

Student Experiences of Extrinsic and Intrinsic Motivation During Assessment

by

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Abstract

For many students and educators, assessment may be thought of as primarily a source of extrinsic motivation. However, students can also have an inherent interest in and can be intrinsically motivated by assessment. According to self-determination theory research, students have different learning outcomes depending on if they are extrinsically or intrinsically motivated. Yet, there is a lack of research investigating student experiences of motivation and assessment, specifically. Therefore, the purpose of this study was to examine students' experiences of extrinsic and intrinsic motivation during the assessment process. Data was collected from 209 university students in an undergraduate course on classroom assessment. Participants answered two prompts inquiring into their experiences of assessment and extrinsic motivation, and assessment and intrinsic motivation. A thematic analysis procedure was employed to analyze participant responses and inductively produce themes and sub-themes. From the extrinsic prompt, five themes emerged: Emotions, System Constraints, Grade-Focused, Relationship to Learning, and Characteristics of Assessment. Among these themes, 15 sub-themes were derived. From the intrinsic prompt, five themes also arose: Emotions, Relationship to Learning, Characteristics of Assessment, Pedagogy, and Relatedness. From these themes, 14 sub-themes were developed. Although three themes were common across the two prompts, they contain different sub-themes, which demonstrates the differing experiences of intrinsic and extrinsic motivation. The results are discussed through the sub-themes are compared to existing studies. The findings of this study have implications for educators looking to develop assessment practices that encourage students' intrinsic motivation and lessen the adverse effects of extrinsic motivation.

Preface

This thesis is an original work by Talia Schatz. The research project, of which this thesis is a part, received ethics approval from the University of Alberta Research Ethics Board, No. Pro00103462, August 27, 2020.

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Student Experiences of Extrinsic and Intrinsic Motivation During Assessment

Often, one may think of assessments, assignments, and tests as purely extrinsic motivators and that students have no intrinsic interest or drive to engage with them. However, there may be instances where students are intrinsically motivated by assessment. It is important to illuminate the various factors associated with both extrinsic as well as intrinsic motivation during the assessment process in order to understand student experiences and to support intrinsic motivation. As well, it is essential to understand how students are intrinsically and extrinsically motivated by assessment, because both types of motivation have been shown to result in differing outcomes in learning and achievement. For example, students that experience intrinsic motivation learn better, experience higher enjoyment, and have better psychological health (Niemiec & Ryan, 2009; Wang et al., 2019), while extrinsic motivation is associated with lesser interest, value, and effort toward tasks (Ryan & Connell, 1989).

This study aimed to investigate students' experiences of extrinsic and intrinsic motivation during assessment. Students were asked to describe their experiences of extrinsic and intrinsic motivation during assessment through written responses to two prompts. A qualitative descriptive research design was used to examine students' responses. As there are few studies that examine the relationship between extrinsic and intrinsic motivation and assessment, this study will contribute to filling the gap in the research literature. The results of this study will have implications for educators seeking to improve assessment practices, increase students' intrinsic motivation, and mitigate the negative effects of extrinsic motivation.

Literature Review

Theoretical Framework: Self-Determination Theory

Pioneered by researchers Edward L. Deci and Richard M. Ryan (1985; Ryan & Deci, 2000a) self-determination theory (SDT) is a macrotheory of human motivation and personality development. Within SDT, there are six minitheories: basic psychological needs theory, organismic integration theory, cognitive evaluation theory, goal contents theory, causality orientations theory, and relationships motivation theory. I will only discuss the minitheories relevant to the current study in this literature review, namely, basic psychological needs theory, organismic integration theory, and cognitive evaluation theory.

Basic psychological needs theory describes how socio-contextual factors support or undermine people's well-being through the satisfaction of the basic psychological needs of autonomy, competence, and relatedness (Ryan & Deci, 2017). Under this minitheory, SDT hypothesizes that satisfying these needs leads to positive outcomes and enables people to thrive and be psychologically well. In contrast, a lack of satisfaction or thwarting of these needs can lead to alienation, pathology, and ill-being. Social environments and contexts can nurture autonomy, competence, and relatedness or undermine and produce conflict between the basic needs (Ryan & Deci, 2000b). Ryan and Deci (2017) state that autonomy is the most important need to satisfy in order to achieve well-being. Autonomy support facilitates the satisfaction of competence and relatedness. Autonomy support is characterized by the opportunity for choice, reinforcement of self-regulation, and a lack of control and demands.

Central to SDT are the concepts of intrinsic and extrinsic motivation. Previously in the history of psychology, motivation was considered a “unitary entity” (Ryan & Deci, 2017, p. 13), and it was not differentiated into varying types or orientations. In SDT, however, motivation is treated as a continuum from controlled to autonomous. On the controlled side of the spectrum is extrinsic motivation, which is defined as doing behaviours because they lead to a separable outcome, such as an external reward, social approval, avoidance of punishment, or achievement of a valued outcome (Ryan & Deci, 2017). This is in contrast to intrinsic motivation, on the autonomous end of the spectrum, which Ryan and Deci (2000a) define as “the doing of an activity for its inherent satisfactions rather than for some separable consequence” (p.56).

Organismic integration theory (OIT) details the forms of extrinsic motivation that fall within the controlled to autonomous continuum, as well as the factors that promote or hinder the internalization of behaviour (Ryan & Deci, 2000a). Separate from extrinsic and intrinsic motivation is amotivation, which occurs when an individual feels incompetent, does not value an activity, or does not believe it will result in a desired outcome (Ryan & Deci, 2000a). Subsequently, OIT describes the four different forms of extrinsic motivation, which become more autonomous as the behaviour is internalized. The most controlled form of motivation is external regulation, where behaviours are done due to an external demand or to obtain a reward or avoid punishment (Ryan & Deci, 2000a). Under this regulatory style of behaviour, actions have an external perceived locus of causality. The next most controlled style is introjected regulation. Under this regulatory style, people feel pressure to behave in certain ways; this can involve avoiding shame or guilt, maintaining self-esteem, or attaining feelings of pride (Deci & Ryan,

2008; Ryan & Deci, 2000a). Under introjected regulation, actions still have an external perceived locus of causality. The next regulatory style is identification, in which an individual values a behaviour and its goals, identifies with its personal importance, and personally accepts the regulation of the behaviour (Ryan & Deci, 2000a). Under identification, the individual has somewhat internalized the regulation of behaviours and has a somewhat internal perceived locus of causality. The most autonomous form of extrinsic motivation is integrated regulation. Under integrated regulation, actions are valued by the individual and performed by volition; the individual has “internalize[d] the reasons for an action” (Ryan & Deci, 2000a, p. 62). Integrated regulation is still extrinsic because actions are performed for a separable outcome and not for their inherent satisfaction (Ryan & Deci, 2000b).

The satisfaction of the three basic psychological needs of competence, autonomy, and relatedness have been shown to promote autonomous motivation and internalization of behaviour, and the lack of support for these needs negatively affects autonomous motivation (Deci & Ryan, 2016). Relatedness is especially important for promoting internalization; many extrinsically motivated behaviours are first valued or demonstrated by people related or connected to the individual. Perceived competence can also promote internalization because people are more likely to adopt behaviours they feel they can perform well. In addition, autonomy-supportive environments promote internalization because these contexts facilitate relatedness and competence.

The minitheory of cognitive evaluation theory (CET) describes the factors that cause variability in intrinsic motivation. Central to CET is the assumption that intrinsic motivation is inherent and “will be catalyzed [...] when individuals are in conditions that

conduce toward its expression” (Ryan & Deci, 2000a, p. 58). CET theorizes that the satisfaction of the basic psychological needs, autonomy, competence, and relatedness, enhances intrinsic motivation. In a particular context or situation, if these needs are satisfied, people tend to be more intrinsically motivated, but if these needs are thwarted, they become less intrinsically motivated (Ryan & Deci, 2016). Feelings of competence can be fostered through social-contextual events such as feedback, communication, and rewards (Ryan & Deci, 2000b). Deci and Ryan (1985) found that feelings of autonomy were fostered by choice, acknowledgement of emotions, and opportunities for self-direction. CET only applies to behaviours in which the individual has an inherent interest. If this condition is not present, the motivation for the behaviour is not intrinsic. (Ryan & Deci, 2000b).

The environmental and social conditions in particular environments, such as schools and universities, can inhibit or encourage extrinsic and intrinsic motivation. For students in educational contexts, the type of motivation elicited depends on many factors, such as support for the basic psychological needs. Importantly, extrinsic and intrinsic motivation in school are associated with different outcomes. Because assessments are an essential part of a student’s education, it is important to investigate their relationship with students’ extrinsic and intrinsic motivation, so I turn my attention to assessment next.

Classroom Assessment: General Practices

Classroom assessments, such as tests, exams, and assignments, are constant over the course of an individual’s education. Therefore, it is essential that we understand common assessment practices and methods and how this affects a student’s learning, motivation, and general educational experience.

Classroom assessments are used for a variety of purposes. Traditionally, educators followed the “assessment *of* learning” approach, in which assessments are given at the end of instruction in order to measure how much students have learned. However, educators can also follow the “assessment *for* learning” approach, in which teachers gather information about students’ knowledge and skills during the process of instruction. This approach enables educators to change instruction to make it more effective for the students. A third approach is “assessment *as* learning.” In this approach, students gather information about how they learn to help develop their learning skills and increase involvement in the learning process (Frey, 2014).

Frey (2014) created a working definition of classroom assessment that encompasses its many purposes:

Assessment in the classroom includes a broad set of activities where information is gathered and evaluations are made. Mostly, it refers to information and evaluations about students and their learning, but there are other measurement goals, as well. [The term can] refer to tests and other formal or informal data-gathering strategies used by teachers to assess their students and themselves. The assessments can be used before, during, or after instruction, at any time during the learning process. The information can be used by teachers to improve instruction, by students to control their own learning, or both. Performance on assessments might or might not be graded or contribute to a course grade.

There are several classroom assessment types that are commonly used in education today, including summative assessments, formative assessments, and performance-based and authentic assessments, which may or may not be graded.

In the past, traditional graded paper-and-pencil assessments were the most commonly used and, sometimes, the only used assessment in classrooms (Frey, 2014). In fact, they still make up the majority of assessments given by teachers (Frey & Schmitt, 2010). Summative assessments are given to students at the end of instruction in order to test their knowledge and evaluate what they have learned. This type of assessment includes pencil-and-paper tests and quizzes that use question formats such as multiple-choice, matching items, true-false questions, or short answer questions (Frey, 2014; Mertler, 2003). In a survey of academics at post-secondary institutions across Alberta, Rawlusk (2018) found that summative testing remains the most common form of assessment, with written response exams, multiple-choice exams, quizzes, essay exams, and true-false and matching being the most frequently used formats. Traditional assessments can be scored objectively, meaning there is one correct response, or subjectively, meaning that there can be different correct responses and that an educator must use their judgment to score it (Frey, 2014; Mertler, 2003). An advantage of traditional assessments in which there is one correct response to each question is that reliability tends to be high (Frey, 2014).

Performance-based assessments “[ask] students to perform a skill or create a product [to] assess student ability” (Frey, 2014, p. 7). Often, teachers must use judgment to subjectively score a student’s performance. The score is based on observation, and it is meant to reflect the student’s ability or skill. With this type of assessment, students can demonstrate their skills through a performance (such as playing an instrument, giving a speech, acting, or conducting an experiment) or the construction of a product (such as a short story, a painting, or a scientific report) (Frey, 2014). Frey and Schmitt’s (2010)

survey of classroom practices found that essays and written assignments, both performance-based assessments, were the most common type of assessment formats reported. The authors also found that performance-based assessments are more often used by language arts teachers and are more common in higher grade levels.

