

Competency-Based Assessment Implementation: A Study of Understandings, Challenges, and Supports

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Abstract

British Columbia school districts are in the process of implementing Competency-Based Assessment methods in secondary school grades, which is a shift from traditional methods of assessment previously used. This study sought to understand the level of understanding of Competency-Based Assessment amongst secondary teachers, as well as to explore the challenges they have encountered in its implementation so far and identify the supports that they would need to continue the implementation process. After collecting survey data from nine secondary teachers and conducting interviews with three department heads in a British Columbia secondary school, it was found that secondary teacher understandings of Competency-Based Assessment are variable, though the challenges faced and the supports needed for implementation are generally consistent with those identified in the literature on Competency-Based Assessment.

Keywords: Competency-Based Assessment; Challenges; Understandings; Supports; Secondary School; British Columbia

Dedication

This is dedicated to my loving wife, Maddie. Thank you for supporting and encouraging me through this journey. You're simply the best.

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Introduction

When I entered into the Masters of Education program at Simon Fraser University (SFU), I came in with a very clear interest in developing my understanding of how to more effectively lead my department as well as contribute to, and support, my school community in navigating changes in both teaching and assessment practices. As such, my broader topic area is assessment practice, with a particular emphasis on standards-based, proficiency-oriented, or competency-based assessment practices. Standards-based assessment revolves around a set of standards, which “describe what students should know in what grade about a particular subject and what skills they are supposed to demonstrate in relation to this knowledge” (Diekema, 2009, p. 240). This assessment strategy is of significant interest to me personally and professionally, as I believe it aligns well with inquiry and project-based teaching methods, which are teaching methods that I utilize in my own courses, and have an interest in developing further. I also believe that this type of assessment can assist in shifting student mindsets to be more growth oriented, rather than grades motivated, and that if done well, it can help to cultivate lifelong learners who do not have as much anxiety about in-class assessments, or school in general.

In addition to my personal interest in competency-based assessment strategies, this topic is also highly relevant to my position as a department leader in a British Columbia school district. Over the past few years, my district has been working towards the implementation of Competency-Based Assessment approaches at the secondary level in advance of their full provincial implementation. As a department leader, part of my role has been to collaborate with district and school staff in order to meaningfully implement Competency-Based Assessment within classrooms. However, implementing such a shift in assessment practice has not been easy. I have found that full implementation of Competency-Based Assessment methods even in my own classroom, let alone across my department, holds various challenges that, if addressed, could allow for Competency-Based Assessment practices to be implemented in secondary schools more effectively. As a result, this study has particular value to me as a department leader who is actively involved in this work, but it could also be beneficial to other educators and school leaders who are on the journey of implementing Competency-

Based Assessment approaches within their own classrooms, their schools, or their districts.

Literature Review

Assessment is a key element of the teaching process, and one that gets a significant amount of emphasis in my school district, as well as the British Columbia Education system as a whole. More recently, that discussion has centered on the development and implementation of proficiency-based assessment approaches that better align with the new reporting order from the Ministry of Education; according to the Langley School District (2022), this new reporting order focuses on "...learning as a continuous process..." and can, "support a better understanding of learning...encourage student reflection and goal setting... empower students to take ownership of their learning..." and, "...[f]oster hope, efficacy (belief in themselves), and a culture of learning" (para. 6). With this shift in assessment emphasis to the use of levels of proficiency, it is important to understand what the research reveals about the merits of this assessment approach, the potential challenges that B.C. schools may encounter in its implementation, as well as the impacts this approach could have on stakeholders within the education system.

Definitions and Keywords

While assessment is the broader topic area being explored, it is necessary to define some of the key terms and concepts that were addressed and distinguished in the literature. These concepts or terms include, Standards Based Assessment, Competency-Based Education, and stakeholders. A complicated aspect of conducting research in this area is related to the interchangeable nature of the key terms Standards-Based, Proficiency-Based, or Competency-Based Assessment and Education, which was highlighted in recent studies by Rogers (2021), as well as Fergus and Petrick Smith (2022). Earlier definitions of Standards-Based Assessment include that of Diekema (2009) who defined Standards-Based Assessment as an assessment approach that is designed around a set of standards, which "describe what students should know in what grade about a particular subject and what skills they are supposed to demonstrate in relation to this knowledge" (p.240). This definition, though relevant, is somewhat limited, as it focuses on knowledge. That said, it shares similar ideas with a more recent

definition of Competency-Based Education, defined as "... an outcome based approach to education that incorporates modes of instructional delivery and assessment efforts designed to evaluate mastery of learning by students through their demonstration of the knowledge, attitudes, values, skills, and behaviors required for the degree sought" (Gervais, 2016, p. 99). The latter definition, which is captured by the term Competency-Based Education, is more closely aligned with the practices being encouraged in my school district, and will therefore be the definition used going forward. The final term, stakeholder, is defined as "any individual who has an interest in the outcome of the assessment" (Ricci, St.Onge, Xiao, & Young, 2018, p. 353). In the context of this study, those interested parties primarily include educators of all levels, students, and parents.

Themes in the Literature:

In a review of 16 different peer-reviewed academic journals on the topic of assessment, with a particular emphasis on Standards-Based, Competency-Based, and Proficiency-Based assessment and education, a number of key themes emerged that point to the overall benefits of this approach for students, the alignment of the Competency-Based education with best practices in assessment, as well as the potential challenges in implementation, and the mixed receptions amongst stakeholders.

Benefits for Students

The first major theme, and perhaps the most promising, is that the Competency-Based approach to education and assessment has positive implications for student learning and mental health. In contrast to traditional "norm referencing" assessment and grading, in which a mark, which has no meaning by itself, was comparative between students, Competency-Based assessment is based on the learning demonstrated by the individual learner themselves (Tognolini & Stanley, 2007, p. 130; Gervais, 2016). Whereas, traditional assessment and grading methods resulted in a product focus approach to learning, with an emphasis on grades, Competency-Based assessment shifts that towards a process focused approach, with emphasis placed on skill mastery (Erbes, Wizner, & Powlis, 2021). Across multiple studies, this shift was found to have positive implications for student learning. For example, a study of the impacts of Proficiency-Based Assessment on Middle School students found that the clear use of learning

objectives, which characterize the Competency-Based Approach, shifted the focus from earning grades to learning (Fergus & Petrick Smith, 2022, p. 7). In fact, for many students, Standards-Based grading approaches facilitated deeper learning (Lewis, 2019), and even positively impacted their views towards certain subjects as well as their performance because of the flexible pacing and the re-assessment of their proficiency (Posner, 2011, p. 11).

In addition to the positive implications for student learning, Competency-Based Assessment and education practices have positive implications for student mental health. Study participants from secondary schools in New Hampshire reported that Competency-Based practices positively impacted student mental health due to reductions in judgement and anxiety, and that students were less afraid of failure (Rogers, 2021). Similarly, Competency-Based and or Standards-Based Assessment approaches were found to reduce anxiety amongst students in math courses (Fergus & Petrick Smith, 2022; Lewis, 2019).

Some conflicting perspectives do exist as it relates to the impacts of Competency-Based assessment and education approaches. For example, some researchers argue that in certain subjects, like history, Competency-based assessment practices can result in the narrowing of learning in the subject, as teachers focus more on teaching to a few concepts or competencies at the expense of knowledge that does not directly connect to those competencies or concepts (Ormond, 2019, p. 148, 154-155). Indeed, evidence was found that suggests when schools face testing related accountability pressures, they are more likely to focus on “students who are in the vicinity of the proficiency standard,” (Jennings & Sohn, 2014, p. 12) which can impact levels of student equality. Furthermore, re-assessment opportunities that are provided as part of a Competency-Based educational approach can be viewed as socially negative for some students, with one student going so far as to say that the Standards-Based approach had ruined their self-esteem (Peters et al. 2017, p. 17-18).

