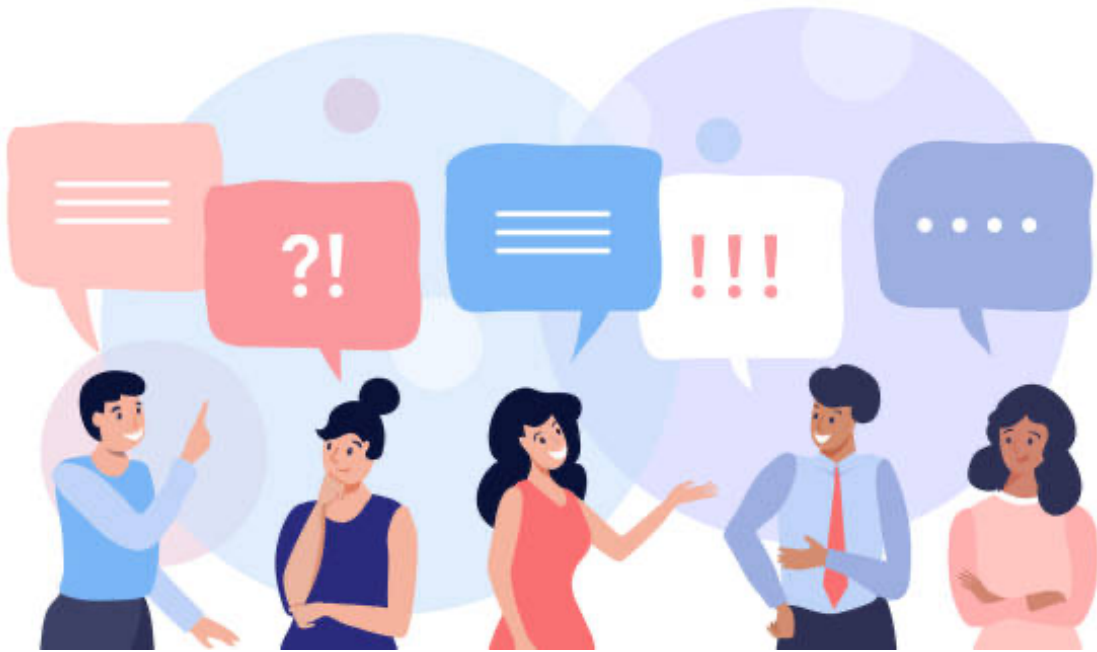


EDUC 421: Assessment & Motivation

“Teaching To” & “Assessing For” Mastery – Group Debate



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EDUC 421: Assessment & Motivation

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Winter 2022 Semester

Foundational Knowledge

What is Debate?

- A debate is a way to explore two sides of an important issue by having two individuals or teams square off against each other over an issue.
- Each side speaks “for” or “against” a statement called a *resolution*.
- A debate provides an opportunity for a *formal argument*.

Essential “Players”:

- **Proposition** – those arguing **for** the resolution.
- **Opposition** – those arguing **against** the resolution.
- **Adjudicator(s)** – those judging the debate and picking a winning side (side with most compelling argument).
- Debaters are often expected to support a side they do not agree with.

Essential Components:

- Opinions, points of view, and persuasion.
- Strong arguments based on research (evidence/facts/data/sources).
- Clarifying rules (timing of speeches, number of opportunities to speak).
- Respect & order (not chaos or conflict).

Teacher candidates will be respectful and keep in mind the following:

“Debating is, by no means, the same thing as engaging in a full-blown argument. Instead, you will have to prepare a compelling, succinct argument, which will gain support and backing, rather than simply attacking your opponent blindly” (The Edvocate, 2021).

Benefits of Debate in the Classroom:

- 1) Improved critical thinking skills.
- 2) Better poise, speech delivery, and public speaking skills.
- 3) Increased retention of information.
- 4) Improved listening and note-taking skills.
- 5) Enhanced teamwork skills and collaboration.
- 6) More confidence to stand up for the truth when a discussion promotes falsehoods/is inaccurate.
- 7) Learn better ways to state one's point with gentleness & grace.
- 8) Helps students identify holes in their theories and create more balanced arguments.
- 9) Teaches students how to structure their thoughts.
- 10) Debating is lots of fun!