An authentic assessment is one that “match[es] real-world expectations ... [and] typically requires students to perform in ways that are valued *outside the classroom*” (Frey, 2014, p. 7). Designing assessments in this manner can make assessments more meaningful and intrinsically motivating because students can perceive their real-world relevance (Frey, 2014; Koh, 2017). There is not a singular agreed-upon definition of authentic assessment. However, Frey, Schmitt, and Allen (2012) developed a list of nine critical components of authentic assessment grouped into three themes based on a review of the literature. Under the first theme, the context of the assessment, a task includes a realistic activity or context, the task is performance-based, and the task is cognitively complex. The second theme, the role of the student, proposes that for authentic assessments, a defence of the answer or product is required, the assessment is formative, and students collaborate with each other or the teacher. The final theme, the scoring, states that the scoring criteria are known or student-developed, multiple indicators are used for scoring, and the performance expectation is mastery. Based on these dimensions, it is clear that there is some conceptual overlap between authentic and performance-based assessments. Authentic assessments can be understood as a type of performance-based assessment. Koh (2017, p. 3) states that “[a]ll authentic assessments are performance assessments because they require students to construct extended responses, to perform on something, or to produce a product.” However, not all

performance-based assessments are authentic. Following the dimensions of authenticity, as identified by Frey, Schmitt, and Allen (2012), will help determine if an assessment is truly authentic. Examples of authentic assessment include portfolios, oral presentations, debates, producing videos, creating a poster for a science fair, writing computer programs, or writing an article (Frey, 2014; Koh, 2017). In Rawlusk's (2018) survey of the assessment practices of post-secondary educators in Alberta, results showed that the most common authentic assessment types were written papers, individual projects, and group projects. These tasks differ from other performance-based assessments because "authentic tasks need to be designed to replicate the authentic intellectual challenges and standards facing experts or professionals in the field" (Koh, 2017, p. 5). Especially in higher education, authentic assessments can better prepare students for employability compared to traditional and non-authentic assessments (King, 2019). Furthermore, like performance assessments, authentic assessments are difficult and time-consuming to score due to subjectivity, and inter-rater reliability may be an issue (Mertler, 2003). However, as included in the key dimensions from Frey, Schmitt, and Allen (2012), if students are involved in the development of scoring criteria, students may have an enhanced understanding of the assessment expectations (Frey, 2014).

Formative assessment differs from summative, graded assessment because it occurs during instruction, its purpose is to provide feedback to students and teachers about students' learning, and does not usually affect grades (Frey, 2014). Formative assessment allows teachers to gather data about how their students are learning during instruction in order to shift and change their instruction to better suit the needs of students. Educators may also share this feedback with students so that they can monitor,

improve, and take control of their own learning. In Frey and Schmitt's (2010) survey of the classroom practices of third to twelfth grade teachers, participants responded that they only give assessments during instruction 25% of the time, and only 12% of assessments do not affect student grades. Therefore, formative assessment is much less commonly used than summative assessment. It would be beneficial to both students and educators to use formative assessment because it has been found to positively affect student learning and outcomes. In Black and Wiliam's (1998) landmark review of the literature on the effect of formative assessment on student achievement, they found that the effect sizes of the experimental studies included ranged from 0.4 to 0.7. This result means that high-quality formative assessment can greatly increase student achievement. To contextualize these results, Black and Wiliam (1998, p. 140) state that "[a]n effect size of 0.4 would mean that the average pupil involved in [formative assessment] would record the same achievement as a pupil in the top 35% of those not so involved." The review also found that formative assessment is especially effective at helping low achievers make the most significant increases in achievement.

Formative assessment can be employed informally or formally. Examples of informal formative assessment include observing student behaviours and asking questions during instruction. This type of assessment allows the teacher to check in with students to ensure they are following the instruction (Frey, 2014). Formal formative assessments are structured and planned tasks given by educators. Frey (2014) provides several examples of formal formative assessment. One example is quizzes or exams that do not count towards grades; these would be most effective if students self-score and are provided feedback about incorrect answers. Other examples include self-reflection worksheets so

that students can pinpoint areas for improvement, self-scoring rubrics that enable students to assess their own skills or abilities, or letters to parents where students be reflective and explain what they have learned. Formal formative assessment is more objective and systematic than informal, and allows for a better understanding of a student's progress, and can be used to compare students within or outside the school (Faragher, 2014).

While formative assessment has been found to improve educational outcomes, a balance of both formative and summative should be achieved because they each have a purpose. Formative assessment can shape students' learning and improve achievement, while summative assessment demonstrates competence (Brown, 2019).

Standardized Testing

Depending on the jurisdiction, students may encounter many standardized tests, a type of summative assessment, throughout their educational career. In the United States especially, standardized testing is very common at the state and district levels (Kelly, 2021). In a report of testing practices, it was found that, on average, American students write 112 standardized tests between kindergarten and grade 12 (Hart et al., 2015). In Canada, testing is less ubiquitous; however, it is more common than ever before (Kempf, 2016).

Standardized tests are meant to measure students' skills and understanding. Proponents of standardized testing argue that it provides an objective measure of students' knowledge and ability, it provides accountability to the public, and that its objectivity minimizes the educational impacts on traditionally marginalized students (Kempf, 2016). However, research shows that high test scores and achievement correlate with higher family and community socioeconomic status, and low test scores and

achievement scores with lower socioeconomic status (Kempf, 2016; Sirin, 2005; van Ewijk & Slegers, 2010; White, 1982). Therefore, standardized test scores do not provide an objective and unbiased reflection of student learning.

Another drawback of standardized tests is that they affect what is taught in the classroom (Kelly, 2021). Many teachers feel pressure to teach in order to improve test scores, rather than to improve learning (Kempf, 2016). Kempf (2016) refers to this as test-oriented teaching and learning (TOTL). The author states that TOTL is

... characterized by curricular contraction (of both breadth and depth) as well as a focus on tested content to the exclusion of untested content. In particular, the arts, physical and health education, social sciences, and in some cases science education are marginalized. (p. 165)

TOTL means that content and subjects that are not included in standardized tests are overlooked in favour of spending more time on test-relevant subjects to increase students' scores (Kelly, 2021). In interviews with Ontario teachers, Kempf (2016) found that an average of one month was spent preparing for the annual assessments of math, reading, and writing. However, extra time spent attempting to increase scores may not result in increased learning. A report by the National Research Council (2011) found that when test scores increased, this improvement was not reflected in other assessments of learning and achievement. Due to TOTL, teachers have less time to address other important matters, such as providing alternate methods of learning that is not associated with standardized testing, and addressing student diversity and well-being. (Kempf, 2016). Teachers also reported that students "lose sleep, experience anxiety, and often find themselves in tears around Ontario's standardized tests" (Kempf, 2016, p. 28).

Standardized Testing in Canada

Across Canada, there are far fewer standardized tests used compared to most US states. However, norm-referenced standardized testing is more widely used in Canada than in the past. Compared internationally, Canada places approximately in the middle in terms of number of standardized tests administered. Each province and territory administers standardized tests, and on average, Canadian students write between three and five standardized tests between grades three to twelve (Kempf, 2016).

Currently, Alberta administers the Provincial Achievement Tests (PATs) annually to all students in grades six and nine (*Provincial Achievement Tests*, n.d.). Testing occurs in January, May, and June and covers the subjects of English, Français/French language arts, mathematics, science, and social studies (*Provincial Achievement Tests*, n.d.). The purpose of the PATs is to “determine if students are learning what they are expected to learn, report to Albertans how well students have achieved provincial standards at given points in their schooling, [and] assist schools, authorities and the province in monitoring and improving student learning” (*Provincial Achievement Tests*, n.d.). Achievement targets for both schools and boards are set by each school board. Schools share results of the PATs with parents, and the scores are not included in final course grades (*Provincial Achievement Tests*, n.d.).

In grade 12, students in Alberta write the Diploma Examinations. These are course-specific examinations that contribute 30 percent of a student’s final grade, with the other 70 percent coming from coursework. Until the 2015-2016 school year, Diploma Exams contributed to 50% of a student’s final mark (“Alberta education,” 2015). Students are required to write Diploma Examinations if they take science courses,

mathematics, English language arts, Français and French language arts, and social studies (*Diploma Examinations Program*, 2022). The main purposes of the Diploma Examinations are “to certify the level of individual student achievement in selected Grade 12 courses, to ensure that province-wide standards of achievement are maintained, [and] to report individual and group results” (*Diploma Exams*, n.d.).

Other provinces and territories in Canada have similar tests. In British Columbia, students in grades four and seven must take the Foundation Skills Assessment, which assesses literacy and numeracy but does not count toward final grades. As graduation requirements, numeracy and literacy are tested in grade ten, and literacy is tested again in grade twelve (*Provincial Assessment*, n.d.). In Ontario, students write standardized tests, known as EQAO (named after the government department that administers the tests, the Education Quality and Accountability Office), which focus on mathematics, reading, and writing in grades three, six, and ten (Kempf, 2016). As a requirement for graduation, students must pass the Ontario Secondary School Literacy Test (OSSLT) in grade ten (Education Quality and Accountability Office, n.d.).

The Relationship between Assessment and Motivation

Currently, there is a lack of research that examines assessment and motivation from a self-determination theory framework. However, there are studies investigating this relationship from other theoretical perspectives that can provide a solid understanding of the topic. Specifically, many of these studies look at how motivation is impacted by assessment type, such as performance assessment, summative assessment and high stakes testing, and formative assessment.

There is some empirical evidence that demonstrates that performance assessment increases different types of motivation. Hancock (2007) examined the impact of performance assessment and traditional paper-and-pencil assessment on graduate students' achievement and motivation to learn, which they defined as a unitary concept. While there was no significant difference in achievement between the group that was given a performance assessment and the group that was given the paper-and-pencil assessment, the students who were given the performance assessment demonstrated higher levels of motivation to learn. Similarly, Brookhart & Durkin (2003) studied a variety of assessment types and their effect on task perception, self-efficacy, goal orientation, and achievement levels in high school social studies classes. They found that performance assessments were positively correlated with the amount of invested mental effort, performance goal orientations, and mastery goal orientations, suggesting that performance assessments elicit both "internal and external sources of motivation" (Brookhart & Durkin, 2003, p. 50). The results from these studies indicate that performance assessments enhance students' intrinsic and extrinsic motivation compared to paper-and-pencil tests and other assessment types.

More research has been conducted on the effect of summative testing on motivation. In a study by Grolnick and Ryan (1987), two groups of children were asked to read passages. One group was told they would be tested on the material, while the other group was told they would be asked questions about the passage, but would not be graded. The students who were told they would not be tested had a greater interest in the reading material and better conceptual learning compared to the tested group, who had greater pressure and a greater deterioration in rote learning at follow-up. Similarly,

Benware and Deci (1984) asked college students to read an article on brain functioning; one group was told they would be tested on the material, and the other group was told they would teach another student about the article. All participants were examined on the material, but the second group did not expect the test. This second group reported greater intrinsic motivation and active learning, and they demonstrated greater conceptual learning than the group that was tested. The results from these studies indicate that students who learn with the expectation of being tested are less likely to be motivated to learn, and also have less interest in and a poorer understanding of the learning material.

Research has investigated high-stakes summative testing as well. For example, Harlen (2012) and Harlen and Deakin Crick (2003) described the impact of high-stakes and summative testing on students' motivation for learning. Both reviews describe the negative impact of this type of assessment, how positive action can be implemented in schools to reduce its negative effects and how assessment can be used to benefit motivation for learning. Summative assessments, and especially high-stakes testing, have a negative impact on student motivation because it encourages "transmission teaching" and reduces "the scope and depth of learning" (Harlen, 2012, p. 7) by focusing teaching on content covered by tests. Students also feel increased test anxiety due to the high-stakes nature of this testing, and they also feel increased pressure to do well from parents and teachers (Harlen & Deakin Crick, 2003). As well, students are more likely to adopt a performance orientation, which means they focus on achieving a certain grade on tests and examinations, rather than focusing on learning and higher-order thinking to understand the content. Furthermore, feedback on summative assessments is often judgmental in the form of scores or grades, rather than supportive

feedback that can help students improve (Harlen, 2012; Harlen & Deakin Crick, 2003).

Based on reviews of the literature, these authors outline ways that the negative impact on motivation can be reduced and how motivation can be increased. First, mastery goals should be encouraged, rather than performance goals, because they promote learning and encourage students' self-esteem. Secondly, research shows that the type of feedback students are given has a significant impact on their self-efficacy for learning and completing classroom tasks and assessments. Feedback given along with a high level of support from teachers provides "the general impression that students have of their teachers' helpfulness and interest in them as learners" (Harlen, 2012, p. 8). Additionally, it provides students with a greater sense of self-efficacy, responsibility, and makes progress more evident. It is also suggested that teachers put less emphasis on grades, expand the information and content used to assess students, and adopt approaches that accommodate a range of learning styles (Harlen & Deakin Crick, 2003).