Alignment with Best Practice

Another theme identified in the leadership is how Competency-Based Assessment and Education practices are consistent with best practices in education. The typical distinction in education is that assessment falls into two categories, formative, and

summative, with formative assessment being seen as the more process oriented and more beneficial of the two when it comes to student learning (Guo & Yan, 2019, p. 675-677). For students, assessment, especially formative assessment, can be used as a check for understanding, a way to plan out learning strategies, and identify areas of improvement, and it can assist students in becoming self-regulated learners (Chen & Bonner, 2020; Guo & Yan, 2019). Unfortunately, “the current paradigm used by high school, colleges, and universities is designed more for teacher efficiency rather than centered on paradigms that foster learning” (Posner, 2011, p. 11). In contrast, Competency-Based Education and Assessment practices hinge on a “comprehensive assessment system,” in which, “[f]ormative assessments guide daily instruction and student selection of customized learning opportunities...” while, “[s]ummative assessments show mastery of competencies...” and can be “... taken when they are ready and have multiple opportunities to demonstrate mastery” (Gervais, 2016, p. 102). As such, Competency-Based approaches involve backwards design, and emphasize skill development and learning progression, personalized learning and instruction, flexibility in how learning is demonstrated, feedback loops, and reflection (Rogers, 2021; Ryan & Cox, 2017; Fergus & Petrick Smith, 2022). Reception amongst educators also points to the belief that Competency-Based assessment and education practices are desirable, with one teacher reporting that they helped their understand the “vehicle that drives [the] curriculum,” and allows them to “focus on what it is that we’re instructing” (Schoepner Torres et al., 2018, p. 6). Other educators echoed similar sentiments, claiming that “ [m]y job before competency used to be teach the material. My job now is to help the students learn it” (Rogers, 2021, p. 9).

Even though many researchers and educators see the benefits of Competency-Based approaches in the literature, dissenting perspectives raise valid points about the potentially negative impacts this approach could have if handled poorly. For example, Torrance (1995) claims that it could result in a system of assessment in which the minimum standards are the maximum, as teachers work to get all students to reach those minimum standards (as cited in Ormond, 2019, p. 149).

Implementation Challenges and Mixed Reception

Unfortunately, not all themes identified in the literature were positive. Even though the literature consistently highlights how Competency-Based Assessment and Education

practices have positive implications for students and for the quality of education overall, there a number of concerns related to implementation and reception amongst student and educator stakeholders. In a survey of the implementation of Competency-Based Education practices in two high schools, Ryan and Cox (2017) found that the elements of Competency-Based Education practices are implemented inconsistently, even though one of the schools surveyed had been implementing those practices for several years (p. 16-17). The reasons for this inconsistency may vary, though some students reported that teacher opposition to the Competency-Based Assessment approach, and even a lack of understanding of it could be to blame (Peters et al., 2017). In other implementation studies, elements of the traditional grading and reporting systems were maintained within districts, at least temporarily, and issues arose with the time intensive nature of Competency-Based reassessment practices, as well as with perceptions of the fairness of reassessment (Schoepner Torres et al., 2018; Peters, et al., 2017) These inconsistencies around implementation of Competency-based Education practices created confusion in some cases, as parents and students were presented with a system of assessment and grading that was very different from the norm, but seemed to be different depending on which district, or in some cases, which teacher they encountered (Schoepner Torres et al., 2018; Peters et al., 2017). This emphasizes another theme highlighted in the literature around the need for educator training. Studies into implementation of Competency-Based Education approaches done by Rogers (2021), Peters et al. (2017), and Schoepner Torres et al. (2018) highlight, in different ways, how training, support, and time is needed for teachers to adapt to and implement this approach to educating students, which can impact the implementation process.

Additionally, concerns over college preparation arose, as students experiencing Standards-Based grading found it harder to achieve higher grades, and even though some students acknowledged that traditional assessment methods did not adequately measure learning, they were preferred due to their perceptions that it prepares them better for post-secondary (Peters et al., 2017; Erbes, Wizner, & Powlis, 2021).

Gaps in research

Based on an analysis of the research so far, it is apparent that additional opportunities for research about Competency-Based Education and Assessment exist. The benefits of the approach may be well documented, as are some of the implementation challenges,

but most studies have been done outside of the Canadian context. As such further study of challenges of implementation in the Canadian context, as well as study of student perceptions of Competency-Based approaches would be beneficial to Canadian educators, as the findings may be different than those of current studies. This leaves three major questions to be considered in keeping with these themes: How well do secondary teachers understand what Competency-Based assessment is; what challenges do secondary educators encounter when implementing Competency-Based Assessment; and what supports would they consider to be the most beneficial in facilitating the implementation of Competency-Based assessment practices?

Methodology

The Research Questions

My analysis of research on Competency-Based Assessment implementation led me to consider three key questions that I wanted to address through my own research. First, how well do secondary teachers understand what Competency-Based assessment is? Second, what challenges do secondary educators encounter when implementing Competency-Based Assessment? and third, what supports would they consider to be the most beneficial in facilitating the implementation of Competency-Based assessment practices?

Research Site

This study was conducted in a public school district in the Lower Mainland of British Columbia, Canada, at Bayview School (pseudonym). The school has a population between 700 and 730 students from grades 6 to 12 each year. As of 2023, there were approximately 38 teachers at the school, with experience levels ranging from entry-level teachers to those approaching retirement. In alignment with the B.C. Ministry of Education, and at the direction of their school district, the staff of this school have been working to implement Competency-Based Assessment and reporting in the secondary grade levels, with full implementation at the grade eight level in Fall of 2021, and full implementation at the grade nine level in the Fall of 2022. Competency-Based Assessment and reporting was also planned for grade 10, 11, and 12, though that was

postponed. The work that has been done so far includes both formal and informal staff, departmental, and district departmental meetings to discuss and establish common understandings and approaches of Competency-Based Assessment. Special emphasis has been placed on establishing consistent understandings and communication of proficiency language, the creation of proficiency rubrics, and the creation of competency-based scope and sequences across courses. Educators who are well versed in Competency-Based Assessment have also been consulted by Bayview's district in this regard, particularly Katie White, who is a well-known Canadian educator, author, and consultant with decades of experience in assessment and reporting (Katie White Consulting, n.d.). The reason why this site was chosen is partially because of its accessibility to myself as the researcher, but also because the site in question had been working to implement Competency-Based Assessment Practices at the secondary level for a few years before this study was conducted, and therefore the staff would be able to provide insight into the process of implementing Competency-Based Assessment.

Participants

The selection of participants at this site were selected through non-probability availability sampling. The inclusionary standards for the survey were those teachers currently teaching Gr. 8-12 courses at the research site. This excluded those teachers who were exclusively teaching grade six and seven courses, as Middle School teachers were at a different stage of implementing Competency-Based assessment practices in their classes than secondary teachers. This also excluded resource teachers who did not teach full classes of students. Secondary teaching staff that met the inclusion criteria for the survey were contacted by email after receiving permission from district and school administration, with a total of nine teachers participating. For the qualitative interviews, availability sampling was also used, and the inclusion criteria was limited to secondary-level department leaders. Three secondary school department leaders took part in the interviews after being contacted through in-person requests. SFU ethics approvals were received for the participant selection and recruitment, including the consent letters for both the survey and the interviews. District approval was also received following approval from the university.

Data Collection

In order to explore and provide an answer to my three research questions, a combination of qualitative and quantitative methods was utilized for data collection. The overall mixed-method approach that was used followed the sequential explanatory method outlined by Creswell and Plano Clarke (2007), in which quantitative data is collected and analyzed first, before the collection of qualitative data, which can be informed by or connected to the quantitative results. (p. 72-73; Smith, Cannata, & Haynes, 2016, p. 3). The approach used in this study was also inspired by prior research approaches used by Ryan and Cox (2017) and Rogers (2021), in which quantitative survey data, gathered from students and staff respectively, was collected in order to better understand aspects of implementing Competency-Based Assessment practices. The qualitative approach was inspired again by the study done by Rogers (2021), but also by the study done by Schoepner Torres et al. (2018); both involved the conduction of interviews of educators around the topics of implementation. However, rather than looking at student levels of exposure to Competency-Based Assessment, or the general perspectives or contextual influences on implementing Competency-Based Assessment, this study sought to examine the levels of understanding of the Competency-Based Assessment approach, as well as the perceived challenges to implementation, and the supports that would be considered most beneficial to secondary school teachers. The definition of Competency-Based Assessment, and the assessment elements associated with it, were derived from Gervais (2016), and their work was used as a reference for creating questions that helped to determine staff levels of understanding of Competency-Based Assessment.