Resolutions up for Debate

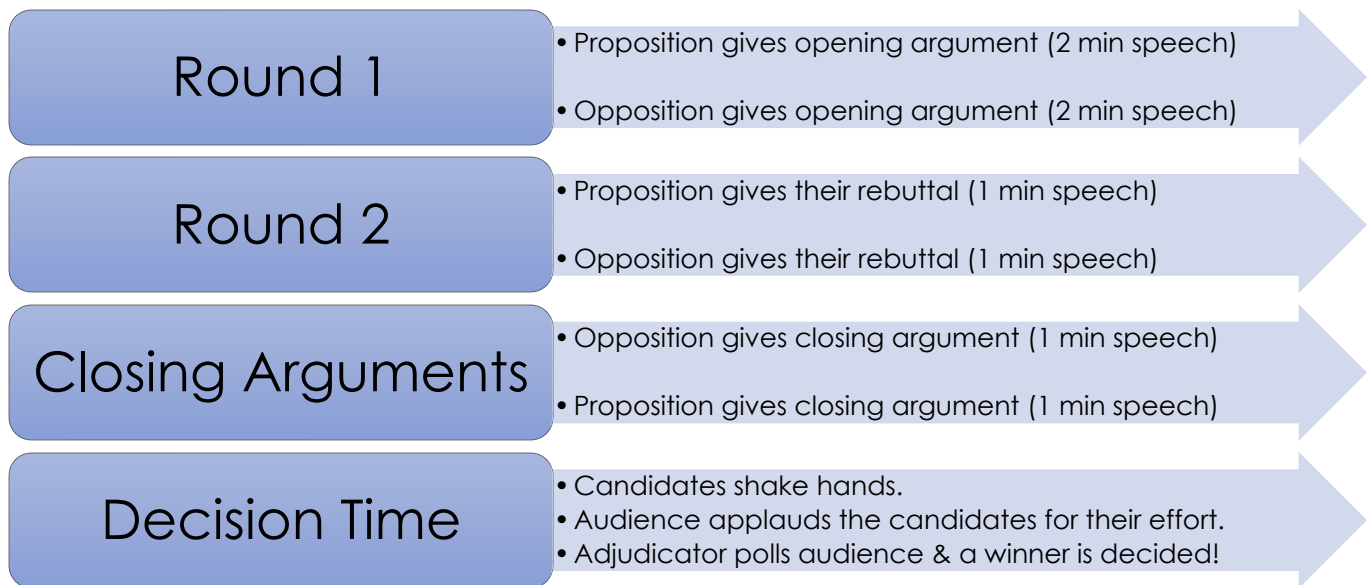
Resolution #1: Is it important to teach to mastery?

- Teacher candidates will debate why/why not; if it depends; and what it depends on.
- Teacher Candidates involved: Andrea (proposition) vs. Joni (opposition)
- Adjudicator: Melanie Baerg, M. Ed – Lecturer, UNBC School of Education
- Audience: Regional Cohort – UNBC Bachelor of Education

Resolution #2: Is it important to assess for mastery?

- Teacher candidates will debate why/why not; if it depends; and what it depends on.
- Teacher Candidates involved: Sara (proposition) vs. Aurora (opposition)
- Adjudicator: Melanie Baerg, M. Ed – Lecturer, UNBC School of Education
- Audience: Regional Cohort – UNBC Bachelor of Education

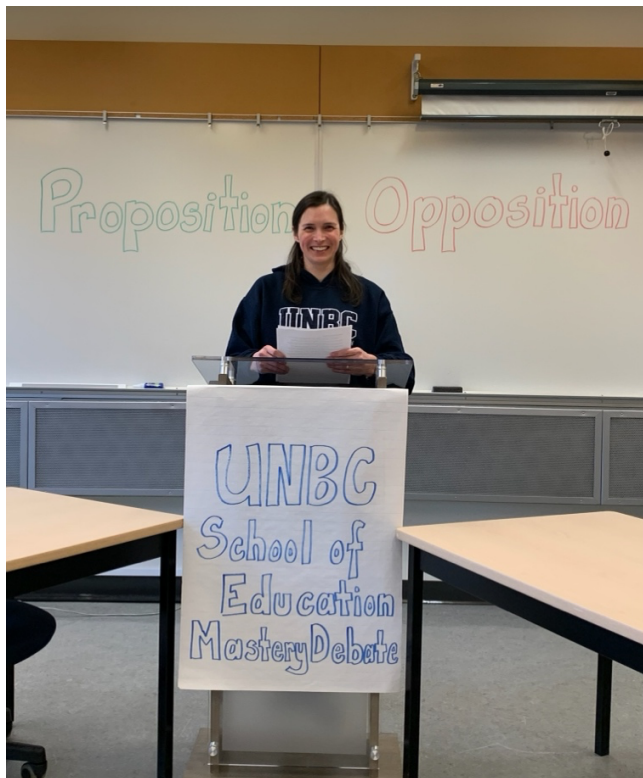
Let the Debates Begin!