Madaus and Clarke (2001) also examined the impact of high-stakes testing on minority students, and found that high-stakes tests do not motivate unmotivated students. Unmotivated students may feel they do not have the ability to pass these tests, or "they do not see the test credential necessarily resulting in jobs or college because of scarcity, competition, or lack of relevance in their social setting." (Madaus & Clarke, 2001, p. 97). Subsequently, these students may become alienated from examinations and the educational process as a whole. As other researchers have found, students who are motivated by high-stakes tests are externally motivated to improve their scores and performance rather than to gain knowledge and competence. Overall, the findings from

these studies show that summative assessment and high-stakes testing are largely detrimental to student motivation.

In contrast, formative assessment is hypothesized to increase motivation. For example, Cauley and McMillan (2010) described classroom practices that can be used to enhance students' achievement and motivation. The first of the five practices they describe is for teachers to provide clear learning targets, because then students have a clear idea of the goals and expectations teachers have for them. Secondly, teachers should provide feedback to students about their progress toward their learning goals. They recommend that the feedback focuses on helping students improve skills, understanding, and mastery, and that teachers should avoid normative feedback that compares students and results in extrinsic motivation. The third practice Cauley and McMillan recommend is for teachers to attribute students' success to effort. Next, the authors recommend that teachers encourage student self-assessment, including self-monitoring their work, self-evaluating their performance and desired progress, and making steps towards improving their learning or skills. Finally, the authors recommend teachers help students set attainable goals for improvement through feedback. They state that specific goals are most effective "because self-efficacy is substantiated as students observe their progress toward the goal" (Cauley & McMillan, 2010, p. 5).

In support of this initial literature that shows formative assessment increases motivation, a few studies working from an SDT perspective have also shown that formative assessment enhances intrinsic motivation. For example, Barefoot (2017) examined the relationship between formative assessment, delivery of instruction, and intrinsic motivation. The study compared the results of two groups of students in a

university research writing class. The intervention group was given a session of information literacy instruction as well as an individualized, written formative assessment and a second instruction session during the second class. The control group only received the session of instruction. Analyses indicated that the group that received formative assessment and a second instruction session had increased intrinsic motivation for conducting research compared to the control group. Similarly, Hondrich and colleagues (2018) investigated the direct effect of formative assessment on intrinsic motivation and the indirect effect of perceived competence, a basic psychological need. Two groups of elementary school students were assigned to either a control group, or the treatment group that was instructed by teachers who implemented formative assessment. Students' intrinsic motivation and perceived competence were assessed before the intervention, after the first classroom unit, and after the second classroom unit. Results showed that after unit one, the students who were given formative assessment had higher perceived competence and intrinsic motivation. After unit two, intrinsic motivation was even higher for these students compared to the control, and the impact of intrinsic motivation was mediated by students' perceived competence after the first unit. Pat-El and colleagues (2012) also found that the relationship between formative assessment and intrinsic motivation was mediated by basic psychological needs. The researchers looked at the formative feedback methods of monitoring and scaffolding, which are used in the process of formative assessment. Results showed that formative feedback and interpersonal teacher behaviour had an influence on students' intrinsic motivation, but that this relationship was mediated by students' feelings of competence, relatedness, and

autonomy. Overall, these studies demonstrate that formative assessment can increase students' intrinsic motivation and other positive outcomes like perceived competence.

Researchers working from an SDT perspective have investigated other aspects of assessment and their effect on motivation. Thomas and Oldfather (1997) examined how social-constructivist assessment practices support intrinsic motivation. They concluded that the key elements supporting intrinsic motivation were perceived autonomy, self-competence, optimal challenge, and relational qualities. They state that perceived autonomy is supported through assessments where students contribute to setting their own goals and selecting activities, and being involved in the assessment process through establishing criteria and self-assessing. Self-competence is supported through authentic assessment practices that provide opportunities for students to contribute to and find solutions to real-world activities. Additionally, Thomas and Oldfather also state that optimal challenge levels are connected to self-competence and perceived autonomy. They argue that providing students with their optimal challenge level requires allowing the student the freedom to make choices about their learning, and at this level, students are likely to experience growth in their learning which increases self-competence. Finally, the relational qualities of autonomy-support, structure, and involvement that are present in authentic assessments support intrinsic motivation. In authentic assessments, students are involved by communicating with teachers and classmates, goal-setting and providing feedback, and having choice in their learning activities.

Although there is a research gap in SDT perspectives on the relationship between motivation and assessment, Wu and colleagues (2014) have examined pre-

service teachers' perceptions of the relationship between assessment and intrinsic and extrinsic motivation, presented in a conference paper. They conducted a thematic analysis of answers to an online discussion on the topic, and derived four themes from the responses: classroom assessment environment, the nature of assessment tasks, the effectiveness of feedback, and the clarity of learning goals and criteria. In summary, they found that intrinsic motivation was more likely to occur when classrooms involved a task-involving environment, authentic and diversified assessment tasks, effective feedback, and clarifying learning goals. In contrast, extrinsic motivation was more likely to occur in a competitive environment, where teachers predominantly teach to the test and give students grades.

The Current Study

The purpose of the current study is to investigate students' experiences of assessment and extrinsic and intrinsic motivation. Research shows that intrinsic motivation leads to greater psychological health and high-quality learning, while extrinsic motivation is associated with rigid functioning and reduced well-being (Deci & Ryan, 2008; Ryan & Deci, 2000a). Examining students' experiences will add to the current lack of literature surrounding assessment and motivation, and the results will have implications for educators and practitioners looking to support students' intrinsic motivation through assessment.

Methods

The current study used a qualitative descriptive research design with open-ended written data to explore university students' experience of extrinsic and intrinsic motivation during assessment.

Procedure

Participants were recruited via a required undergraduate course on classroom assessment during the Fall semester of 2021. The course included 11 course topics involving lecture videos and completing Application Activities every week. The data for this study was collected as part of the written Application Activity in Topic 4, which included a survey related to summative assessment and student motivation. Students were given instruction in extrinsic and intrinsic motivation prior to responding to the survey. I focused on two open-ended survey questions in the current thesis study. Ethics approval was obtained by the course instructor from the institutional review board, and students indicated their consent for their responses to be used for research purposes after completing the course activity.

Participants

There were 284 undergraduate students registered in the course. A total of 226 students completed the Topic 4 Application Activity, of whom 210 consented for their data to be used for research purposes beyond the course requirements. There were 125 women, 78 men, 6 non-binary participants, and 1 participant who stated they preferred not to report their gender. The ages of the participants ranged from 19 to 43 years old ($M = 26.1$). Participants identified themselves as predominantly White (63.3%), while the next three largest ethnic groups were Chinese (6.7%), South Asian (5.2%), and Arab (4.3%). One participant was excluded for not answering the prompts for the study, leaving a total of 209 participants.

Measures

To describe students' experiences of extrinsic and intrinsic motivation during assessment, the researchers asked participants to respond to two open-ended question prompts on summative assessment and student motivation. The prompts were:

1. Describe a time you were extrinsically motivated by assessment. What was the assessment? What made it extrinsic? How did it feel?

2. Describe a time you were intrinsically motivated by assessment. What was the assessment? What made it intrinsic? How did it feel?

Coding and Thematic Analysis Procedures

Before analysis, sixty-nine responses were removed from the responses to the extrinsic prompt, and forty-five were removed from the responses to the intrinsic prompt because they did not describe a specific assessment. I followed the process for coding qualitative data as described by Creswell and Creswell (2018). Before analyzing the data, the responses were prepared and organized into two documents, separated into responses to the extrinsic prompt and responses to the intrinsic prompt. Participants' written responses to each prompt were analyzed separately, beginning with the extrinsic responses. Responses were examined as students provided them; typos and grammar errors were not corrected. First, I and the assisting graduate students open-coded a sample of the participants' responses for possible themes by segmenting and highlighting sections of text and labelling them with a word that represents its idea. Often, the label came from an *in vivo* term that was used by a participant (Creswell & Creswell, 2018). Then, the assisting graduate students and I compared our codes and the process was repeated with a second sample of responses. I then independently open-coded the

participants' responses from both prompts and organized the codes into potential themes.

My research supervisor and I reviewed the themes and codes for redundancy and reorganized them. Subsequently, I created a codebook organized by theme that defined each code and provided examples. After coding, the responses were read through again and verified. For ease of documentation and interpretation, I created a document that compiled every example of each theme and sub-theme from the participant responses.

Positionality

Prior to the coding and thematic analysis of the written data, I, the author, assisting graduate students, and my supervisor discussed personal biases regarding assessment and extrinsic and intrinsic motivation, and our expectations of what the responses will say. Acknowledging the biases we hold allowed us to better manage them during the coding process. Specifically, we discussed that we have a more positive opinion of intrinsic motivation and formative assessment, and that students do not have a pleasant assessment experience if they are not intrinsically motivated. We discussed how we thought that assessments that are extrinsically motivating are viewed as more "serious" while assessments that are intrinsically motivating are sometimes seen as "less serious" and low stakes. We expected that participants would have an easier time thinking of a time they were extrinsically motivated, and that their experiences of intrinsic motivation would be harder to come up with, result in shorter responses, and refer to an assessment that was "less academic". We discussed how we have an idea of extrinsic motivation as stressful and not enjoyable, although some people might enjoy being extrinsically motivated and find success with it.

I recognize that the data from this study is interpreted through my standpoint as a White, heterosexual woman with a Bachelor of Arts who has had the privilege of private schooling and access to additional educational support when needed. My educational experience, biases, and assumptions will undoubtedly have an effect on how I examine the participant responses. The discussion with my supervisor and assisting graduate students was helpful for revealing my biases. To elaborate further, I have more commonly experienced extrinsic motivation than intrinsic motivation over the course of my education. This leads me to believe, as stated above, that the participants will more easily be able to come up with an example for the extrinsic motivation response. Many of the assessments by which I have been extrinsically motivated have resulted in stress and a prioritization of completing the assessment over actually learning. Again, I think this will be a common experience among the participants. In terms of intrinsic motivation, it is difficult for me to think of examples of when I was truly intrinsically motivated by an assessment. Therefore, I believe that the same may be true for many participants, although I also believe the participants' intrinsic experiences will be more positive overall than their extrinsic experiences.

To manage my biases during analysis, I kept my assumptions in mind, and also looked out for themes in the responses that were the opposite of my expectations. In addition, I engaged in check-ins and discussions with my supervisor about the nature and relevancy of the sub-themes I had identified. Sub-themes that were not as common among the responses as initially thought were subsequently eliminated.

Results

Thematic Analysis

The thematic analysis resulted in 29 discrete sub-themes that gave rise to 10 thematic categories (15 sub-themes and 5 themes from the extrinsic prompt and 14 sub-themes and 5 themes from the intrinsic prompt). The themes for extrinsic motivation were: Emotions, System Constraints, Grade-Focused, Relationship to Learning, and Characteristics of Assessment. The themes for intrinsic motivation were: Emotions, Relationship to Learning, Characteristics of Assessment, Pedagogy, and Relatedness. The three themes of Emotions, Relationship to Learning, and Characteristics of Assessment were identified from student responses to both the intrinsic and extrinsic prompt, although they are made up of differing sub-themes. The results from the extrinsic motivation and intrinsic motivation responses will be discussed separately.