Appropriateness of Approach

This approach to data collection was appropriate for a variety of reasons. Firstly, by following Creswell and Plano Clark's (2007) sequential explanatory method with quantitative data gathered first, from a larger sample of secondary teachers, while the qualitative data was gathered from a smaller sample department leaders, the themes related to the overall understanding of Competency-Based assessment within the school teacher population and within the school leadership will be able to be discerned more completely. Likewise, the qualitative data collected in the interviews could provide

greater depth of understanding of the challenges and needed supports identified through the survey. The data collected could also help to equip school department leaders and administrators with the knowledge of more beneficial supports that would result in more effective implementation of Competency-Based Assessment within schools at varying stages of implementation. While this approach may not result in generalizable data due to the small sample sizes, it still provided valuable insights into the types of supports that would be beneficial for other secondary schools seeking to implement Competency-Based Assessment practices.

Quantitative methods

To determine teacher levels of understanding of Competency-Based Assessment, as well as the supports that would be most beneficial in facilitating its implementation, a cross-sectional quantitative survey was conducted. To ensure content and face validity of the survey, it was pilot tested by two teachers from other secondary schools within the district who met the inclusion criteria, and they were asked if the questions were appropriate for understanding Competency-Based Assessment implementation. Pilot responses were assessed and analyzed at a preliminary level to understand the likelihood that the results would be reliable. This helped to ensure that the survey was effective in addressing the research question, and provided feedback and discussion on the wording of the survey questions before it was distributed. Content and face validity was further established through expert review. An expert on Competency-Based Assessment from the local district instructional services team was consulted to gain feedback on the type of information that was being collected, which further helped to establish face validity, and allowed for additional feedback and discussion on the survey questions.

Once pilot testing was completed, teacher participants were recruited through email contact and through an announcement at a staff meeting, and respondents were required to read and complete a consent form in advance of completing the survey. Participants had the right to withdraw from participation in the survey at any time by exiting the survey. When survey participants completed the consent form, they were given the option of choosing between completing the survey online through SurveyMonkey, or through completing a paper copy of the survey. Survey data was collected anonymously.

Through the survey, respondents answered questions that provided insights into teacher understandings of Competency-Based Assessment, the challenges they faced in its implementation, as well the needed supports that could allow for more effective implementation within their school (see Appendix B). Initial questions were more general and contextual, focusing on the grades they currently taught, as well as whether or not the respondent was a department leader, before shifting to questions on Competency-Based Assessment understanding. For example, a question prompted respondents to identify elements of Competency-Based Assessment practice based on the definition and criterion derived directly from Gervais (2016, p. 102). These were followed by questions in which respondents were asked how they would rate their understanding of Competency-Based Assessment practice, how they rate their understanding of traditional assessment practice, how they first learned about Competency-Based Assessment practice, and their most significant sources of information on Competency-Based Assessment. These questions together allowed for the assessment of the overall level of understanding of Competency-Based Assessment amongst respondents.

The final questions focused on implementation challenges and supports, particularly on personal and perceived school-level challenges in implementing Competency-Based Assessment, as well as the supports considered to be most beneficial in facilitating the implementation of Competency-Based Assessment within their classroom and within the school at large. Two questions differentiating between the identification of personal implementation and perceived school-wide implementation challenges were short written responses. Subsequently, a rating question was asked with the aim of identifying supports that respondents would deem to be the most beneficial and least beneficial in the implementation of the Competency-Based approach to assessment. The options for supports in this question were chosen based on observations of common supports that were offered or discussed within the school district more broadly, though not necessarily on a consistent basis, or across all school level departments, based on my observations. Finally, an additional rating question allowed respondents to indicate their level of preference for either traditional or Competency-Based Assessment models on a 100 point scale.

Qualitative Methods

To expand upon and better understand the data gathered through quantitative survey methods, qualitative interviews were arranged and conducted with three department leaders within the same school. In keeping with the sequential explanatory method (Creswell & Plano Clark, 2007), the interviews were done after the collection and analysis of the survey data. Because department leaders are influential in helping to facilitate assessment and curriculum policy changes at the school level, it was seen to be beneficial to allow them to elaborate on the information collected through the survey, and potentially provide greater insight into the challenges of implementing Competency-Based Assessment within their school, while also potentially elaborating on the supports that survey respondents indicated as being most beneficial. Interviews with department leaders also allowed for a more detailed understanding of the quantitative survey data collected. Indeed, it was hoped that department leaders would be able to provide greater insight into the challenges identified by survey respondents, as well as insight into whether or not the supports that are viewed as most beneficial are consistent within and across departments.

Prior to any interviews being conducted, interview protocols were developed and pilot tested by two different educators within the district to establish content validity and to establish reliability by practicing the interview, transcription, and analysis processes. Likewise, interview protocols and questions were assessed by a local expert on Competency-Based Assessment, in order to ensure that the interviews would collect appropriate data regarding Competency-Based Assessment.

To conduct the interviews, three department heads within the school that fit the inclusion criteria were contacted through in-person requests. Each participant was provided with consent documents to be signed before the interview, and consent documents explained how the information would be collected, stored, and shared. It was made clear to participants that anonymity would not be guaranteed, but that steps would be taken to ensure confidentiality, including the use of pseudonyms, as well as the removal of identifying information from transcripts. It was also communicated to participants that they would have the right to withdraw from the interview at any time. Interviews were recorded and subsequently transcribed, and field notes were maintained as well, along with a reflexive journal. An interview guide was followed closely over the

course of the interview, and included an introduction and a debrief statement (see Appendix C). Interviews were estimated to last between 25 and 45 minutes, though in most cases were much shorter, and they were conducted after school hours to reduce the likelihood of interruption.

Following each of the three interviews, participants were asked to be contacted within a few weeks in case there were follow-up questions that would help to clarify or supplement the data provided in the interview. Additionally, transcripts were given to participants to ensure that their responses were accurate and so that they could clarify or amend any statements made in the interview. Along with the transcript, participants were also provided with the summary of the analysis of their interview for them to provide comments and feedback. This measure was done to help to establish trustworthiness and transparency with the data collected.

Data Analysis

Because this was a mixed methods study which followed the Creswell and Plano Clark's (2007) sequential explanatory method, quantitative survey data was analyzed first, followed by the qualitative interview data. Consistent with this method, quantitative results were emphasized more heavily than qualitative results in the interpretation of the data, however, the qualitative data will allow for a potentially deeper explanation of the quantitative results. (Creswell & L. Plano Clark, 2007)

Survey Analysis

Upon the collection of the survey data, quantitative data was analyzed in Microsoft Excel through the use of univariate descriptive statistics, specifically measures of central tendency such as mean, median, and mode, and measures of variability including range and standard deviation. Data was also analyzed through SurveyMonkey's data analysis tools and graphing functions.

Beginning with the first two questions of the survey, specifically the grade levels taught by respondents and whether or not the respondents are department leaders, the data was analysed graphically through Survey Monkey's bar graph tools. This was done

because this information was not as closely linked to the research questions, but provided insight into the survey respondents themselves and their own contexts.