“Good luck and may the odds be ever in your favor.” –*Suzanne Collins*



**Debate #1: Andrea (proposition) vs. Joni (opposition)
Resolution: Is it important to "teach to" mastery?**



vs.



Andrea's Opening Statement:

When I think about teaching with the end in mind, I see one of the goals of my teaching as preparing students for the next steps – helping them acquire the tools to approach future learning with confidence. This means teaching with the purpose of helping students learn to the point of mastery. Learning is incremental, building on itself in any field – whether it's learning to play an instrument, learning a new sport or language, or learning to be an effective elementary teacher.

A learner needs to have a firm grasp of foundational concepts to apply them in multiple contexts and be prepared to scaffold as their learning progresses. Vanderbilt University suggests that when a learner develops mastery in an area, "an expert's fluency allows the easy retrieval of relevant knowledge...This fluency with fundamental patterns frees the mental energy to focus on new knowledge to add to the pattern," (Vanderbilt University Center for Teaching).

Over time, if a learner has not achieved mastery of building-block skills, the quality of their learning in that area will be diminished as they spend more and more cognitive energy on the lower-level skills. Suppose a learner is introduced to long division without being confident in the multiplication table or subtraction with

borrowing. In that case, the multiple steps of long division will be burdensome and make it difficult to see the bigger picture.

Educators can encourage learners to strive toward mastery by communicating what the next steps are and why the current skills are important. This encouragement helps the learner apply themselves to learning something that is not intuitive to them.

Teaching to mastery also involves circling back to foundational concepts – I had one professor call it “beating the dead horse” as we engaged in retrieval practice throughout the term. This practice enables the educator to check for gaps and helps solidify understanding. As learners become more confident in their understanding, they will recognize their metacognitive processes rather than being focused on the mechanics of what they are learning.

Learning to mastery occurs at different rates, involving patience and time, as laid out in the First Peoples Principles of Learning (FPPL 7). Making mistakes along the way can help deepen a learner’s understanding if they approach it with a growth mindset. A master educator can manage these dynamics with agility and build a classroom culture with high academic standards. They can recognize opportunities to deepen understanding while infusing warmth and good humour. Master educators create confident students who are willing to try new learning and articulate new ideas.

Joni’s Opening Statement:

While I think *teaching to mastery* is important, it is idealistic to believe that we can teach to mastery in all cases, with all students—it is just unrealistic to believe and infeasible to achieve within our current educational system. According to Sal Khan (TED, 2016), the traditional academic model fails students because teachers fail to teach students to mastery of essential skills, creating gaps in knowledge that make students believe they cannot learn. But this is not the fault of teachers! The current educational paradigm is failing all of us—BOTH students and teachers.

Khan highlights how students are grouped by age and “shepherded along at the same pace” without accounting for reality: students do not learn at the same pace. Khan outlines the following traditional approach: teachers teach a concept, give an assignment, assign homework, and then test. Tests reveal gaps in student knowledge—not all students get one hundred percent of the material; some understand less than seventy-five percent of the concepts, skills, or knowledge. Yet teachers still move on to harder, more

complex concepts that build on the identified gaps. So, the gaps get wider. This goes on for months or years until a student hits a wall and disengages.

Khan asks us to imagine if we did this in other areas, giving us the example of home-building. He asks us to imagine a contractor starting with a foundation. Upon inspection, the foundation is found to be eight percent structural, yet the contractor is asked to move on to the next floor—without remedying any structural gaps. The second floor is determined to be seventy percent structural. Again, the contractor is asked to move to the next floor without tending to the gaps. The third floor is determined to be sixty percent structural, and still, he is asked to build the roof. Upon which time, the entire structure collapses!

Do we blame the collapse on the contractor? No, we blame the system. The contractor was constrained to do something in x amount of time, and inspectors passed him along to the next level, even with notable gaps. This is exactly the case with our current educational system: it constrains teachers by pressuring them to teach the curriculum in x number of weeks, with minimal support. In turn, teachers are pressured to keep moving students along, even when they have not mastered the material. Students cannot be held back, regardless of grade, so students will continue coming to our classrooms with varying gaps in knowledge. Therefore, in such a system, teaching to mastery is an impossible task.