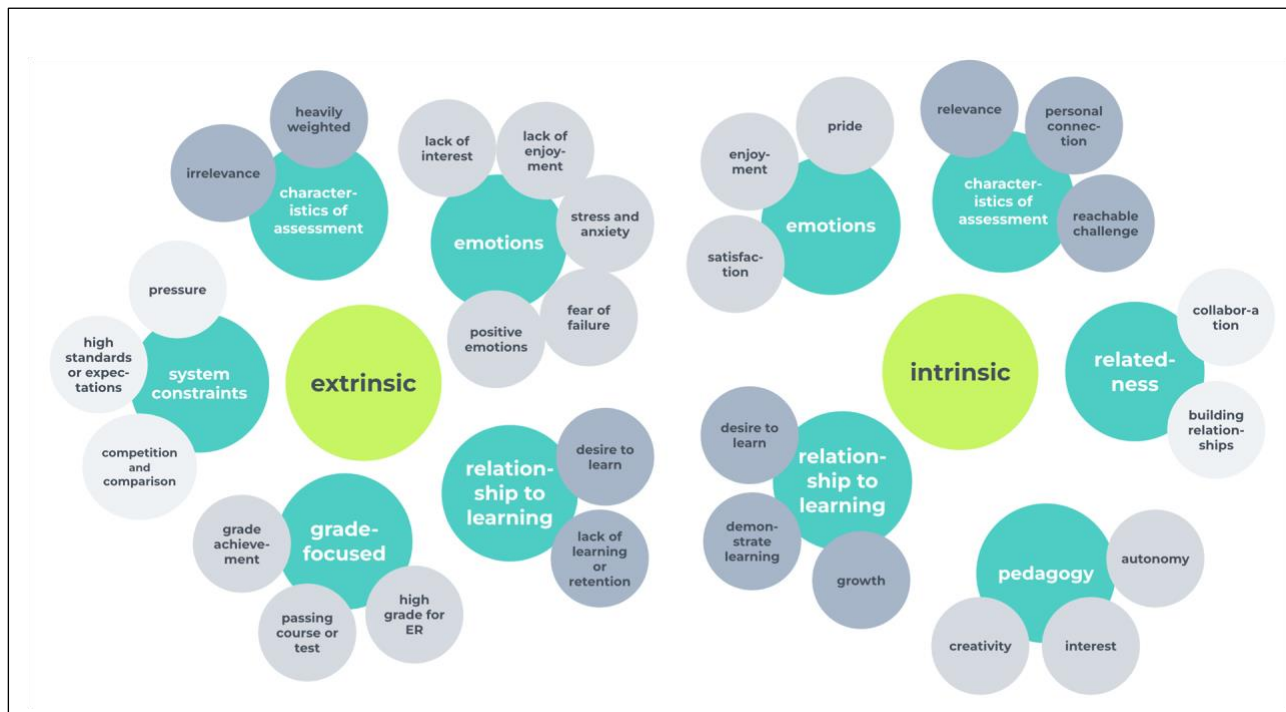


Figure 1: Themes and sub-themes from participants’ experiences of extrinsic and intrinsic motivation during assessment.

Themes: Extrinsic Motivation

Emotions. The first theme we identified from the participants' responses was Emotions, which arose from the feelings participants had before, during, and after the assessment experience. Within this theme, we identified five sub-themes: Lack of Interest, Lack of Enjoyment, Stress and Anxiety, Fear of Failure, and Positive Emotions.

Within the Lack of Interest sub-theme, participants described how, when extrinsically motivated, they felt disinterested or did not care about the assessment or course content as a whole. For example, participant 149 wrote: "I took a political science class as a requirement for my degree and I found myself very disengaged with the topics. The course itself seemed difficult and the topics were not of my interest." Often, participants described their lack of interest in the assessment or course, but explained that they still needed to do the work in order to pass the class or achieve a certain grade. For example, "I wasn't always invested in the topics and I wasn't motivated to learn more about the topic or practice my writing skills—I was truly in it for the marks" (participant 114). Similarly, another participant wrote: "It was a course that I needed to pass so that I could receive a biology degree. I cared very little about calculus" (participant 202).

Within the Lack of Enjoyment sub-theme, participants explained how they did not find pleasure in completing assessments or learning content when extrinsically motivated. Several participants mentioned how they could not focus on the enjoyment of learning or doing assessments, and instead had to focus on achieving a certain grade or simply completing the assignment. For example,

Our success and chances of post secondary opportunities was weighing on the mark we got on Diploma Exams – this extrinsic motivation made it hard for us as

students to focus on learning the content for the enjoyment of learning and very easy for us to focus on learning the content for a numerical outcome in the form of a grade. (participant 112)

Another participant explained that they chose a topic for an assessment that would be “easier to execute instead of choosing something harder that I may have been more interested in” (participant 114). In addition, one participant described how external motivators and a focus on grades resulted in displeasure towards a subject they had previously enjoyed: “The fear of bad grades was enough to drive me to success, I actually did pretty well somehow! [...] But I retained absolutely nothing and now hold a deep resentment towards a subject I used to enjoy.” (participant 146).

The Stress and Anxiety sub-theme emerged from participants’ descriptions of feeling stressed and anxious due to the external pressures from assessments. Many participants described these feelings, using words such as "stressful," "anxiety," and "nervous," with some using descriptions such as "it felt dreadful" (participant 149) and "the challenge of the exams was stressful and honestly kind of terrifying" (participant 310).

Several participants described extreme stress, sometimes resulting in a lack of wellness and the extreme effects of anxiety. Participant 244 reported: "I remember being extremely stressed [...] which led to insomnia for a few days leading to the exam." Participant 240 described how they were "crying in a bathroom" before taking a final for a university-level math course, and that "... [h]aving my future rest on a single grade I received was incredibly stressful..." Furthermore, participant 291 explained that taking many high-stakes university exams has "made me develop exam taking anxiety."

The next sub-theme, Fear of Failure, encompasses participants' fear of failing or not passing an assessment or course, as well as the fear of not meeting expectations.

Participants wrote that they were "so scared of doing poorly" (participant 238) and that they "had a very extreme fear of failure" (participant 133). Another participant described that they were "felt motivated by fear and stress that I would not perform well on the exam..." (participant 157).

Participant 146 described extreme feelings of anxiety and fear of failure taking place over a semester:

I was in a university course just two years ago that was so exceedingly difficult and mind-boggling to me that I felt like I was freefalling everytime I entered the class. The tests terrified me. They were worth so much of my grade and were far too long for most students to finish them in time [...]. Needless to say, I felt horribly anxious the whole semester that I might fail a class for the first time.

This participant continued, describing how they were able to perform well despite the extreme anxiety: "The fear of bad grades was enough to drive me to success, I actually did pretty well somehow!" For this participant, their fear of failure was not undermining or debilitating, but encouraged them to perform better on assessments.

Not all emotions described by participants were negative. The next sub-theme, Positive Emotions, emerged from participants' descriptions of positive emotions and experiences they had while being extrinsically motivated. Some participants described how positive emotions were elicited after they did well on an assessment. Participant 236 stated that "it felt good when I scored well on [the final assessment]" and participant 245 said, "it felt great to [meet] my goal [...] and I was very proud of myself." Similarly,

participant 281 described that after receiving a “horribly low grade” on a previous assignment, “getting the great mark next time felt very good and actually kind of motivated me to study better.” Other participants derived pleasure from extrinsic motivation. For example, participant 111 stated that “[i]t feels good to be challenged.” Additionally, some participants experienced positive emotions when the process of completing an assessment and learning was made to be “fun.” For example:

[T]his particular science class [was] a fun environment where students were trying their best to get good enough grades for a piece of candy. It felt good to be appreciated for your hard work for a piece of candy as a grade seven student.
(participant 130)

System Constraints. Another theme identified from the participants’ responses was System Constraints. This theme describes the external conditions that constrained participants’ assessment experience. The constraints came from the self, from others, or perceived from others. The sub-themes under System Constraints include Pressure, High Standards and Expectations, and Competition and Comparison.

Within the sub-theme Pressure, participants described how they felt pressure to complete assignments and to perform well. Participants stated that the pressure came from things such as frequent assessments (participant 299), the high weighting of certain assessments toward a final grade (participants 172, 129) and looming rewards such as “scholarships and university entrance” (participant 260). Participant 260 stated: “[The diploma exams were] high stakes and I wanted to do well in order to qualify for scholarships and university entrance. There was a fair bit of pressure...” Similarly, when participant 242 was extrinsically motivated by a biochemistry exam, they “felt extremely

pressured, and only rewarded when the grades were released.” Many participants described their pressure to perform well in a negative light. For example, participant 299 explained that the pressure from frequent assignments resulted in overwhelm: “While I always completed these assignments, the constant pressure and stress of these assessments became really overwhelming and I started to feel like I wasn't learning anymore but just working to complete these assignments.”

The High Standards and Expectations sub-theme emerged from participants' descriptions of how they felt assessment was extrinsic when they were held to high standards and expectations, usually from parents, educators, or the self. For example, participant 177 described how they believed from a young age that they “had to meet the educator's expectations and achieve high marks constantly.” In addition, participant 195 discussed how they were extrinsically motivated by expectations from others and that this affected their experience in education:

I think a lot of my motivation came from expectations from my parents and family as well as comparing myself to other students. To be honest, it really didn't feel great. I felt like all the struggle I went through was to satisfy others but never really myself.

Participant 313 explained how high expectations came from the society they grew up in, and that these expectations extrinsically motivated them to study:

The common attitude and the belief in [Taiwanese] society, including my family, is that a "good" program (mostly science or engineering) offered by a good university dictates your future. Therefore, most students, including me, take

practice exams daily starting as early as grade 7 to prepare for this national assessment.

Within the Competition and Comparison sub-theme, participants described how the motivation to perform comes from competition with others which naturally implies comparison. Participant 204 describes how their extrinsic motivation to perform came from “needing a good grade in the course and outperform[ing] other students.” Sometimes, participants described the experience of competition negatively. Feelings of stress and anxiety were mentioned, as well as the fear of underperforming. For example, participant 254 described:

A time I was extrinsically motivated by an assessment was a summative assessment that included multiple-choice and short answer questions. [...] I felt like I was competing with the other students to see if I could remember more information than my classmates. After the teacher graded the assessment, he praised me for the grade and not the effort it took me. My feelings on the assessment were that the competition aspect caused the feeling of anxiety and stress.

Although competition always involved comparison, comparison had other sources as well. For example, participant 323 explained how, when all students were asked to build the same desk during their carpenter apprenticeship, “it was very stressful and i did alot of comparing to other students.”

For some participants, the motivation to achieve highly due to competition and comparison resulted in a positive experience and pushed them to perform well. For

example, participant 296 explains how a competitive assessment positively motivated them to perform:

In high school we had individual presentations in my English class, I was extrinsically motivated to achieve in this assessment out of sheer competition. The teacher I had made the presentation assessment a competitive event, rewarding bonus points on the next assignment to the best presentation. I also had numerous friends in that class, of whom I wanted to beat.

Similarly, participant 300 and their friend used competition to “[push] each other” and “perform well” on a final exam in biology. Both participants 300 and 296 did not describe their experiences with competition negatively, and this resulted in increased extrinsic motivation without added stress.

Grade-Focused. The second theme we identified was Grade-Focused. This theme arose from participants describing their relationship to assessment as primarily focused on achieving certain grades. Within this theme, three sub-themes emerged: Grade Achievement, Passing Course or Test, and High Grade for External Reward.

Within the Grade Achievement sub-theme, participants discussed their extrinsic motivation as largely coming from a focus on grades but did not specify why they had this focus. Participants made statements such as “I cared about my grades only” (participant 196), “the only reason I plowed on was because I needed the grade” (participant 272), and “I finished the assignment so I could get a good grade, but I was not at all motivated internally” (participant 276).

Discussing the Alberta diploma exams, participant 124 described how others pushed them to achieve “good grades” but this resulted in feeling disconnected as a student:

This motivation [to write the diploma exams] was extrinsic as it was controlled by others and intentionally placed on me to provide a reward (good grades) or punishment (poor grades) depending on my performance. While it certainly motivated me to work harder, these exams did not make me feel valued as a student and somewhat reduced the image of my high school experience to a number.

As well, many participants described being solely motivated by grades, rather than completing an assessment in order to learn or for their own enjoyment or interest.

Participant 109 described such an experience:

I know this was an example of extrinsic motivation, because though I did wish to learn [the content] out of my own interest, I was only doing so in this way because of the grade offered at the end...

Other participants were more specific about why their extrinsic motivation was fuelled by a focus on grades. Within the Passing Course or Test sub-theme, participants described their focus on achieving a passing grade on assessments or in a class overall, or avoiding failure generally. Many participants described how their sole motivation came from wanting to pass. For example: “I was only motivated to pass the course and had no enjoyment in the topics presented” (participant 220), and “my motivation to complete the assignment was mostly to earn a good grade so I could pass the course” (participant 243).

Other participants mentioned avoiding failure: “my only motivators to do well was my final grade and the possibility of failure (punishment)” (participant 240), “I [am] motivated by rewards (passing) and punishment (failing) [more] than anything else” (participant 232).

The next sub-theme under the Grades category is High Grade (for External Reward), which encompasses participants’ descriptions of their focus on achieving a high grade for an external reward. Often, participants mentioned rewards such as undergraduate or graduate university acceptance, scholarships, career success, or praise from others. For example, participants discussed wanting high grades “to get into post secondary” (participant 187), to “be accepted into grad school” (participant 285), and because “admissions to [university] programs are very competitive” (participant 223). High grades as an extrinsic motivator were also connected to the material lives of participants. For instance, participant 272 explained: “Good grades also get me scholarships which means my family suffers less financially.”