Question three of the survey, “How much do you use any of the following practices in your teaching?” was analyzed through the use of mean, mode, and standard deviation. Analysis of the mean and mode of the responses was done to reveal the overall utilization of different Competency-Based Assessment methods across respondents, and would allow for an overall assessment of the understanding of Competency-Based Assessment methods amongst respondents. Respondent ratings of Competency-Based Assessment understanding and Traditional Assessment understanding on a scale of 1 to 10 were also analyzed for the mean, mode, range, and standard deviation of responses. Analysis of the mean and mode allowed for the analysis of teacher perceptions of their own understandings of each type of assessment, while standard deviation was used to determine the variability and level of agreement amongst respondents. Question 11 and 12 were also analysed in this way. Question 11 involved having respondents rate a selection of implementation supports from those that are minimally beneficial to highly beneficial on a scale of five (converted into numerical values for the purposes of analysis), particular attention was paid to the mean of responses in order to identify which supports would be most beneficial. Mode was also analyzed to determine the most frequent rating for each support. Question 12 asked, “which assessment model do you prefer?” with choices between traditional assessment and competency-based assessment models being rated on a sliding scale from 0 (Traditional Assessment) to 100 (Competency-Based Assessment). For this question, only mean, median, range, and standard deviation were analyzed due to wide numerical range of the scale meant that a mode could not be calculated or analyzed.

Question seven and eight of the survey, which focused on how respondents first learned about Competency-Based Assessment, as well as which sources of information they consult to learn more about Competency-Based Assessment were analyzed graphically using SurveyMonkey’s data analysis tools, and Microsoft Excel’s graphing tools. Graphical analysis of these questions allowed for a more straight forward identification of the common or dominant sources of knowledge around Competency-Based Assessment.

Finally, the two short answer questions in the survey (question nine and ten) focused specifically on the identification of personal and school level challenges associated with Competency-Based Assessment implementation. To analyze and understand the data from these responses, common themes across responses were identified, and those responses were then tagged and organized according to the themes that they connected to most strongly. In some cases, responses were tagged with multiple themes depending on whether or not there were multiple points made in the response.

Interview Analysis

The interviews of the department leaders, the interviews were analyzed with the aim of identifying themes relating to school understandings of Competency-Based Assessment, as well as the challenges and the needed supports that were present in different departments as they implement Competency-Based Assessment practices. Once interview data was collected, it was analyzed with the use of a codebook that was created in a table format using Microsoft Word. The layout of the codebook was inspired by the work of DeCarlo, Cummings, and Agnelli (2021). Code labels were based around the three research questions, and used in order to differentiate between responses that reveal perceptions of school and or department level understandings and challenges of implementation of Competency-Based Assessment, as well as the beneficial supports that are needed to facilitate implementation. Additional coding categories were added following further analysis of the data, including a category that focused on school and department level of progress in implementation, as well as a code focused on an explanation of supports to provide a greater level of differentiation and understanding for why certain supports were needed. All survey participants chose a pseudonym to be used to ensure confidentiality in the communication of the data. When the interview transcripts and analysis were provided to interviewees, participant checking of the interview data was done when needed in order to gain clarity on what was meant in certain responses. This reduced the likelihood of personal biases influencing data interpretation, and helped to ensure that the data more accurately reflected the thoughts of the interviewees.

Limitations

Because only nine teachers chose to participate in the survey, and only three department leaders participated in interviews, there are definite limitations in that the results will not be generalizable. Additionally, while nothing really went wrong in the process of completing this study, certain aspects of the design as well as contextual circumstances definitely had an impact on its results. If I were to conduct a similar study in the future, I would expand the scope of the survey to more than one school, and I would also plan to conduct the study, especially the interviews, at a point in the school year that is not as busy for teachers and department heads in order to increase the likelihood of participation.

Findings

Secondary Teacher Understandings

A review of the data from the nine survey respondents, of which two were department leaders and seven were classroom teachers, revealed that there was a variable, but positive overall level of understanding of Competency-Based Assessment. When asked to rate their understandings of Competency-Based Assessment on a ten-point scale, with ten indicating an expert level of understanding, the average rating of all respondents was 6.89 out of 10. Of the nine respondents, 33 percent of them rated their understanding at an eight out of ten, 33 percent at a seven out of ten, 22 percent rated their understanding a six out of ten, and 11 percent, a single respondent, indicated an understanding of five out of ten (see figure1).

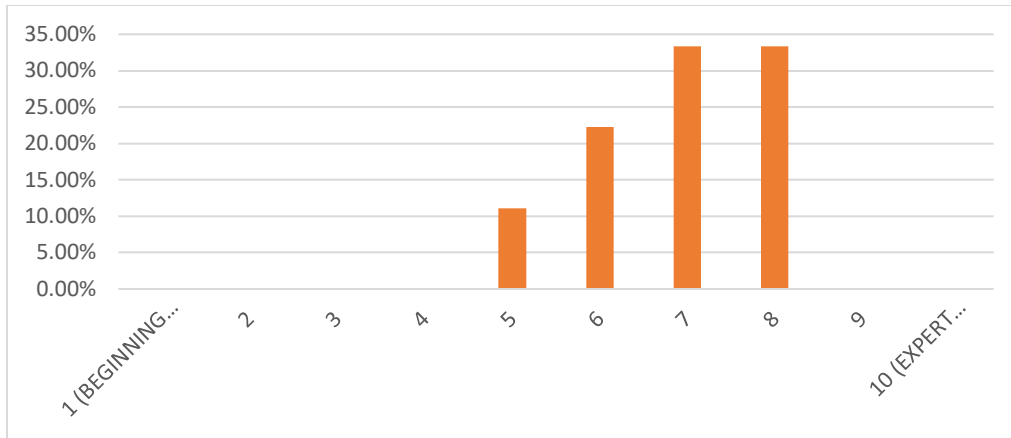


Figure 1. How would you rate your understanding of Competency-Based Assessment on a scale of 1 (Beginning Understanding) to 10 (Expert Understanding)?

Interestingly, when asked how much do they use a series of practices in their classroom which were derived from the literature on Competency-Based Assessment, respondents indicated an overall positive level of implementation of Competency-Based Practices. Of the eight practices listed, the majority of respondents reported using five of them either consistently or always, based on an analysis of the mode. A more detailed breakdown is more telling. For example, 44 percent of respondents indicated that they always use grades with descriptive language that reflects student mastery of competencies (a five on a converted five point numerical rating scale), with an additional 44 percent reporting that, while they do not always use it, they use descriptive language consistently, or 4 out of 5 on a numerical rating scale (see Appendix A.1). With this being a major aspect of how Competency-Based Assessment is being implemented within British Columbia, this is a positive indicator of understanding.

Similarly, respondents indicated consistent use of formative and summative assessment practices in ways that align with Competency-Based Assessment methods. For example, for the practice: “summative assessments demonstrate a mastery of the competencies,” the mean of responses was a 4.33, which reveals that the majority of respondents use this practice consistently or all the time (see figure F.2 on p.18). The use of formative assessment to “...guide instruction and student selection of learning opportunities,” was also reported positively, with a mean of 4.11, also revealing a consistent level of practice in the classroom. Practices such as the assessment of students based on mastery of competencies that have clearly defined learning

objectives, and the provision of multiple opportunities to demonstrate mastery were also positively reported, though to a lesser degree (mean of 3.89 for each practice), as was the practice of reporting which competencies need to be re-learned when a student fails to earn credit for a course (mean of 3.63). Of all the practices consistent with Competency-Based Assessment that were included in the survey, the least consistently used were giving students a choice of learning experiences based on interests and learning styles (mean of 3.00), and the practice of allowing students to take assessments when they are ready (mean of 2.89).