Andrea's Rebuttal Statement:

I agree that teaching to mastery has its challenges given the constraints of the current educational system. However, I don't think this reality should cause educators to lower their standards with regard to having high academic expectations of *all* their students. In Chapter 7 of Essential Assessment, the authors encourage educators to be relentless about expectations. To quote: "The research is compelling and unmistakable: high expectations for all students yield increased academic achievement. When teachers believe learners can achieve, the self-fulfilling prophecy kicks in and learners tend to achieve" (Erkens *et al.*, 2017, p. 120). Furthermore, the authors contend, "A learner with a mastery orientation emphasizes the process of learning, progress and effort toward increased achievement" (Erkens *et al.*, 2017, p. 123), in contrast with someone who has a performance orientation, whose motivation is to receive a grade or score. "Learners with a mastery orientation compare their achievement to a set of criteria," (Erkens *et al.*, 2017, p. 123) rather than more relatively comparing their performance to other learners around them, which could at once lower the standards or cause undue anxiety. For these reasons, we should not compromise in maintaining high standards for ourselves or the learners in front of us.

Joni's Rebuttal Statement:

I agree with my opponent—teaching to mastery is important—but I still believe that it is not feasible within the current educational system:

Most schools still use letter grades and manage the education process based on seat time requirements and pacing guides where teachers teach groups of students the same content at the same time. The entire system, including college admissions, scholarships, financial aid, and athletic eligibility, expects traditional grade point averages and often translates them into a four-point score. The current system is driven by teaching rather than learning, and all of its complex and deeply-rooted systems and practices are based on this paradigm. Educators have heard of mastery learning and some have even tried it, but America's [and I argue, Canada's] education system is not mastery-based (Ellis, 2019, p. 1).

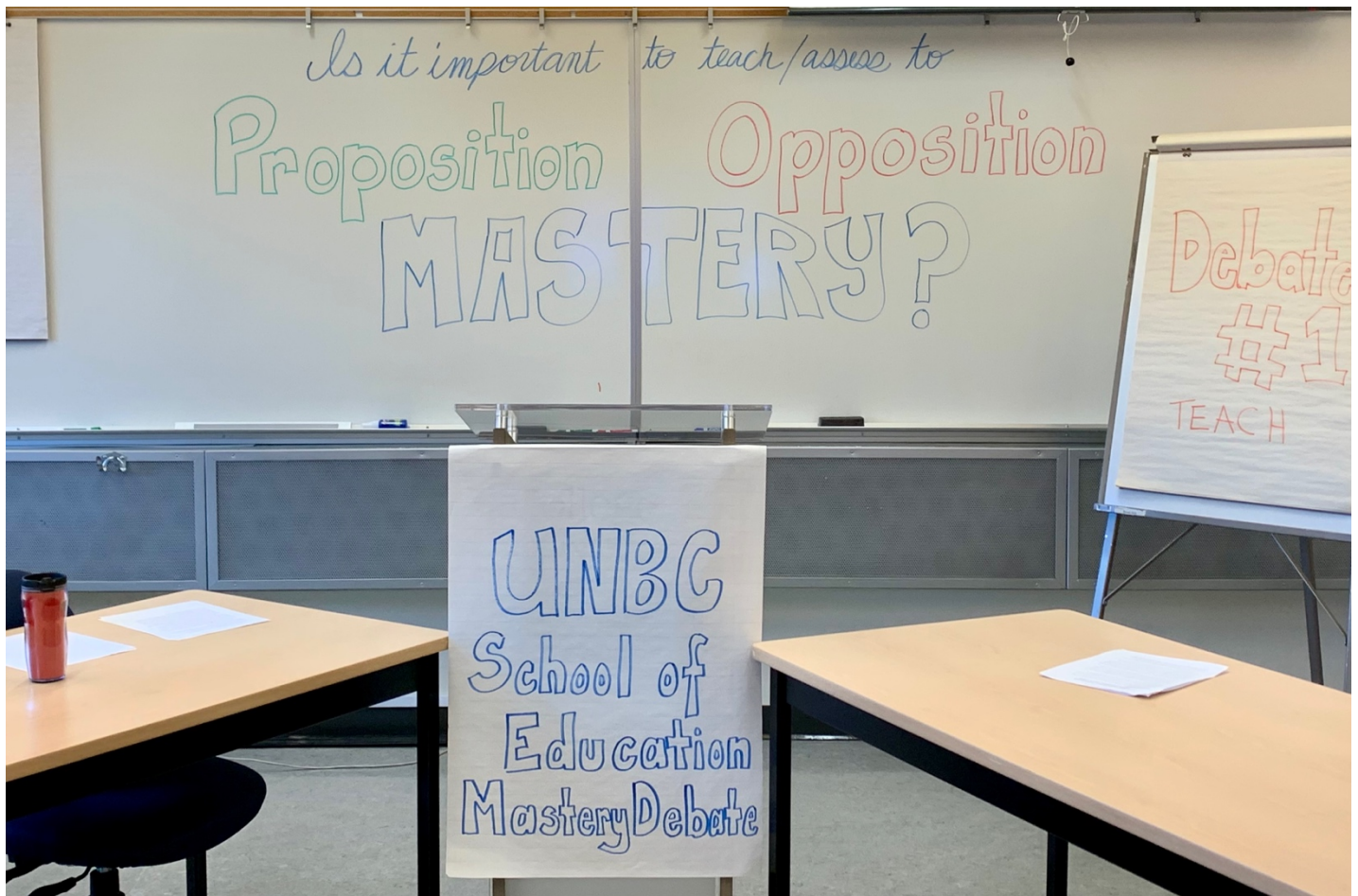
It is just too logistically difficult. Every teacher would be giving upwards of twenty-seven different instructions, lectures, and assignments, and conducting upwards of twenty-seven different assessments, to meet the needs of every student in her classroom working toward mastery of their individualized work. Until the traditional academic model is turned on its head and accounts for these teaching and learning challenges, mastery learning will remain an “ideal”—outside our reach and too hard for both teachers and learners to grasp!!