Furthermore, participant 231 explained how they were extrinsically motivated to do well on Advanced Placement exams for university credit and to help them in their desired career:

In grade 12 I had very specific career goals of being an educator, being in AP courses with the possibility of obtaining university credit, AP exams represented a very real reward (extrinsic motivation) to not only do well on the exams but also to retain the information being tested.

Some participants mentioned praise as an external reward they received when they achieved high grades. Participant 177 discussed their experience with praise and grades:

A time when I was extrinsically motivated by assessment was when I was in Grade 7 and I was praised constantly by educators when I received high grades. [...] I recall one time in my math class when I received 100% on a math test and I was praised in front of the class. It felt really good to be praised for receiving a perfect score on a test and this public praise motivated me to strive to do my best for every future test.

Importantly, participants' discussion of being extrinsically motivated by high grades or achievement was not exclusively a post-secondary experience. Many students recalled instances of extrinsic motivation during their compulsory education as well. For example, participant 213 stated: "In grade 7 or 8, our [Language Arts] teacher told us that if our class got more ... points than the other classes in our grade by the end of the term, we would get to have a pizza party." Like in this example, often, participants who described their elementary school assessment experiences mentioned external rewards such as pizza parties, other treats or rewards like watching a movie for good performance.

Relationship to Learning. Another theme that emerged from the responses to the extrinsic motivation prompt was Relationship to Learning, which describes how participants felt with respect to learning and their assessment experience. The sub-themes under Relationship to Learning include Lack of Learning or Retention and Desire to Learn.

In the Lack of Learning or Retention sub-theme, participants described how they felt that they did not learn content or retain what they had learned when assessment was viewed as extrinsic. Participants stated that they “retained absolutely nothing” (participant 146) or that they “never really felt like [they] learned too much in the long term” (participant 144). Often, participants explained that their lack of learning and retention of content was due to a focus on grades and assessment rather than learning itself. For example:

I strategically designed my study plan to aid in quick memorization of superficial characteristics, and anything that might help me do better on the exam [...] rather than taking time to learn the material in a way that would be committed to my long term memory. Looking back now, I regret this situation because I was excited to learn about those topics, but in the moment I was more motivated by grades and now I don't remember any of the content that I "learned". (participant 109)

Similarly, participant 124 explains that “the constant pressure and stress of these assessments became really overwhelming and I started to feel like I wasn't learning anymore but just working to complete these assignments.”

Within the Desire to Learn sub-theme, participants described how they wanted to learn more about the content of a course, or they wanted to focus on learning, but often had to focus on grades or assessments instead. For example, participant 313 wrote: “I would rather have learned the subjects deeply and not care much about the grade, or at least not put it as top priority.” Similarly, participant 174 explained:

While coding is something that I really wanted to learn about, the fact that a big chunk of my assessment for the course (15%) is attributed to this activity meant that I was mainly concerned with getting things right without necessarily understanding everything.

Evidently, these students wanted to learn more about the particular subjects they were studying, but were instead primarily focused on achieving a grade rather than learning.

Participant 279 expressed disappointment with his instructor due to the disconnect between his learning goals and the assessment presented:

This assessment was [extrinsically motivating] as it dominantly relied on factual recall rather than an expansion of learning. Rather than being involved with the learning going on in class, the multiple choice test was distant from my personal learning goals. It was clear to see that the teacher's goal for the assessment was purely summative and to evaluate the amount each student had learned. This resulted in me feeling let down by my teacher, for it seemed that she was only invested in what I learned, not how or why I wanted to learn.

Characteristics of Assessment. Under the theme of Characteristics of Assessment, participants frequently described two features of assessment by which they were extrinsically motivated. This included Irrelevance and Heavily Weighted.

Within the Irrelevance sub-theme, in response to the extrinsic prompt, participants explained how the assessments they were given were often not relevant, meaningful, or applicable outside of the course. Participants mentioned that their assessments had “no relevance to my life” (participant 204), and that “the knowledge itself was completely irrelevant” (participant 215). Speaking about an assessment in an undergraduate

education course, participant 276 stated: “The activity was very long, often frustrating, and did not connect at all to my success as a future teacher. I finished the assignment so I could get a good grade, but I was not at all motivated internally.” Similarly, participant 240 described their feelings toward an undergraduate mathematics final exam:

Having my future rest on a single grade I received was incredibly stressful and it made me angry because it was not a subject that I would need in my education future or in my life. It felt useless but it also felt like if I didnt do well it would have horrible consequences.

In both of these examples, the disconnect between the relevance of the assessment and the participants’ learning goals and future resulted in negative feelings such as frustration, stress, and anger.

The next sub theme, Heavily Weighted describes the frequent mention of feeling extrinsically motivated by assessments that were worth a lot of the overall mark in a particular course, often 30 to 50 percent or more. Often, students remarked that they were extrinsically motivated to complete or do well on an assessment partly or solely because it was worth so much of their grade. For example: “My essay assignment that was worth a third of my grade. The fact that this assignment was worth so much towards my final grade motivated me to complete the assignment” (participant 120). Participant 272 also expressed a similar sentiment: “the paper was worth 40% and the only reason I plowed on was because I needed the grade” (participant 272). Many participants described how heavily weighted assignments caused negative emotions. For example, “I remember being extremely stressed out” (participant 244), “I ... was very anxious” (participant 223), and “the tests terrified me” (participant 146).

Themes: Intrinsic Motivation

Emotions. A theme that emerged from participants' responses to the intrinsic motivation prompt was Emotions. This theme, like the theme from the extrinsic motivation responses, describes participants' feelings and emotions before, during, and after the assessment experience. However, in contrast to the largely negative emotions described in response to the extrinsic prompt, here, students reported primary positive emotions, which we used as three sub-themes: Enjoyment, Pride, and Satisfaction.

Under the Enjoyment sub-theme, participants described how they were intrinsically motivated when they enjoyed the process of learning content or completing an assessment. They made statements such as, "I loved my classes," (244), "I enjoyed doing [the assignment]" (256), "I absolutely loved the content" (116), and "I was excited about my subject matter" (109). Participants discussed the enjoyment they felt when learning or doing assignments and how this caused them to be more internally motivated. For example, participant 130 wrote:

In one of my university classes I wrote a paper on the importance of including different cultures inside the classroom. I was intrinsically motivated by this paper assessment because it is a topic that I hold near and dear to my heart and one that I thoroughly enjoy researching.

Many participants described similar experiences where the enjoyment and "fun" nature of a class or assessment led to greater intrinsic motivation. For example, participant 289 stated: "I have also had intrinsic motivation to do well in my native studies course because I was passionate about the topic I was presenting on..." Similarly, participant 289 explained how their passion increased enjoyment and motivation for their

assessment: “There have been a handful of times when a certain assessment has allowed me to tap into something I am passionate about, that is when I am motivated just by the joy and curiosity of researching.”

The sub-theme Pride emerged from many participants’ descriptions of how they felt proud of the work they completed. Many participants said they were “proud” or “took pride in” their work. For example, participant 195 explained that when they were intrinsically motivated to write a term paper in a university class, they “never felt more proud about a piece of work that I handed in.” Furthermore, participant 206 described how intrinsic motivation came from a desire to take pride in their performance in band class: “I knew there was an assessment but I wanted to do well so that I could feel like I performed to the best of my abilities. I wanted to make myself proud. It felt very rewarding.”

Some participants stated that they felt proud of what they had done and explained how they were not focused on achieving a certain grade. For example, participant 157 stated: “Upon completion of my essay, I felt proud of the hard work I put into organizing my passionate research and investigation into a compelling paper, regardless of ... what mark it could receive.” In a similar vein, participant 307 discussed how their teacher’s lack of focus on grades allowed them to concentrate on the process of completing the assessment: “I wasn’t working to impress someone else, ... I was working to produce something that I would be proud of.”

Another sub-theme that arose from the responses was Satisfaction. This sub-theme describes when a participant feels satisfied or accomplished by the work they are doing or have completed. Participants described feeling "immense satisfaction" (244),

"self-fulfilled" (149), and "more accomplished" (196). Participant 242 discussed the satisfaction gained from an assessment they were intrinsically motivated by and described how the assessment experience was positive and resulted in a great sense of accomplishment:

During an aquatic ecology class, the final assignment was a large lab report on any topic of our choice. [...] Every moment spent on that report was new, exciting, and extremely satisfactory as the data was calculated and analyzed due to its relevance to the surrounding environment. It felt absolutely amazing, and I believe it is to this day one of the best reports I have ever written.

Similarly, participant 204 also described how their satisfaction with their final project resulted in it being remembered as being an exceptional assignment: "I ended up with a good grade in the end, but it was one of the most satisfying and memorable assignments I'd ever completed."

Participant 129 explained how they derived satisfaction with their assignment because of positive feedback as well as the effort they put into its completion: "I felt very satisfied with the results of my [assignment] because I worked so hard on it and received a lot of supportive feedback on it from my professor and peers." In the same way, participant 314's satisfaction and accomplishment were tied to their hard work and preparation, as well as a good grade: "I remember studying all week before the unit test and when we finally took the test I got a 98. This left me feeling great about myself and what I had accomplished."

Relationship to Learning. Another theme that was identified from the participant responses was Relationship to Learning. Like in the responses extrinsic prompt, this

theme describes participants' relationship to learning, including how they feel about the learning or assessment experience or what they gained from the experience. From this theme, three sub-themes were identified: Desire to Learn, Demonstrate Learning, and Growth.

One sub-theme that emerged under Relationship to Learning was Desire to Learn. This sub-theme differs slightly from the code of the same name based on the extrinsic motivation prompt. Here, Desire to Learn describes participants' desires to learn more or gain more knowledge. Participants made statements such as "I wanted to do well to learn and better understand" (283), "I was eager ... to learn more" (223), and "I wanted to learn as much as possible" (244).

The intrinsic Desire to Learn sub-theme is different from the intrinsic sub-theme because here, participants do not mention being constrained by grades or other external conditions. As an example, participant 159 stated: "When I was writing a history paper ... I was motivated by my desire to know more and not entirely by what grade I got." This participant has explained that they were not solely motivated to write their paper based on grades, but on an intrinsic wish to gain more knowledge. Similarly, participant 104 described how their motivation did not come from an external source like grades, and that the intrinsic motivation they experienced contributed to positive feelings and interest in the subject:

It felt empowering to be intrinsically motivated, as I found myself spending a great deal of time actually practicing the objectives at hand in order to maintain the knowledge, rather than just memorizing information to fulfill a grade requirement.

Participant 307's response detailed how their intrinsic motivation in a course came from their passion for the subject and a desire to gain more knowledge and understanding:

I am more intrinsically motivated when I enjoy the class or am passionate about the subject. I have felt this way for most of the literature classes I have taken.

Although I still hope to get a good grade in the class, my reasons for doing the work are not based on grades but on my desires to master the material or to engage with the literature in a meaningful way. I study and do the readings because I am interested in learning literature and because I know that when I come to class prepared I can participate in the discussions. I am not wanting to participate in the discussion because I think that I will be rewarded but because I believe it will deepen my understanding.

The next sub-theme, *Demonstrate Learning*, emerged from participants describing that they were intrinsically motivated by assessments that allowed them to demonstrate what they had learned. Participant 283 stated, "I ... had several assignments where I really wanted to demonstrate my learning, because I genuinely found the knowledge of the class so interesting." Participant 290's intrinsic motivation was strengthened by the opportunity to display their knowledge of test material:

I was also intrinsically motivated by many of the tests I took in university math courses. I saw the tests as a reflection of my understanding of the material. [...] It gave me a chance to showcase to myself what I had learned and was now able to do.

Speaking about a high school biology project, participant 291 described that “I got to create something ... and it made me feel like I was able to demonstrate my understanding fully.” Many participants explained that when assessments were designed in a way that allowed them to show what they had learned, they were more intrinsically motivated.

The next sub-theme, Growth, arose from participants’ descriptions of how they have experienced or wanted to experience an improvement in skills or knowledge. Under this sub-theme, participants discussed focusing on the process of learning or improvement, rather than focusing on grades or other extrinsic motivators. For example, participant 267 stated that they “wanted to grow and learn throughout the course versus just getting a good mark.” Similarly, participant 124 said, “The motivation to continue researching [...] was intrinsic because I was doing it only for my own growth and to satisfy my curiosity.”