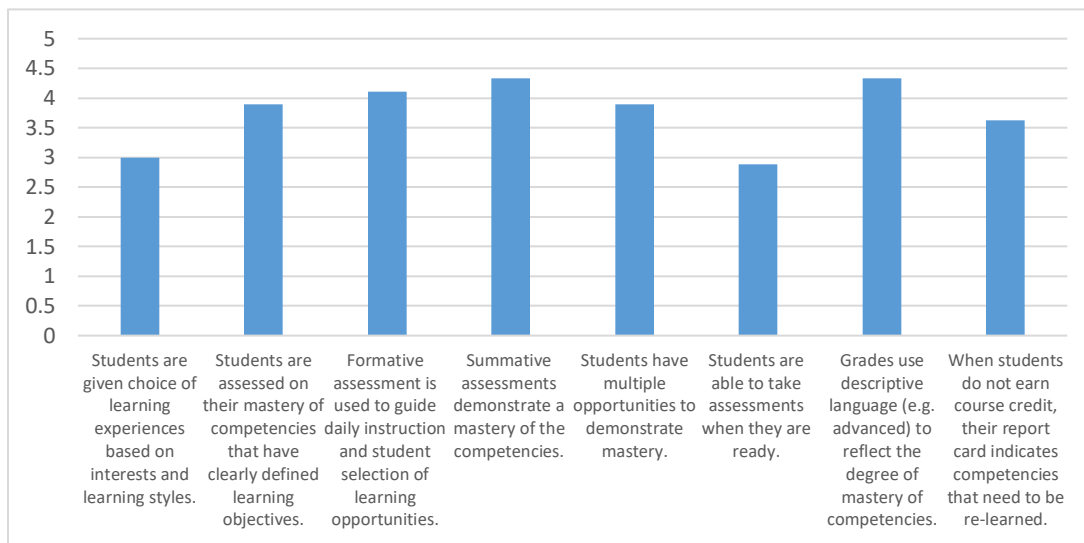


Figure 2. How much do you use any of the following practices in your teaching? Select all that apply?

The range of understandings revealed in the survey is consistent with what was reflected in the interviews with the department leaders as well. All three department leaders indicated that there is a range of understandings of Competency-Based Assessment in their schools, and that as a school, they are still in the process of learning how to implement it fully. For example, when asked about their school’s level of understanding of Competency-Based Assessment, Jay responded, “overall, I think we have a wide range. I would say for the most part we’re still developing.” This was echoed by Sarah who said, “I think if we were to look in the proficiency scale of [what] our school’s overall understanding, I would say the developing phase, because while people might understand the terminology, there’s a lot of discrepancy between what people believe proficient is, [and] what people feel like extending is.” Department Leader Esme elaborated on this idea as well, saying: “...some people are way down the line [and] not

only have taken it and run with it, and changed it and adapted it and make it work for their classroom, and other people are still very much resistant to doing it.”

Taken together, the survey and interview data reveal an overall positive indication of understanding of Competency-Based Assessment amongst secondary teachers, though it also reveals that there is more to be learned and implemented before a more full understanding of Competency-Based Assessment amongst secondary teachers is attained.

Challenges to Implementation

While the overall understandings of Competency-Based Assessment amongst secondary teachers at Bayview School are reported to be positive overall, the survey respondents and interview participants highlighted numerous challenges to their implementation of Competency-Based Assessment for themselves individually, for departments, and for their school as a whole.

Personal Challenges to Implementation

Amongst survey respondents, time was one of the themes that came up in their short answer responses that detailed the most significant personal challenge they have encountered in implementing Competency-Based Assessment. Five of the nine respondents expressed that a lack of time to either learn more about Competency-Based Assessment practices, or implement them. For example, one survey respondent reported that figuring out “how to complete the work in a 5-day work week,” is a challenge for them, and another highlight that there is, “not enough time for professional development. Not enough time set aside for implementation.”

The issue of time also connected with another theme dealing with the personal challenges of assessment design. For example, one survey respondent was highlighted that “the time it takes to rethink, redesign and efficiently assess the summative assessments...” is a significant challenge, while another respondent reported, “not having enough prep time to create good, thorough competency-based assessment— it takes a lot of time [and] effort!” Assessment design itself was highlighted independently of the theme of time as well, with one respondent revealing the challenge of

“successfully connecting competency-based assessment with content requirements in certain content heavy courses.”

Another set of themes that arose through the analysis of the personal challenges reported through the survey responses were connected to parent and student understandings of Competency-Based Assessment, and challenges in reporting. A “lack of parent understanding, support, and education around competency based assessment,” was reported as a personal challenge for one respondent, while another communicated that “getting parents [and] students on board with assessment that they’re not used to...” has been a challenge for them. In terms of reporting challenges it was revealed that “moving away from correlating proficiency with letter grades,” has been a personal challenge, as has determining, “how to translate to percentages.” It was also indicated that Competency-Based Assessment “can be hard to accurately quantify.”

School Level Challenges to Implementation

At the school level, challenges were also reported, with the dominant themes of survey responses relating to consistency in implementation and staff buy-in, as well as student understanding and buy-in. The most dominant themes identified by survey respondents was the challenge of having consistency in the implementation of Competency-Based Assessment. For example, survey respondents highlighted challenges related to consistency include challenges with: “consistent practice and alignment within the school and across schools” and “consistent use of language and evaluation” being highlighted. Furthermore, consistency is also challenging because, “not all [teachers] are using competency-based assessment, so it is difficult when one teacher is giving a percentage/letter grade, but others are using the most recent proficiency standards.” Another respondent elaborated on this idea saying that, “...if educators are not taught it [Competency-Based Assessment] well enough, it seems too daunting, and too time consuming, and feels easier to do it the old way.” They explained that, “educators need to be taught and given opportunities to practice and receive feedback in simple ways that aren’t daunting.”

These sentiments about the challenge of consistency were echoed in the interviews of department leaders as well. Esme described how the lack of consistency in assessment practice, “...causes a problem where, in one grade, some teachers are

using proficiency-based, and other teachers are still using just numbers and percentages at the junior grades. That is leading to conflict because then it's pitting teachers against teachers." Additionally, Jay noted that there has been differences in "interpretations between departments..." and a lack of "common language," while Sarah pointed to a lack of "real training," for teachers, which has resulted in a situation where "teachers don't know how, and there's not great direction in how to do that going forward." The idea of training is particularly interesting when considered in tandem with survey data on where teachers first learned, and continue to learn, about Competency-Based Assessment. Four of the nine survey respondents indicated learning about Competency-Based Assessment for the first time from either a department leader, a teacher colleague, or through informal or individual professional development such as research or independent workshops, while five learned of it through either undergraduate, post-graduate, or graduate education or through formal professional development (see Appendix A.2). Additionally, when asked what sources of information they consistently consult to learn more about Competency-Based Assessment, knowledgeable colleagues were selected as a source of information at a higher rate than any other source of information, with professional development workshops following as the second most reported source (see Appendix A.3). Taken together with the expressed challenges associated with a lack of consistency and training, this data may suggest that more unified and ongoing approaches to educating teachers on Competency-Based Assessment may be needed.

The second major challenge that was identified through the survey and interview data related to a lack of student understanding and buy-in. Student understandings and buy-in pose a challenge to Competency-Based Assessment implementation because, according to a survey respondent, "students care about numbers-based assessment and will sometimes ignore feedback that isn't numerical." One survey respondent went so far as to say that, "students do not see it [Competency-Based Assessment] as a legitimate assessment and therefore are less motivated." Department leader Sarah connected the challenge of consistency with student and parent buy-in in as well, stating, "... I think there's so much resistance [and] confusion again, with parents, And you know, frustration obviously, and with parents and students, because we're not all in alignment."

Department Level Challenges

Challenges were also identified at the department level, though primarily to a lesser extent than personal and school level challenges. At the department level, the challenges were mainly based around staff willingness to implement Competency-Based Assessment practices, and around helping students to take advantage of some of the benefits that Competency-Based Assessment has for learning. Related to staff willingness, Esme highlighted how in some cases, teachers may be "...comfortable in what they created, or how they run their classroom, and... are not interested in putting in the time to make changes, or don't value the changes that are there." Additionally, Jay explained that even when Competency-Based Assessment practices are being implemented in project-based classes, students may not be receptive to feedback during the learning process, saying "... there's a lot of students that are still open to seeing their assessment at the very end of the process."