Joni's Closing Statement:

Point blank: the system needs to change if we are to teach to mastery! Benjamin S. Bloom brought the idea of “Learning for Mastery” to the forefront of education in 1968, in his article of the same name, where he theorized that nearly all students could attain mastery of any learning task IF they were provided with enough time AND “favorable learning conditions” (Bloom 1977, qtd. in Wiggins, 2013). Back then, the “challenge for educators was to structure schools and organize classroom instruction in ways that would provide individual students with the time and conditions they needed” (Guskey and Anderman, 2014, p. 19). Still, over fifty years later, this remains the challenge! Why? Because education policy has not changed enough to implement mastery learning. Why? Because it costs too much to fund a system that allows teachers to teach to mastery and students to learn to mastery! Until education is funded as it should be, we will remain in the same boat for another fifty or more years! System-wide implementation will require action at the federal, provincial, district, school, and classroom levels—the question is: will we finally be able to shift the paradigm?

Andrea's Closing Statement:

My colleague contends that the system needs to change if we are to teach to mastery, but I would challenge each of us to work towards change in our own teaching practice and our own sphere of influence. Some things are outside of our control, but there are areas where we can take action. I reiterate that we should have high expectations of *all* learners and put in place favourable conditions for learning to mastery: along with maintaining high expectations, doing regular retrieval practice, giving clear feedback, and communicating next steps, fostering a growth mindset and a culture of confidence to try new learning while feeling safe to make mistakes. As educators, we can make a difference by supporting learners as they achieve mastery incrementally. We can help them build understanding and skills for future learning and help them become fluent with fundamental patterns (Vanderbilt University Center for Teaching) before moving on to more complex ideas. Let's be intentional about building these principles into our teaching practice.



**Debate #2: Sara (proposition) vs. Aurora (opposition)
Resolution: Is it important to “assess for” mastery?**



vs.



Sara's Opening Statement:

Teaching for Mastery and Assessing for Mastery will be how civilization moves forward, and education needs to align itself to prepare our future generations. As educators, we must focus on learning rather than student achievements, test scores, and grades. This can be done through Assessment for Mastery. Therefore, it is absolutely important that educators use Assessment for Mastery.

Derek Bruff of Vanderbilt University discusses that Mastery Assessment involves three main components: The first is “explicitly identifying learning objectives for students” (VandyCFT, 2021). This means that we need to be upfront with our students before we assess them. We need to communicate with them about their learning objectives and ensure that their assessments match.

The second component is making sure that we are “Assessing for Mastery and not partial understanding” (VandyCFT, 2021). This takes us from the old thought of 20 out of 30 is a passing grade to a changed perspective of questioning: What third of the content are they missing? This is why BC's Proficiency Scales tie in so nicely with Assessing for Mastery. It allows for the natural progression from “Emerging” to “Extending.” Assessing for Mastery promotes student-led demonstration of mastery in content or competencies and utilizes formative assessment to guide classroom practice.

