, Culture, Science and Technology (MoECST) and its partners for consideration. These findings are relevant to government-aided secondary schools and may not necessarily reflect the needs of educators at private or public schools.



### Address teachers' concerns around misalignments between CBE and the CSEC.

The Ministry may consider several pathways to address the potential resistance among teachers to implement CBE because of pressures associated with the CSEC. First, the Ministry may consider adjusting the CBE curriculum to better align with the CSEC in upper secondary and articulating these linkages to teachers. Second, the Ministry may consider providing curricular materials and professional development on the use of CBE strategies to implement the CSEC-based curriculum in Forms 3 and 4, which could support the implementation of CBE in a more consistent manner throughout secondary schools. Finally, while this would be a substantial reform, the Ministry could consider an alternate testing regime that would test competencies acquired, thus incentivizing CBE curriculum uptake.







**Engage with employers and families to raise awareness of changes to curriculum and how they might relate to the CSEC.** Teachers expressed a great deal of pressure to support students in meeting the expectations of parents and employers while also adhering to the values of CBE. To alleviate this pressure, it may be beneficial for the Ministry and school leaders to develop a community and family awareness plan to raise awareness of and buy-in for CBE among parents, students, and employers who are accustomed to the grading and testing systems associated with the CSEC and prior curricula.



**Strengthen and articulate systems of accountability and incentives for CBE implementation to enhance teachers' extrinsic motivations.** To address teachers' desires for clear, written guidance on how CBE performance factors into teacher evaluation and advancement, the Ministry may consider 1) clarifying expectations around CBE (e.g., including CBE expectations in job descriptions); 2) formalizing how CBE performance factors into appraisals, teacher rank, and/or pay grade; 3) creating a framework that outlines professional development practices and needs and equitably serves teachers; and 4) developing data reporting tools and accountability metrics for school leaders and district/regional education officials related to CBE implementation.



**Strengthen local professional development (PD) support for CBE implementation so that teachers, especially rural and new teachers, have ongoing, regular, and hands-on support.** Regular PD activities could be provided through professional learning communities, peer-to-peer mentorship, and when needed, engagement with external subject matter experts. Based on teacher responses, content areas for consideration in future PD may include: 1) subject-matter specific CBE strategies; 2) tangible methods of assessing learners' progress; 3) strategies for deciding when to move learners to a new topic, unit, or subject area; 4) approaches for supporting learners with disabilities to engage with CBE; 5) applications of different technological devices and applications to facilitate effective student



learning; 6) approaches for implementing project-based learning with resource constraints in mind; and 7) strategies for monitoring students' use of technology in the classroom to prevent academic misconduct and to support their focus on education-related tasks. Although pre-service training was not explicitly examined in this study, findings suggest that the Ministry may also consider integrating CBE strategies into pre-service training so that newer teachers can enter the workforce prepared to implement CBE.



**Support equitable learning opportunities for students by increasing finances for technological devices, project-based learning, and internet for teachers and students within and outside of school hours.** Teachers applauded efforts that have increased the distribution of devices (e.g., laptops, projectors etc.) and internet and improved access for both teachers and students. At the same time, they identified persistent gaps in access that disproportionately affect learners of low socio economic status and rural teachers. To maintain current levels of device access, it may be beneficial to invest in maintenance of current technological devices. To further extend access and advance equitable learning opportunities and outcomes, it may be beneficial to expand distribution of devices to teachers (such as projectors) and to students (such as laptops and tablets) through loaning programs, and to improve internet access within classrooms and across communities. Finally, the Ministry and school leaders may consider providing additional materials and/or professional development to facilitate project-based learning opportunities.

## Study strengths and limitations

Several strengths underpin this study. First, the study triangulated data from multiple sources (surveys, technology inventory, and focus groups) and stakeholders (principals and teachers) to aid in the validity of the findings. Second, although the study had varying degrees of participation across schools, participants across all six districts were engaged in either FGDs, surveys, technology inventories, or a combination of methods

supporting the generalizability of findings. Third, the study checked findings with multiple key stakeholders involved in the educational system, further contributing to their validity. One key limitation of this study is that research was only conducted in government-aided secondary schools, excluding those schools designated as private or public, which may have brought further nuance to these findings.





## Conclusion

Findings from this study suggest that initial progress has been made in supporting teachers to implement CBE strategies in government-aided secondary schools: frontline educators are using some CBE strategies and generally perceive the envisioned goals of CBE in a positive light. Teachers have also articulated real concerns around feasibility that, with the continued leadership of the Ministry and

local education officials, can be addressed through systems alignment to realize the promise of CBE. Future studies should engage with other key stakeholders, including students, parents, master teachers, principals, and supervisors, to explore their unique perspectives on CBE to increase the uptake, impact, and sustainability of the CBE innovation.



# Competency-Based Education in Belize:

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Educators' Perspectives  
From the 2023-2024 Pilot School Year