Identified Supports

In addition to the identification of challenges in implementing Competency-Based Assessment, survey respondents and interview participants also identified needed supports that they thought would be beneficial in furthering the implementation of Competency-Based Assessment in their school. When survey respondents were asked to rate a selection of supports on a five-point scale, with one being minimally beneficial, and five being highly beneficial, a few supports stood out as being highly rated, as well as consistent with the needed supports identified through interviews with department leaders. Of the eight supports in the selection, two supports tied for the highest average rating with an average rating of 4.44 out of 5 (Figure 3 on p.22). These supports were: sample assessment examples for specific subjects, and sample competency rubrics for specific subjects. Following closely with average ratings of 4.33, 4.22, and 4.0 respectively, were: department collaboration time, and longer timelines for implementation, and additional formal professional development opportunities. The remaining supports in the selection, including more accessible professional resources on Competency-Based Assessment, rubric design workshops, and collaboration opportunities with other departments, had comparable average ratings ranging from 3.56 to 3.78 out of 5. Only one respondent identified a support that was not listed, which was

a need for “Ministry [of Education] created resources rather than District or teacher created resources.” Overall, this data suggests that for most respondents, samples assessments and rubrics that are specific to each subject would be most beneficial in helping teachers implement Competency-based Assessment, followed by department collaboration time, more time to implement assessment changes, and more formal professional development opportunities focused on Competency-Based Assessment.

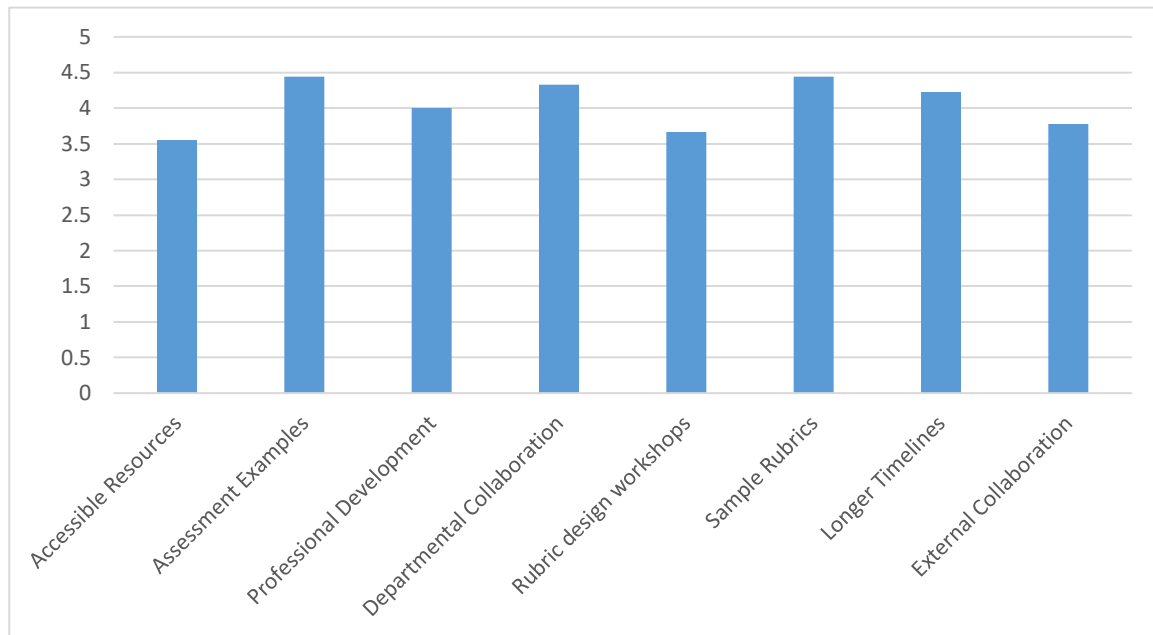


Figure 3. What supports do you think would be most beneficial in facilitating the implementation of Competency-Based Assessment within your school? Rate each support from 1 (Minimally Beneficial) to 5 (Highly Beneficial).

Interestingly, the most highly rated supports connect quite strongly to some of the most significant challenges associated with Competency-Based Assessment implementation which were identified by both survey respondents and interviewees. For example, the desire for samples of both assessments and rubrics that are specific to departments could potentially help to address the challenges associated with a lack of consistency in the use of assessment language and practice within the school and even across schools, and they may also help to reduce the amount of time it takes for teachers to implement Competency-Based practices of their own. This idea was supported by Esme, who stated that samples help to provide “... a place to start from to work it with any subject, any grade...” and that it is hardest for teachers when they have to “start from scratch”. In fact, when samples of Competency-Based language were

provided in the past through district workshops, Esme found "...that language was really helpful of what should be consistent, because that could apply across districts, or across grade level and subject matter." The topic of professional development, time, and common understanding in assessment language was also mentioned by Jay, in which he stated, "always a little more Pro-D would be good," and that, "you could just bring more common understanding to it, give us a little more time to hone our practices as well." Additionally, the request for more department collaboration time and formal professional development opportunities connected with an identified need for department specific rubrics and assessment samples. As Sarah explained, "I think really just in terms of support, it's just about resources, access to subject specific training, because often, especially for [their subject], if there is Competency-Based Assessment training, [or] workshops, stuff like that, it's not often pertaining to like [their subject] specifically."

Discussion

The exploration of secondary teacher understandings of Competency-Based Assessment, the challenges they have in its implementation, and the supports that secondary teachers need to further implement it in their schools has shed light on some simple but valuable lessons that do have implications for future educational practice.

Connections to Literature

Based on the survey responses and interviews with department leaders at Bayview School, there are clear connections to the prior literature, particularly in relation to teacher understandings and implementation challenges, as well as the mixed reception associated with Competency-Based Assessment. Firstly, based on the survey data, it is clear that most Competency-Based practices, especially those identified in the literature by Gervais (2016), are known and used by secondary teachers at Bayview School, and are being implemented to varying degrees. This suggests that Competency-Based approaches being implemented in British Columbia and within Bayview School's district are literature informed. As far as implementation challenges are concerned, similar to what was observed by Ryan and Cox (2017) and Peters et al. (2017) a challenge to implementing Competency-Based is the consistency in its implementation within a

school, with teachers having different levels of willingness to change their practices, and different levels of understanding (p. 16-17). The time consuming aspect of implementing Competency-Based Assessment practices was also suggested by the surveys and interviews conducted at Bayview school, as was the difficulties of trying to use Competency-Based practices while continuing to use traditional grades and reporting methods, which aligns with studies done by Schoepner Torres et al., (2018) and Peters et al., (2017). Finally, the survey responses and interviews from Bayview school also confirm the findings in the literature that teachers need training, support, and time when implementing Competency-Based Assessment practices, even after it has been initially adopted within the classroom (Rogers, 2021; Peters et al., 2017; Schoepner Torres et al., 2018).

Implications

Though the study at Bayview school only involved a small number of teachers and department leaders, because of the consistency between the findings at Bayview School and the literature on Competency-Based Assessment implementation, there are definite lessons that could benefit schools or districts that are either beginning to implement Competency-Based Assessment practices, or that have already begun the implementation process. One of the most significant lessons would be that implementing Competency-Based Assessment is a challenging process that needs to be done deliberately, so that common understandings and consistent approaches to assessment can be established amongst teaching staff. Implementing Competency-Based Assessment also takes time. As such, it is important that schools or districts seeking to implement Competency-Based approaches recognize that even after initial implementation, teachers, even those with a good understanding of Competency-Based Assessment, will need continued time to refine their practice, and support in the form of department specific samples, collaboration time, and training in order to implement it more fully.

The findings of the study of Bayview School could also suggest that so long as traditional methods of reporting and grading are used, some challenges associated with Competency-Based Assessment may persist, though further research would be needed to determine that fully, as this study did not focus as closely on that specific topic. Finally, because most of the research on Competency-Based Assessment

implementation has been done in the United States, the consistencies between the study at Bayview School, which was done in a Canadian context, and the literature could help to make existing literature more relevant to Canadian educators despite the differing contexts. That said, the findings of this study are not generalizable due to its limited scope, and because of provincial differences in education that exist within Canada. As a result, further study into Competency-Based Assessment implementation in the Canadian context would be required.