The third component is “providing students with multiple opportunities to demonstrate Mastery” (VandyCFT, 2021). This is huge! As stated in our text, “...mastery with a single assessment...will fall short of measuring accurately...” (Erkens et al., 2017, p. 15). If the goal is learning, then students must be able to assess over and over and over again as many times as necessary until they reach Mastery before they move on. These do not have to be daunting formal summative assessments. Assessment for Mastery can be utilized with any type of formative assessment, so long as it is explicit, and allows for continual improvement over time. This means that there are no negative consequences for re-doing work. Mistakes are part of the Assessment for Mastery process.

What we are debating is not only important, but it is essential to propel our students forward in their learning and the future.

Aurora's Opening Statement:

Mastery is a concept that is complex and not easily defined or accessed. Effective assessment must adhere to the Six Tenets ***. The first task in all assessments is to set clear and concise guidelines as to what the expected outcome is. With mastery, there are multi-factor results that are expected, and the very concept of mastery achievement is that it takes time, practice, failure, readjustments, and formative assessments, with feedback along the way (Guskey and Anderman, 2014). A distinction must be made between competency and mastery. For example, a physics student can understand the concept of a question of structure strength vs weight-bearing capacity but when asked to design a bridge, the student must have had the experience and practical application as well as apprenticing experience (coaching, mentoring and feedback) to gain the complex skills and “cognitive complexity” to be able to master the task, as identified by Guskey and Anderman, 2014, p. 20.

A very important consideration regarding mastery assessment is student motivation and investment. One student may have the goal of understanding the topic but may not be motivated to further the understanding to a point of mastery. In the previous example, one of the students may only need to complete the physics course to obtain the credit towards a more general degree, whereas the other student may want to enter the engineering field, where it will be imperative that they eventually achieve mastery in all skills. This mastery will be achieved over time and with multiple layers. Further, as identified by Benita and Matos (2021), a student may be motivated to achieve mastery, but the assessment or the results that they receive, due to the complexity of the concept, may deter the student from pursuing mastery.

Wienhold describes mastery as a process that is learned over time and may involve years of interweaving skills and concepts to be fully achieved (2021). These concepts together make accurate mastery assessment very challenging and pose the risk of discouraging students who may have otherwise achieved mastery. I propose an alternative to regular mastery assessment, where each student is evaluated on levels of improvement and measured against their specific goals of achievement towards competency at each scaffold. Summative assessment and student accountability for mastery should be reserved for specific instances and lead to an eventual goal determined by each student's interest and motivation.

Sara's Rebuttal Statement:

An interesting proposition. However, as referenced earlier, Khan gives examples in his Ted Talk (2016) on how Mastery is normalized everywhere, except in education. In his homebuilding example, Khan suggests that the education process is broken, which was articulated by Ken Robinson in "*Changing Education Paradigms*" (2010). I argue that in order to meet the demands of what Khan refers to as the "Information Revolution" (TED, 2016) educators must shift to Assessment for Mastery.

Mastery is not a complex end goal and Assessing for Mastery does not reflect that. In a primary classroom, how can students know their addition facts before they master: verbally counting, object counting, cardinality, spatial relationships, and so forth (Tondevold, (n.d.))? And if students can count numbers backwards too, does mastery change? I think not.

Fortunately, BC's Curriculum has set the level of mastery at "proficient" because it is defined as "a complete understanding... relevant to the expected learning" (Ministry of Education, (n.d.)). When we look at gaps in our system, they can occur everywhere in every subject, because we are forced to move on with scaffolding before students have reached mastery.

Aurora's Rebuttal Statement:

Although I agree that assessment for mastery holds a necessary place in certain scenarios (i.e. building bridges, foundations of homes, early math concepts, and early reading comprehension), the concept of mastery can be referred to as a level of understanding so thorough and conceptualized that the learner would be able to teach the concept. This level of understanding requires a long-term investment of the student (and the teacher), as well as layers of cognitive complexity. The BC curriculum is quite vague in what the description of mastery/proficiency is at each level and further adds to the challenge. Within the current constraints of our system, the acquisition of mastery in all subject areas, at every level, is an unrealistic goal.

Further, student investment is imperative and, as Erkens et al. explain, is determined by a symbiotic relationship between the student's desires, interests, understanding of how they learn and that they can learn, as well as an understanding that they will be able to reach their goals and how (2017). It is imperative that favourable conditions for mastery attainment are created but, assessing for mastery in all instances should not be the main focus when considering student investment and our limited time resources.