Furthermore, participant 220 explained how they were intrinsically motivated by an effective instructor who encouraged students not to focus on grades, but instead to focus on growth and understanding in the course:

A time I was intrinsically motivated was in my EDU 211 course. At the beginning of the semester the instructor was very honest with all of the students and laid out that she is prioritizing our growth and that we genuinely get something out of the course. She asked that we try to not think about grades, but instead work towards bettering our understanding of Indigenous teachings.

Additionally, other participants discussed how feedback and a chance to improve their work through formative assessment contributed to their intrinsic motivation. For

example, participant 256 described how they were intrinsically motivated when they were “given a second chance to improve by giving comments before grading.” As well, participant 161 wrote:

The times when I felt intrinsically motivated by assessment were when my teachers emphasized the importance of the feedback given to me on my assessments, such as when I was able to hand in assignments earlier than the due date and was given feedback from them without a grade, so that I could review my work and then finally submit my edited version. I was able to feel like I was submitting my best work and that made me feel intrinsically motivated.

Characteristics of Assessment. As with the responses to the extrinsic motivation prompt, the theme Characteristics of Assessment emerged. Under this theme, participants frequently described a few characteristics, which became the sub-themes of Relevance, Personal Connection, and Reachable Challenge.

Under Relevance, participants described assessments or courses as being applicable outside of the course or relevant to their lives outside academia. Participants made statements like “the topic was interesting and relevant to me” (participant 276), and “I found the assignment both meaningful and relevant” (participant 223). Participant 116 described how their experience in a marine biology course connected to real life: “The material and assessments were actively related to real life and importance of content was present, so I felt that I was gaining an understanding of the world in which I lived throughout the course.” Many participants described how they were intrinsically motivated by assessments and courses that would be applicable to their future careers as educators. For example, participant 267 wrote: “I truly wanted to do well because I knew

everything I would learn in [the science curriculum] class could transfer to when I started doing my practicum's and teaching. Participant 298 described this sentiment further in their response:

I found I was not very intrinsically motivated by assessments until I began my After Education Degree. I find that assessments regarding lesson plans – creating lesson plans or unit plans – are very intrinsically motivating for me. I feel as though it is critical for myself to feel comfortable and confident in creating lessons, as it is a skill I will be using in my career.

In these examples, the participants explained that their assessments were relevant to their future careers and that their intrinsic motivation came from a desire to improve their teaching skills in order to perform well as educators.

Another sub-theme that arose was Personal Connection. Within this theme, participants described feeling a personal connection to the content of an assessment or what they are learning, or they described engaging in self-reflection. Participants stated they enjoyed assessments that "involved a lot of personal reflection" (participant 171) and they "enjoyed the process since I could relate the learning to myself" (participant 254). Participant 323 described how they were intrinsically motivated by an assignment that had a personal connection and enabled them to engage in self-reflection and growth:

For my final project in a Indigenous Studies course this summer I had to create a drawing of what a specific concept meant to me and describe it. It was intrinsic because it involved me with the assessment process. The assessment resulted in creativity and enjoyment. This assessment made me feel good about my self and pushed me to explore my own boundaries as a person.

Some participants described how an opportunity for self-reflection increased their motivation. For example, participant 171 wrote: “I was extremely passionate about this project because it involved a lot of personal reflection.” Similarly, participant 174 described their experience with self-reflection:

The one time [I was intrinsically motivated] that stood out the most was in my EDU 211 spring class in 2019/2020 session. The assessment was to write a letter to myself addressing how I am connected or involved in the process of reconciliation as it relates to Indigenous education. [...] It felt great to be able to demonstrate my learning by looking inwards at myself ...

Within the sub-theme Reachable Challenge, participants described how they were motivated by a challenge that they had the skills to meet. The assessments that participants describe challenge them in an appropriate way, and they are not too difficult so as to cause frustration and also not too easy that they are boring and unengaging. Under this sub-theme, participants made statements such as “I found myself challenged but it was enjoyable” (participant 149), “I loved the challenge, because there was so much satisfaction when I was able to prove my work” (participant 295), and “this lesson plan assignment actively engaged my thinking” (participant 235). Participant 131 was also challenging by an engaging assessment that increased their intrinsic motivation: “The topic was highly engaging and I wanted to do my best because I felt challenged in a way that I enjoyed.”

Participant 310 explained that they were challenged by their assessment, but it was an appropriate and relevant challenge, which increased their intrinsic motivation:

Recently in an education course we had to write a paper on a particular concept from the program of studies in our subject area. [...] Although it was still somewhat challenging, I felt like it was a good use of my time, which lead to me feeling motivated by it.

Similarly, participant 153 described in their response that their assessment was challenging, but at an appropriate level so that they had enough confidence to complete it: “even though it was a hard concept at the time, I felt confident enough to [complete the assignment].”

Pedagogy. The theme of Pedagogy arose from the responses to the intrinsic motivation prompt This theme describes how assessments were designed or how classroom experience was structured in ways that were frequently mentioned by participants. Under this theme, there are three sub-themes: Autonomy, Interest, and Creativity.

The sub-theme of Autonomy describes how the participant has the freedom to choose the format or content of an assessment. When describing why they were intrinsically motivated, many participants made statements, such as “[we could choose] any topic of our choice” (participant 242), and “The autonomy I was given with this assignment [...] truly motivated me...” (participant 166). Participant 120 explained how they felt when asked to create a science demonstration: “I was happy and excited that I was able to pick the topic, the specific outcomes, and whatever I wanted to include.”

Participant 213 explained in more detail how being given an assessment where the students had the autonomy to choose increased enjoyment and allowed them to become more active learners:

In film studies 35, one of our assignments was to create an assignment that we would then complete. [...] Nurturing our autonomy as learners allowed us to be active participants in the assessment creation and completion process; we cared a lot more about doing the assignment we had created because WE created it. [...] I remember having fun and wanting to work hard on it because it allowed me to be creative and be in charge of my learning.

Similarly, participant 119's response also showed that being given an assessment where students have freedom of choice increased their intrinsic motivation:

[W]e were given a group project in which we had to research an important historical figure and create some form of presentation on them. We got to choose the format, and the person, along with who was in our group and how much/little content and detail we wanted to put in. We were highly motivated to do this project because we had so much choice.

Some participants described how autonomy resulted in increased effort to complete their assessments. For example:

I had a tremendous amount of autonomy in where and who I chose to focus on, [and] I felt that my own interests were being involved in the assignment, and thus I felt compelled to put a lot of effort into it. (participant 141)

Participant 241 also put forth greater effort when given the freedom to choose the content of their assessment

I recall a social studies 9 project where my teacher gave us free-reign to design a poster project about some form of technology that has advanced, or gone through improvements. [...] It felt good because I was given autonomy to choose my own

topic and in turn put more effort into the project and received a good grade, which I associate to being able to choose something of my own interest.

The next sub-theme, Interest, describes how participants experience intrinsic motivation when they are interested in the assessment they are completing or content they are learning. For example, participant 235 stated: “I was intrinsically motivated by this assessment because I would be able to talk about something I was truly interested in.” Similarly, participant 170 stated that “I was always intrinsically motivated by courses that I was interested in.” Speaking more broadly, participant 289 wrote: “So long as I am able to research, present, or write about a topic that interests me I find I am more often than not intrinsically motivated to do well.”

Participant 279 explained that, because their assessment was based on their interests, they were able to internalize their motivation and complete the assessment for themselves: “While completing the assessment it did not feel like being at school. Instead, the assessment made me feel like I was completing something on my own time, for myself, because it was of genuine interest.” Participant 195 explained in greater detail how their interest in the topic of their assessment contributed to their intrinsic motivation and ease of writing while completing the assignment:

A time that I was intrinsically motivated was writing my [political science course] Term Paper back in Fall of 2019 while I was in my 2nd year of university. This course specifically focussed on Canadian Government and covered various topics I was interested in at the time. [...] I honed in on my interests and decided to write about Senate reform in Canada and my ideas and thoughts seemed to flow into writing like they never have before. Typically I would feel overwhelmed by such

a large writing task but the motivation to keep writing and researching seemed to flow throughout the process and I never felt more proud about a piece of work that I handed in.

Participant 165 also found their assessment easier to complete because of their interest in the topic: “The task would have been impossible had I not been so interested and fully invested in it.” Similarly, participant 232 described how they exceeded expectations and completed more of their final than was needed: “Since I was creating something on a topic I was interested in, I found myself extremely motivated to complete the project and I may have overstepped requirements and completed more than what was asked.”

The sub-theme of Creativity describes how participants mention they are intrinsically motivated by assessments in which they can be creative or demonstrate their creativity. Participants made statements such as “the teacher did not limit our creativity” (participant 151), “the project [...] gave students creative freedom” (participant 232), “I appreciated the creative aspect” (participant 254), and “the project ... allowed me to express my creative side” (participant 270). Speaking about a performance assessment in a high school drama class, participant 203 described how an opportunity to be creative increased their motivation and enjoyment:

[The performance] was fun and I was always motivated to do it because it was a chance to be creative with very few limitations so it was something I genuinely wanted to do. It felt so good to have creative freedom and that always makes me really enjoy an assignment.

Participant 280 described how they were motivated to take on a challenging assignment, in part because it involved creativity:

I was intrinsically motivated by an insect display box I had to create for my entomology course. [...] I found this assessment extremely rewarding because it was fun and novel to me. It allowed me to be creative and proud in my work even though it was a lot more work than writing an essay.

Like participant 280, some participants explained that they enjoyed the opportunity to be creative, as opposed to completing traditional assessments such as essays. For example, participant 280 wrote:

The assignment was low-stakes (worth no more than 10%) and was collaborative and open to creativity. [...] The way we were graded was also intrinsically focused, where we were graded on creativity and got feedback on almost every aspect of the presentation. It felt less stressful since grades were not the focus, and I spent more energy focusing on being creative and making the presentation as well as I could for my peers...

Some participants became more invested in assessments due to their creative aspects. For example, participant 256's response detailed how an assessment that was initially unengaging became more motivating due to their opportunity to be creative: "At first, the assessment felt like a chore, but as I got into it more and was able to get creative and take ownership for my work, my attitude changed."

Relatedness. The last theme that arose from the responses to the intrinsic response prompt was Relatedness. This theme describes participants' relationships with others that were fostered alongside the assessment experience. There are two sub-themes under the theme of Relatedness: Collaboration and Building Relationships.

The sub-theme of Collaboration emerged from participants' descriptions of intrinsically motivating assessments that involved working or collaborating with other students, professors, or others. Many participants mentioned how being able to collaborate enhanced the assessment experience. Speaking of their education courses, participant 305 described the advantages of working with others: "Collaboration is also very helpful as hearing the different ideas of my peers gives me a different perspective to help with my growth as a prospective teacher." Often, participants stated that the opportunity to collaborate increased their intrinsic motivation. For example, participant 147 wrote: "I was intrinsically motivated in this [education] class because it aligned with my interests and there were many opportunities during the course to collaborate and create projects and programs together." Participant 309 described their strengthened intrinsic motivation in greater detail:

[I was intrinsically motivated by] working together in groups to build and present a presentation. It involved working collaboratively and creatively, making it more intrinsic. It felt rewarding, to stand in front of the class with fellow peers and showed the true value of the assessment.

For participant 221, the opportunity to collaborate resulted in increased effort and enjoyment during the assessment experience:

An assessment that intrinsically motivating for me was a music duet assessment that evaluated us on our playing skills. It was intrinsic, since it involved partnering up in groups of two or three. Having that collaborating factor was enjoyable for me. It made me work harder to get my part down, while also having fun with the collaboration.

The next sub-theme, Building Relationships, describes when an assessment or course allows the participant to build positive relationships with others. Most responses that fell under this sub-theme included participants' descriptions of fostering relationships with educators or mentors. For example, participant 232 described how a smaller class size allowed them to build relationships with the instructors which resulted in greater intrinsic motivation: "last semester I was intrinsically motivated by assessment for a large final project. This was in a much smaller class size, about 22, which made for better relationships with the Professor and the [teaching assistants]." In addition, participant 317 discussed how their professor in an education course aimed to build relationships with students, which resulted in enhanced learning, motivation, and empowerment:

[My professor] made me feel intrinsically motivated; even through remote delivery she focused on building a strong relationship, saw our perspectives, and treated us as equals. It made me feel so motivated to learn about a topic that intimidated me, and to this day it made me want to teach like her. [...] I am forever grateful for her respecting me, and focusing on my growth, which made me feel empowered to learn more.