Conclusion

As districts in British Columbia have begun to implement Competency-Based Assessment practices at the secondary level, it is important that educators, and especially educators in leadership positions, understand the realities of implementing this shift in assessment in a secondary setting. This study has revealed that implementing Competency-Based Assessment is challenging for teachers and leaders alike, and that establishing common understandings in assessment, providing department specific samples, and investing time into opportunities for Competency-Based Assessment focused training and collaboration even after it has been initially adopted, would help to facilitate more effective implementation over all.

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Appendix A. Additional Figures

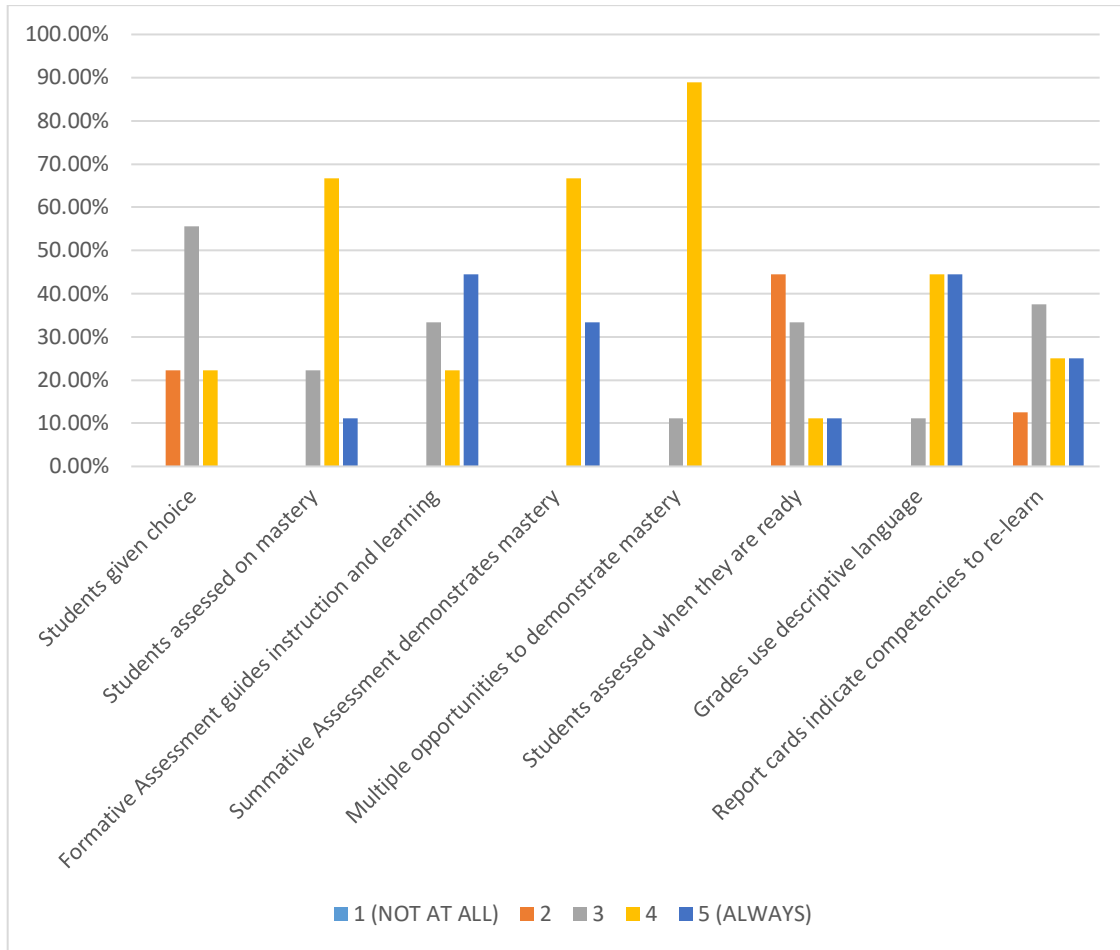


Figure A.1. How much do you use any of the following practices in your teaching? Please select all that apply.

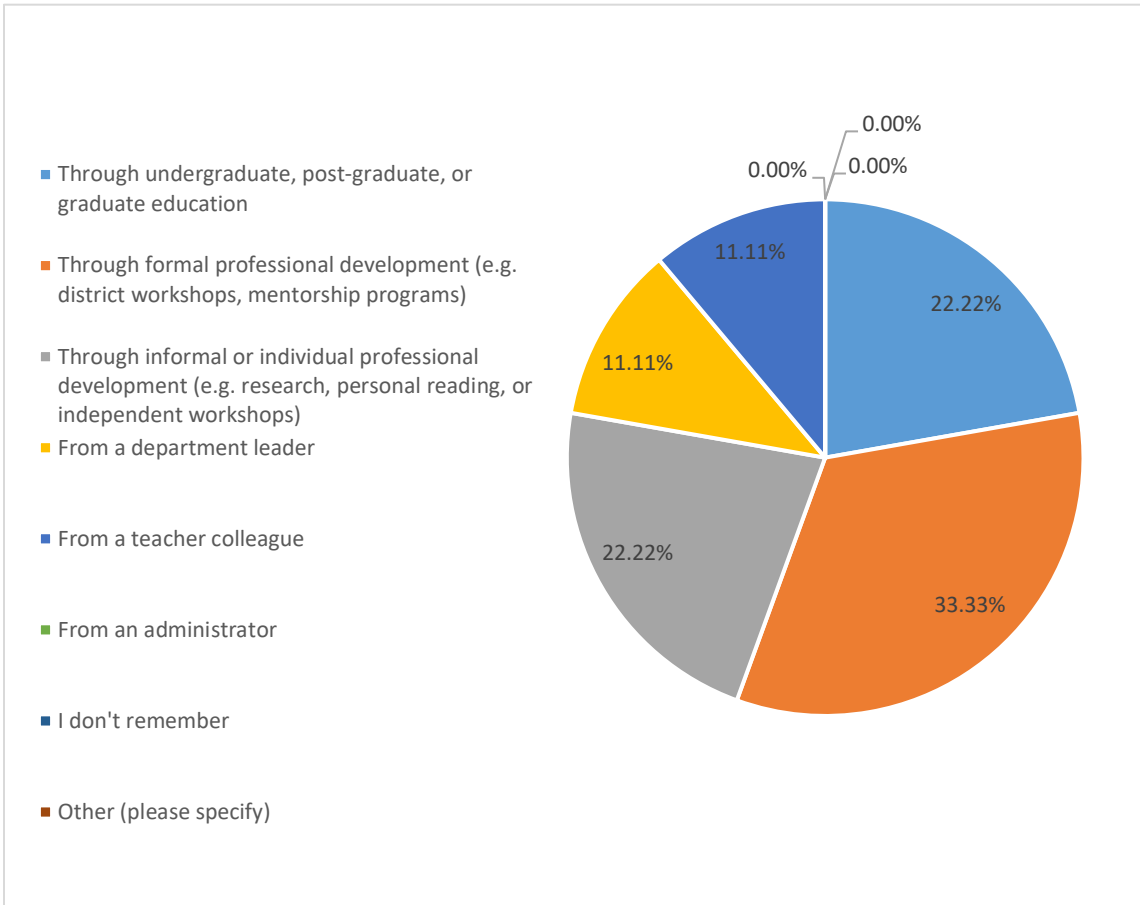


Figure A.2. How did you first learn about Competency-Based Assessment?