Aurora's Closing Statement:

Within the constraints of our current education system, we must focus our efforts on the most beneficial outcome possible for each student. The potential for overwhelming students with such a high standard if it is not where their interests lie, may discourage the learning process, and focus valuable time and resources in areas that will not be as worthwhile (Guskey and Anderman, 2018). Further, as described by Wiggins (2013):

Take a complex whole, divide it into small pieces, string those together in a rigid sequence of instruction and testing, and call completion of this sequence "mastery." Although well-intentioned, this practice leads to fractured, boring, and ultimately in ineffective learning that never prepares students to be fluent and skilled in authentic work (p.5)

I agree that the focus should be on the "learning" and not the grade, and clear goals should be set for and with each student, but where is the realistic boundary and how do we continue to meet the curriculum standards in the time that we have with each student, keeping their learning engaged and meaningful along the way?

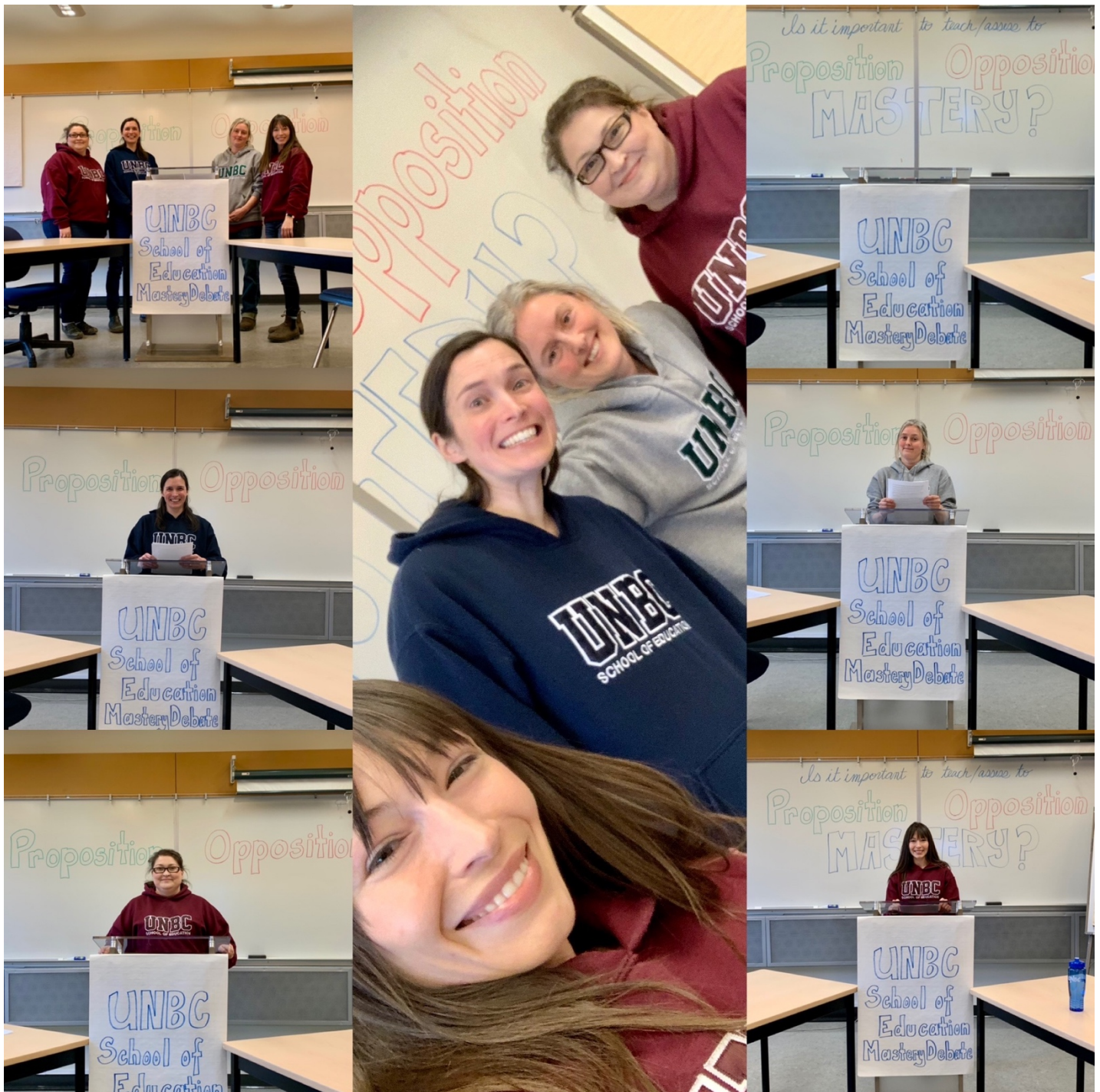
Sara's Closing Statement:

The way of the future is through Assessment for Mastery. Khan proposed that 400 years ago if you had asked: What percentage of people have the capability to read? You might have received an answer of 20%. However, we know now that is not true. It is nearer 100%. He argues that if you repeated the question today, but changed it to advanced calculus (or physics for that matter)? The answer may also be at 20%. Khan contends that the capability is again 100% (TED, 2016).