Participant 106 discussed how they experienced increased intrinsic motivation due to a relationship with a caring teacher who was invested in their students' classroom experience:

In high school, I had an English teacher who was so kind, understanding, and encouraging that I wanted to please her. I was motivated to do well in her course because she took the time to develop relationships with each of her students on an individual level. I wanted to do well because I knew she wanted us to do well, and

she did everything she could to help us get there. [...] It was reassuring to have someone so invested in my learning and take the time to provide guidance to me. Similarly, some participants discussed how their relationship with an educator resulted in a newfound interest or passion in their particular subject. For example, participant 295 described how the relationship between his geometry professor and the students “made me love the content.” Additionally, participant 277 explained how their professor fostered an interest in genetics:

The professor was very organize[d] and passionate about the course. He was willing to take suggestions from us and show his human side (i.e. make mistakes as well). I feel like it was the relationship that made it intrinsic. It felt good!!! He actually made me pursue more genetics course[s].

These examples show that the opportunity to develop a connection with an educator resulted in students’ intrinsic motivation for the course or assessment as well as increased interest in the subjects taught.

Discussion

The purpose of this study was to explore students’ experiences of extrinsic and intrinsic motivation during assessment. Through a thematic analysis, 29 sub-themes and 10 themes emerged from participants’ responses. From the extrinsic prompt, there were 15 sub-themes that made up 5 themes: Emotions, System Constraints, Grade-Focused, Relationship to Learning, and Characteristics of Assessment. From the intrinsic prompt, there were 14 sub-themes that made up 5 themes: Emotions, Relationship to Learning, Characteristics of Assessment, Pedagogy, and Relatedness. In this discussion, I highlight the results of the thematic analysis, including the common themes across the extrinsic and

intrinsic prompts and the themes unique to both prompts. The results are discussed in connection with existing research. I consider the limitations of the study and then discuss the implications for educators and researchers.

Common Themes Across Extrinsic and Intrinsic Responses

Across the extrinsic and intrinsic prompts, it is possible to identify groups of themes that represent similar constructs, including (1) Emotions, (2) Characteristics of Assessment, and (3) Relationship to Learning. Although each theme common across the prompts does not include the same sub-themes, it is possible to interpret many sub-themes in tandem, which will be done with the appropriate sub-themes. The sub-themes that are unique to each prompt will be discussed separately after the sub-themes similar across the prompts.

Emotions: Extrinsic and Intrinsic Responses

From this theme, there were five sub-themes that were common across responses to the extrinsic prompt: Lack of Interest, Lack of Enjoyment, Stress and Anxiety, Fear of Failure, and Positive Emotions. The Lack of Interest sub-theme will be discussed in conjunction with the intrinsic sub-theme Interest below. From the intrinsic prompt, three sub-themes emerged: Enjoyment, Satisfaction, and Pride. To discuss these sub-themes across the extrinsic and intrinsic prompts, I will group them together as negative emotions and positive emotions.

The Control-Value Theory of Achievement Emotions (CVT; Pekrun, 2006; Pekrun et al., 2007) is useful as a lens from which we can discuss the Emotions sub-themes. According to this theory, emotions influence several factors related to learning, including cognitive resources, use of learning strategies, self-regulation and external regulation of learning, and, importantly, motivation (Pekrun et al., 2007). Central to this theory is the idea that in achievement and

educational settings, individuals' values and appraisals of control elicit particular achievement emotions, such as enjoyment, pride, boredom, anxiety, and more (Pekrun, 2006).

Enjoyment/Lack of Enjoyment, Pride, Satisfaction, Positive Emotions. Under Lack of Enjoyment, participants described how, when extrinsically motivated, they did not find pleasure in learning or completing assessments, often due to a focus on grades. However, under the Enjoyment sub-theme in response to the intrinsic prompt, participants discussed that they enjoyed completing assignments and learning when intrinsically motivated. Pekrun and colleagues (2007) state that positive emotions, such as enjoyment, are elicited if an individual positively values an activity or outcome, and that is seen as controllable. As well, because enjoyment is a positive activating emotion, it increases both intrinsic and extrinsic motivation and interest (Pekrun et al., 2007). This mirrors the responses of participants in the current study. Participants described their enjoyment of learning and completing assignments when intrinsically motivated, and this enjoyment likely enhanced their intrinsic motivation further. In contrast, when participants were not interested in and did not positively value the classroom content or assessments, they therefore did not experience enjoyment or intrinsic motivation, but only extrinsic motivation. However, because enjoyment also increases extrinsic motivation, it helps explain that some participants under the Positive Emotions sub-theme described the pleasure they got from completing assessments while extrinsically motivated. These participants discussed enjoying the challenge of extrinsically motivating assessments and meeting their extrinsic goals, such as high grades or praise from others; these forms of enjoyment could have contributed to increased extrinsic motivation that resulted in positive outcomes.

CVT can also help us understand the satisfaction and pride participants described. In response to the intrinsic prompt under the Satisfaction sub-theme, participants described feeling

satisfied or accomplished by the work they have completed. Most participant responses fell into this sub-theme when they described experiences of success (defined by themselves or others) *after* assessment. In this way, their satisfaction is similar to the emotion contentment described by CVT. In CVT, contentment is a positive outcome-focused emotion that is elicited by success (Pekrun et al., 2007), as is the feeling of satisfaction that participants described. Another intrinsic sub-theme was Pride, in which participants described how they felt proud of the assessments they had completed. Pekrun and colleagues (2007) state that certain outcome-related emotions, such as pride, are instigated depending on appraisals of control. In the case of pride, this emotion is elicited when an individual attributes the success of an achievement outcome to the self (Pekrun et al., 2007). Pride is a positive activating emotion that strengthens motivation, and therefore it follows that participants would experience intrinsic motivation and pride when they attributed the success of their assessment outcomes to themselves.

Stress and Anxiety and Fear of Failure. In response to the extrinsic prompt, two more sub-themes describing negative emotions emerged: Stress and Anxiety and Fear of Failure. Under Stress and Anxiety, participants discussed feeling stressed and anxious due to pressures from assessments, and under the Fear of Failure sub-theme, participants described their fears of not passing an assessment or course, or their fears of not meeting expectations.

CVT can also be used to explain negative emotions. Pekrun and colleagues (2007) state that negative and unpleasant achievement emotions occur due to a "perceived lack of controllability" and a negative valuation of an activity or outcome. According to CVT, anxiety is a prospective outcome emotion that is elicited, for example, when a student highly values the outcome of an assessment, perceives that failure is possible, but does not believe they can control the outcome (Pekrun, 2006; Pekrun et al., 2007). Evidently, Fear of Failure as an emotion is

intertwined with anxiety in CVT, as anxiety is elicited when an individual expects a possible failure that is outside their control.

As a negative emotion, anxiety can reduce intrinsic motivation and interest in an activity or outcome, but it can also enhance extrinsic motivation to put effort toward avoiding failure (Pekrun, 2006). This is in line with the experiences described by participants in the current study. Because anxiety decreases intrinsic motivation, many participants experienced Stress and Anxiety and Fear of Failure as emotions that occurred when they were extrinsically motivated by assessments. While for some participants, their anxieties and fears were debilitating and prevented learning, some other participants described how their anxieties and fears of failure caused them to put more effort towards their assessments to achieve a passing grade or higher grades.

Emotions – General. In this section, I discuss all Emotions sub-themes generally and connect them to research outside of CVT. Research from other researchers also supports the participants' experiences from this thesis study. For example, González and colleagues (2012) found that pleasant emotions were positively correlated with more self-determined types of motivation, such as intrinsic and identified extrinsic motivation, while unpleasant emotions were positively correlated with less self-determined types of motivation, such as amotivation, external and introjected regulation. Furthermore, Benmansour (1999) reported that extrinsically motivated students were more likely to experience test anxiety than intrinsically motivated students, and Wang and colleagues (2019) found that controlled motivation was negatively related to enjoyment. These studies support our finding that positive emotions, including Enjoyment, Satisfaction, and Pride, were more common while participants were intrinsically

motivated, while negative emotions, such as Stress and Anxiety, Fear of Failure, and Lack of Enjoyment, were common during experiences of extrinsic motivation during assessment.

Under the Positive Emotions sub-theme from the extrinsic responses, participants described the positive experiences and emotions they felt while extrinsically motivated. Because of these positive experiences, it is likely that these participants have experienced the internalization of intrinsic motivation. Students who experience the more autonomous forms of extrinsic motivation are more likely to engage themselves in learning, learn better, and are more psychologically healthy (Niemi & Ryan, 2009).

Studies of students' conceptions of assessment found that emotions play a large role. In a qualitative study done by Lynam & Cachia (2018), the researchers found that negative emotions, including stress and anxiety, affected students' engagement with assessments, while positive emotions, including enjoyment, satisfaction, pride, and a sense of academic freedom, contributed to students' motivation. Crossman (2004, 2007) found that many students' perceptions of assessment were connected to feelings of anxiety, stress and a sense of failure. The results from these studies support the experiences of participants in the current study.

Characteristics of Assessment: Extrinsic and Intrinsic Responses

In response to both the extrinsic and intrinsic prompts, participants described several features of assessments that were associated with extrinsic and intrinsic motivation. The sub-themes Relevance and Irrelevance, from the intrinsic and extrinsic prompts, respectively, will be discussed together. Then, I will discuss the sub-themes from the intrinsic prompt, Reachable Challenge, Personal Connection, followed by the remaining sub-theme from the extrinsic prompt, Heavily Weighted.

Relevance and Irrelevance. Under the intrinsic prompt, many participants described how they were intrinsically motivated by assessments that were applicable outside of the course or relevant to their future careers or lives outside academia. In contrast, in response to the extrinsic prompt, participants discussed how they were extrinsically motivated by assessments that were not relevant, meaningful, or applicable outside their courses. The importance of the relevance of assessment and its effect on motivation has been reflected in other studies. Seale, Chapman, and Davey (2000), who defined motivation as a unitary concept, found that students experienced greater motivation when they perceived assessments as relevant and “if it related to skills needed on placement” (p. 619). The result from this study reflects the sentiment expressed by several participants that they were intrinsically motivated by assessments that allowed them to work on skills needed for their future careers as educators. Perceived irrelevance also has been shown to affect students’ conceptions of assessment. Crossman (2004) found that students perceived assessments that lacked relevance as fleeting “time wasting activities” (p. 588) that did not seem to matter or stay relevant once they were completed.

Relevance can be understood to be a component of authentic assessment. In Frey, Schmitt, and Allen’s (2012) definition, they state that authentic assessment commonly includes a “realistic activity or context” (p. 5). This dimension of authentic assessment is echoed in the responses from participants who discussed connections between assessments and real life or their future careers. Results from Wu, Cheng, and Bettney (2014) showed that students were intrinsically motivated by authentic assessments because they “can help students connect their class work to real world applications and see the meaning of these tasks” (p. 364). Thomas and Oldfather (1997) also found that students are intrinsically motivated by authentic assessments because they contribute to self-competence through the opportunities they provide for students to

contribute to and find solutions to real-world activities. If relevant and authentic assessment tasks contribute to students' perceptions of competence, which is a basic psychological need, then it would follow that assessments with these characteristics contribute to intrinsic motivation. If an assessment lacks relevance outside of academia, therefore, competence and intrinsic motivation are not supported, and students are more likely to be extrinsically motivated by these types of tasks.

Reachable Challenge. Under the sub-theme of Reachable Challenge, participants explained that they were intrinsically motivated by assessments that involved challenges that they had the skills to meet. The participants described enjoying and engaging in the challenges they were given, demonstrating that they were provided with reachable challenges that were at an appropriate level and not too difficult nor too easy. Ryan and Deci (2017) state that “[i]ntrinsic motivation is theorized to occur spontaneously under conditions of *optimal challenge*” (p. 152). They argue that people are intrinsically motivated by using and improving skills and abilities. By reaching the goals set out by reachable (or optimal) challenges, students can experience a sense of competence (Ryan & Deci, 2017; Thomas & Oldfather, 1997). Developing this sense of competence and satisfying this basic psychological need, therefore, enhances students' intrinsic motivation.