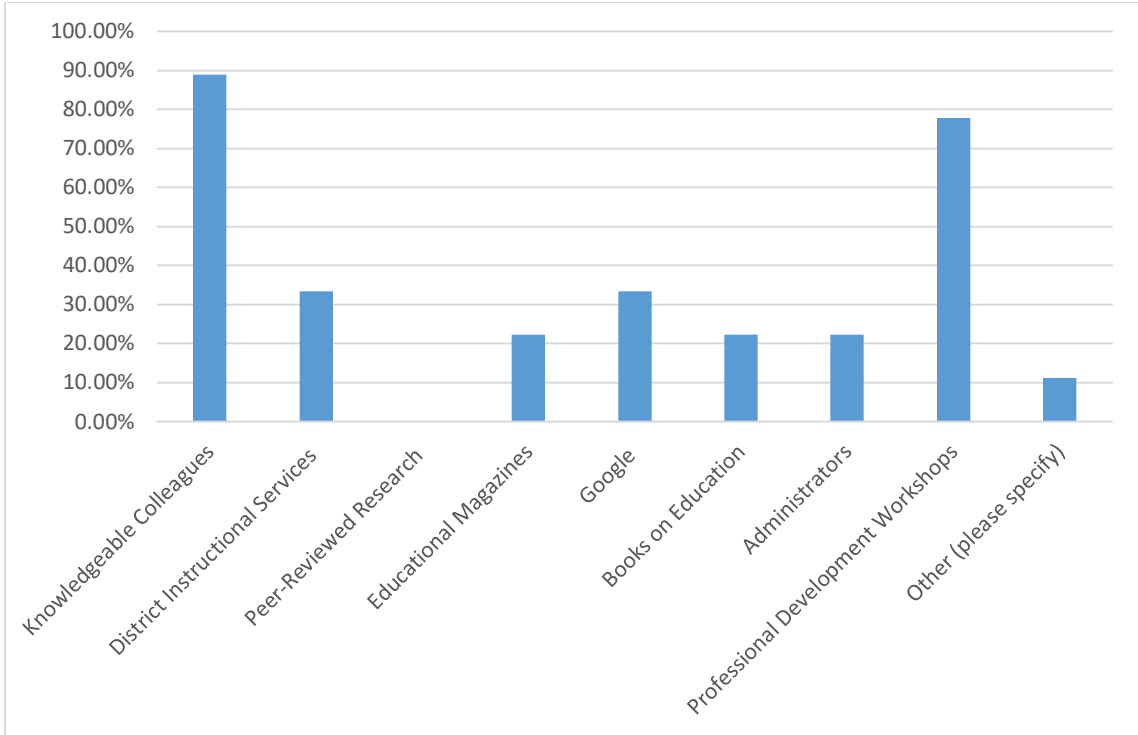


Figure A.3. What sources of information do you consistently consult to learn more about Competency-Based Assessment? Select all that apply.

Appendix B. Survey Questions

Competency-Based Assessment Implementation Survey

Before proceeding with the survey, please ensure that you have read and understood the consent letter that you received via email.

Your participation is voluntary. If you decide to participate, you may withdraw from the study by exiting the window on your web browser. Please note that once you submit you will not be able to withdraw. This is because the study is anonymous and the researchers will not be able to know which responses are yours.

You are free to skip any questions you do not wish to answer.

By clicking “Yes” below, you indicate that:

- **You consent to participate in this study.**
- **You do not waive any of your legal rights by participating in this survey.**
- **You understand that you are free to stop participating in this research project at any time.**

* 1. Do you consent to participate in this study?

- Yes
 No

Competency-Based Assessment Implementation Survey

2. What grades do you currently teach? Select all that apply.

- Grade 6
 Grade 7
 Grade 8
 Grade 9
 Grade 10
 Grade 11
 Grade 12
 Middle School Resource
 Secondary Resource

Competency-Based Assessment Implementation Survey

Disqualification Page

Thank you for your interest in participating in this survey. Unfortunately, you do not meet the inclusion criteria for this study, as it solely focuses on Competency-Based Assessment implementation at the secondary level. You may now close the window.

Competency-Based Assessment Implementation Survey

3. Are you a department leader?

- Yes
- No

4. How much do you use any of the following practices in your teaching? Please select all that apply.

	Not at all		Sometimes		Always	
Students are given choice of learning experiences based on interests and learning styles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students are assessed on their mastery of competencies that have clearly defined learning objectives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Formative assessment is used to guide daily instruction and student selection of learning opportunities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summative assessments demonstrate a mastery of the competencies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students have multiple opportunities to demonstrate mastery.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students are able to take assessments when they are ready.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grades use descriptive language (e.g. advanced) to reflect the degree of mastery of competencies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When students do not earn course credit, their report card indicates competencies that need to be re-learned.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

5. How would you rate your understanding of Competency-Based Assessment on a scale of 1 (beginning understanding) to 10 (expert-level understanding)?

Beginning Understanding Expert Understanding

6. How would you rate your understanding of traditional grading and assessment on a scale of 1 (beginning understanding) to 10 (expert understanding)?

Beginning Understanding Expert Understanding

7. How did you first learn about Competency-Based Assessment?

- Through undergraduate, post-graduate, or graduate education
- Through formal professional development (e.g. district workshops, mentorship programs)
- Through informal or individual professional development (e.g. research, personal reading, or independent workshops)
- From a department leader
- From a teacher colleague
- From an administrator
- I don't remember
- Other (please specify)

8. What sources of information do you consistently consult to learn more about Competency-Based Assessment? Select all that apply.

- Knowledgeable Colleagues
- District Instructional Services
- Peer-Reviewed Research
- Educational Magazines
- Google
- Books on Education
- Administrators
- Professional Development Workshops
- Other (please specify)

9. In one to two sentences, what do you think is the most significant personal challenge you have encountered in implementing Competency-Based Assessment practices in your classroom?

10. In one to two sentences, what do you think is the most significant challenge that your school has encountered in implementing Competency-Based Assessment?

11. What supports do you think would be most beneficial in facilitating the implementation of Competency-Based Assessment within your school? Rate each support based on their degree of benefit from 1 (Minimally beneficial) to 5 (Highly Beneficial)

	Minimally Beneficial		Highly Beneficial		
More accessible professional resources on Competency-Based Assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sample assessment examples for specific subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additional formal professional development opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Department collaboration time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rubric design workshops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sample Competency Rubrics for specific subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Longer timelines for implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaboration opportunities with other departments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

12. Which assessment model do you prefer?

Traditional Assessment Competency-Based Assessment

Appendix C. Interview Guide



Competency-Based Assessment Interview Script

Interview Script

Competency-Based Assessment Implementation in Secondary School: A Study of Understandings, Challenges, and Supports

Ethics Application #30001623

Hello, thank you for talking with me today, my name is Kristian Lay and I am hoping to speak with you today about your experiences in implementing Competency-Based Assessment. The goal of this interview is to further explore secondary teacher understandings of Competency-Based Assessment, the challenges of implementing Competency-Based Assessment, and to further understand the needed supports that would benefit secondary teachers in implementing Competency-Based Assessment in their classrooms.

This conversation should only take about 25 to 45 minutes of your time. I wanted to remind you that you can choose to skip any questions that I ask and that you can ask to stop the interview at any time with no consequences.

Could you confirm that you received a copy of the consent form?

Did you have any questions about anything?

And, are you okay with me audio-recording this conversation?

-
1. How long have you been a department leader?
 2. Based on your observations, to what extent does your school have a proficient understanding of Competency-Based assessment? Why do you think that?
 3. What challenges to implementation have you found to be the most significant for your school?
 4. How long has your department been working towards the implementation of Competency-Based Assessment? How's that going?
 5. What supports do you think would be the most beneficial in facilitating the implementation of Competency-Based Assessment in your department?
 - a. Why do you think those supports would be beneficial?
 - b. Which challenges or needed supports are exclusive to your department? Why do you think that?
 6. Is there anything else you would like me to know about your engagement with Competency-Based Assessment?
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Thank you so much for taking the time to talk with me today. Just a final reminder that you can contact me via phone or email if you have any questions about today. Also if you have any information that you forgot to add and want to share, or have anything you said that you want me to remove from my notes, you can also contact me via phone or email.

Is it alright if I contact you again in a couple of weeks to ask any follow up questions I may have?

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