Bruff advocates that Assessment for Mastery gives students clear expectations that guide them through their studies, reducing test anxiety through multiple low-stake opportunities rather than high-stake stressors (VandyCFT, 2021). When learning, not the grade is the goal, students can feel educators are on their side. Bruff concedes that the multiple re-do opportunities of Assessment for Mastery may add time for educators (VandyCFT, 2021). However, in my experience, this is some of the best time for relationship building.

To quote *Essential Assessment* (2017), "...a teacher's relationship with students directly impacts their learning" (p. 21). AND LEARNING IS THE GOAL.

NOTE: Six Tenets - *Assessment Purpose* (the why of assessment), *Communication of Results* (clearly demonstrates learning), *Accurate Interpretation* (must be accurate, accessible, and reliable), *Assessment Architecture* (must be purposefully designed and intentional), *Instructional Agility* (teachers understand that one size does not fit all and be able to adjust as needed), and *Student Investment* (students understand and are engaged in the learning process and understand the assessment) (Erkens et al., 2017).



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EDUC 421 FINAL PROJECT

Summative Demonstration of Learning – 30%

The final project will incorporate themes and understandings from your weekly journals and reflective analysis, in collaboration with a group of your peers (groups of 3-4). With reference to the Learning Intentions for Education 421, you will demonstrate your ongoing understanding of assessment practices in British Columbia classrooms, and dive more deeply into a topic or an aspect that has piqued your group's collective interest. Your group's inquiry will be presented on the last class, maximum 20 minutes, and may be live or pre-recorded. Please complete your own self-evaluation and submit it with your project. If you have clearly indicated that your project can be evaluated individually, the instructor section will be completed that way; otherwise your project will be evaluated as whole, for all group members.

Please evaluate our project as a group. Attached is our self-evaluation. Thank you!

Self-Evaluation & Reflections	Criteria	Instructor Evaluation & Reflections
Our debate has been divided into 4 different perspectives that were randomly delegated (not necessarily based on our individual opinion) and we encompassed our knowledge, understanding, experience and research to formulate the best argument to support our focal point. We even have some sources that have been analyzed by multiple team members that show a completely different perspective from one another. All team members provide very strong evidence of original thinking and at least two connections have been made to our current BC curriculum and context.	Strong evidence of original thinking (i.e., avoid merely summarizing sources) with at least two connections to our BC curriculum and/or context	
Many of the tenets are referred to in numerous cases and at least two explicit connections have been made to student investment and motivation, accurate interpretation, and communication of results . The integrated course content has been pulled apart and analyzed by each member of the team to formulate original content in support of "their" focal point. This provides a very diverse understanding of all the course material based on a relevant and meaningful topic.	Fluent and appropriate use of relevant course content and concepts including at least two explicit connections made to any of the Tenets	
Thorough investigation of each topic was conducted by each team member and multiple sources of relevant and peer reviewed research was sourced to provide the soundest support of each focal point. The course textbook was referenced, and prior knowledge, personal experience, and other course content was evaluated to formulate ideas.	Clear grasp of subject matter with ability to provide sound critical evaluation with evidence of care and precise reading of required and other texts.	
Specific examples of foundational skills based on theory and put into practical applications were examined at multiple points throughout the debate. These examples have been formulated over time and through experience and critical analysis of course materials as well as external research.	Demonstrated ability to relate theory to practice (this could be theory from other EDUC courses).	
All external sources have been referenced in APA format, both within text and as a reference page. Cited material and recognition of team member contributions have all been acknowledged throughout.	Careful and courteous consideration of ideas or others (citations on slides if appropriate, reference page, APA format)	
Clear and concise writing has been presented throughout the assignment and organized into a debate format to be presented. The entirety of the document has been revised and edited by team members.	Clear, grammatically, and stylistically sound writing and/or logical organization.	
We had great timing and did not go over twenty minutes. We used a podium to give our presentation a theatrical feel and organized the room to reflect a typical debate format. We incorporated Melanie into the presentation as our adjudicator and sent out our debate overview to involve the class. We wrote our resolutions on the board and stood on our delegated sides (proposition vs. opposition).	Presentation (use of images, videos, voice projection, etc.) supports listener/viewer's understanding and is within time limit (15-20 minutes).	