Research demonstrates that students have the intrinsic motivation to choose a reasonably challenging task when given the chance to do so. For example, Danner and Lonky (1981) found that when given a choice between three tasks varying in difficulty, children spent the most time doing the task that was “just beyond their initial ability levels” (p. 1043). Similarly, undergraduate students were more likely to choose a comparatively difficult task when presented with seven options in the absence of a monetary reward (Shapira, 1976). Furthermore, similar to

the sentiments expressed by the participants in this study, Stefanou and Parkes (2003) found that fifth-grade students enjoyed performance assessments more than paper-and-pencil tests because they were more interesting and intellectually challenging. These studies indicate that when given the choice, people will choose tasks that challenge and stretch their existing knowledge and abilities.

Personal Connection. The sub-theme of Personal Connection encompasses the responses in which participants describe being intrinsically motivated by assessments that allow them to engage in self-reflection, or those that relate to students' personal experiences. This result is reflected in Crossman's (2004, 2007) investigations of students' perceptions of learning and assessment. In these studies, participants expressed that they enjoyed assessments that allowed for personalization and "opportunities to express personal beliefs, feelings and emotion" (Crossman, 2007, p. 323). Crossman (2004) found that students enjoyed assessments such as journals that allowed them to express personal beliefs; this mirrors participant responses that described being intrinsically motivated by projects such as scrapbooks and letters.

Heavily Weighted. The Heavily Weighted sub-theme arose from participants' responses to the extrinsic prompt that described being extrinsically motivated when assessments were worth a high percentage of their overall mark in a particular course. Participants described the high-stakes nature of these assessments and frequently mentioned they counted for 30 to 50 percent of their overall mark. The fact that participants found these types of assessments extrinsically motivating follows the research evidence that high-stakes assessments, such as standardized testing, have a negative impact on student motivation, and especially intrinsic motivation. Harlen and Deakin Crick (2003) state that high-stakes testing reduces motivation for learning because it encourages a performance orientation in which students focus on achieving

certain grades rather than working towards understanding. As well, these types of assessments increase test anxiety, and feedback often comes in the form of scores or grades that do not support the student or aid in improvement (Harlen, 2012; Harlen & Deakin Crick, 2003). Furthermore, the National Research Council (2011) found that high-stakes standardized testing does not lead to enhanced motivation nor improvements in learning or achievement. This research evidence supports the responses from this study of participants who experience a lack of intrinsic motivation when faced with heavily weighted assessments. Because these types of assessments hinder intrinsic motivation and motivation for learning in general, students turn to external motivators for completing assessments, such as the need to achieve good grades.

Relationship to Learning: Extrinsic and Intrinsic Responses

The theme of Relationship to Learning and the sub-theme of Desire to Learn emerged from both the extrinsic and intrinsic responses. I will start by discussing the Desire to Learn sub-theme, then the remaining sub-theme from the extrinsic prompt, Lack of Learning or Retention, followed by the last two sub-themes from the intrinsic prompt, Demonstrate Learning and Growth.

Desire to Learn. In the intrinsic sub-theme of Desire to Learn, participants described wanting to learn or gain more knowledge when they were intrinsically motivated by assessment. This result is similar to what participants reported from the study conducted by Brookhart and Durkin (2003); participants expressed that one of their most common motivations to study was "wanting to learn for its own sake" (p. 43). The Desire to Learn sub-theme slightly differs in the responses to the extrinsic prompt, in which participants explained how they wanted to focus on learning or to learn more about the content of the course, but could not due to a focus on grades and assessment; they were constrained by external conditions. Similar sentiments were expressed

by participants in courses with traditional multi-interval grades in the study by Chamberlin, Yasué, and Chiang (2018), who "expressed ambivalence or regret with the choices that they made to prioritize their GPA over taking classes or doing assignments that they felt would be important for their personal growth or learning" (p. 7).

Based on participant responses from both prompts, it is evident that many students have a desire to learn and gain knowledge no matter if they are in situations that elicit intrinsic or extrinsic motivation. This aspiration for learning is part of intrinsic motivation itself. Ryan and Deci (2000) describe that there is a natural human tendency "to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn" (p. 70). Therefore, it would appear that the desire to learn that the participants reported is a reflection of their innate, intrinsic motivation to explore and improve one's knowledge. However, differences in behaviour arise when extrinsic motivators, such as a focus on grades and assessment, constrain students and prevent them from following their innate desire to learn.

Lack of Learning or Retention. From the extrinsic responses, the sub-theme Lack of Learning or Retention arose from participants discussing how they did not actually learn or retain the content on which assessments were based, often due to an extrinsic focus on grades or short-term learning in order to complete assessments. Research has shown that a focus on grades has a negative effect on learning. Students who have a performance goal orientation and are extrinsically motivated to achieve high grades on assessments and tests are more likely to engage in shallow learning, while students with mastery goals have been found to use superior learning strategies (Harlen & Deakin Crick, 2003). Additionally, Benmansour (1999) concluded that a focus on assessment and evaluation is likely to encourage extrinsic goals and reduce students' use of effective learning strategies. However, the different outcomes associated with deep versus

surface-level learning may not be evident to students. Entwistle and Entwistle (1991) found that students who developed a conceptual understanding did not feel confident about their future performance on exams until they had engaged in "trivial learning activities" (p. 224). In contrast, students who had been engaging in more surface-level learning by copying lecture notes were confident they could produce satisfactory answers to questions that focused on lecture content. The research evidence mirrors the responses from participants in the current study. Participants described how their focus on grades due to an extrinsic motivation during assessment led to shallower learning that was often not retained. Because these participants held extrinsic goals related to the achievement of high grades, they engaged in learning strategies that were less effective for the long-term maintenance of knowledge but would more likely result in higher grades, as reported by some. Although some participants may have had an intrinsic interest in the content of their assessments, their extrinsic motivation to quickly complete assessments and achieve good grades overshadowed this innate interest.

Demonstrate Learning and Growth. From the intrinsic responses, the sub-theme of Demonstrate Learning describes participants who were intrinsically motivated by assessments that enabled them to demonstrate what they have learned. The Growth sub-theme also emerged from the intrinsic responses that described how participants experienced or wanted to experience an increase in skills or knowledge. In these responses, participants explained that they focused on the process of improvement and progress and did not focus on extrinsic motivators such as grades.

The opportunity for students to demonstrate their learning through assessment, as well as growth through and the improvement of learning and skills over time, may be related to the demonstration and satisfaction of competence. According to self-determination theory, the

satisfaction of competence as a basic psychological need enhances intrinsic motivation (Ryan & Deci, 2000). As the satisfaction of competence is associated with psychological well-being (Ryan & Deci, 2017), it makes sense that students would experience intrinsic motivation when they are able to demonstrate their competence and improve upon their learning over time. Some research has also shown that students who are given the opportunity to demonstrate or improve their learning are more intrinsically motivated. In line with the experiences of participants in this study, Brookhart and Durkin (2003) found that one of the four most commonly reported motivations to study for high school students was “wanting to show what [they] learned” (p. 43).

Perceived competence can be fostered through events in social contexts, such as feedback (Ryan & Deci, 2000). Students have the opportunity for growth through feedback from formative assessment, which enables them to monitor their own learning and set goals for improvement (Cauley & McMillan, 2010; Frey, 2014). Hondrich and colleagues (2018) found that students who were given formative assessment, including feedback, had higher perceived competence and intrinsic motivation. This research evidence supports the experience of participants in this study who were given the chance to grow and improve, which enhanced their intrinsic motivation.

Themes: Extrinsic Motivation

The following section discusses the themes and sub-themes that are exclusive to the extrinsic prompt: System Constraints and Grade-Focused.

System Constraints

The theme of System Constraints describes external conditions that exerted control over participants' assessment experiences, often emerging from the self, others, or perceived from others. These constraints that participants described can be understood as a form of external control. According to self-determination theory, when these

constraints, including external or self-inflicted pressures, high standards, and competition, are present in the classroom environment, students' autonomy is undermined, and therefore their intrinsic motivation is as well. Therefore, under these conditions, students experience increased extrinsic motivation. There is an abundance of research that demonstrates that autonomy-supportive teaching is associated with numerous positive outcomes for students, and controlling behaviour and low autonomy support in the classroom undermines students' intrinsic motivation (Black & Deci, 2000; Jang et al., 2012; Koestner et al., 1984; Reeve & Cheon, 2021; Tsai et al., 2008). The positive outcomes detailed in these studies connect to participants' experiences of being intrinsically motivated by assessments that enable their autonomy; this will be discussed below.

Pressure and High Standards and Expectations. Within the Pressure sub-theme, participants discussed their experience of being extrinsically motivated and feeling pressure to perform well, often due to frequent, high-stakes assessments and potential rewards like scholarships. Within the High Standards and Expectations sub-theme, participants explained that they were extrinsically motivated by assessment when they felt held to high standards and expectations, usually from parents, teachers, or themselves. These standards that participants described can be thought of as another form of external pressure to perform and succeed to a high standard. There is research evidence that supports the participants' experiences of pressure-reducing intrinsic and increasing extrinsic motivation. For example, Wang and colleagues (2019) found that controlled motivation was positively associated with pressure during learning. In addition, results from Reeve and Deci (1996) demonstrated that participants who were pressured to win in

competition with a confederate to solve puzzles experienced decreased intrinsic motivation through reduced perceived self-determination, compared to those who were not pressured.

Competition and Comparison. Under the Competition and Comparison sub-theme, participants described how they were extrinsically motivated to perform well and complete assessments due to competition and comparison with others. Participants often associated this source of motivation with stress, as well as worries about underperforming and a need to outperform other students. Research has demonstrated that competition with others decreases intrinsic motivation (Deci et al., 1981; Vallerand et al., 1986). Therefore it would follow that the participants of this study described being extrinsically motivated when they felt they were in competition with others. This result is in line with findings from the study by Wu and colleagues (2014), in which students reported that a competitive classroom environment increased their extrinsic motivation and harmed their intrinsic motivation.

Grade-Focused

In this section, the sub-themes Grade Achievement, High Grade for External Reward, and Passing Course or Test from the Grade-Focused theme will be discussed together.

The theme of Grade-Focused emerged from participants' descriptions of their primary motivation coming from achieving certain grades during assessment. Under the sub-theme of Grade Achievement, participants discussed that they were extrinsically motivated by grades, but did not specify a particular reason why. The Passing Course or Test sub-theme encompassed participants' descriptions of focusing on achieving a passing grade on assignments or in a class overall, or avoiding failure generally. Under the sub-theme of High Grade for External Reward,

participants described how they were motivated to achieve high grades in order to gain external rewards such as university acceptance, scholarships, and career success, among others.

It is expected that grades are a strong extrinsic motivator, as Deci, Koestner, and Ryan's (1999) meta-analysis demonstrated that any performance-contingent rewards undermine intrinsic motivation. As well, the salience of grades as an extrinsic motivator is reflected in other research. Chamberlin, Yasué, and Chiang (2018) compared the motivation of students who received multi-interval grades and students who were graded pass/fail and were given narrative evaluations at the end of their course. Students in courses with a traditional grading system tended to experience lower intrinsic and autonomous motivation compared to those in the alternative grading system.

There is research going back decades (Becker et al., 1968; Gibbs, 2019; Snyder, 1971) demonstrating that students' focus on grades is common. In Becker, Greer, and Hughes's (1968) research on university students, they discuss the "grade point average perspective" (p. 33), which "specifies the grade point average as the criterion of academic success and directs students to undertake those actions that will earn 'good' or adequate grades" (p. 34). The authors found that, due to the emphasis on achieving high grades, students focused on surface-level learning and strategies to achieve grades rather than achieving understanding. Similarly, Snyder (1971) studied student experiences in university and found that assessment and grades were the primary focus of most students. He describes the conflict between the "formal curriculum," which encourages students to "explore ideas, generate new questions, and engage in intellectual risk-taking" (Snyder, 1971, p. 14), and the "hidden curriculum," reflected in grading systems and teaching methods that reward memorization of facts, which lead to high grades on examinations.

Furthermore, Gibbs (2019) also found that many students had to focus on achieving grades and avoiding failure at the expense of their learning.

This research echoes the Grade-Focused theme from the current study. Many students in the current study discussed that their experience of assessment was ruled by concerns about grades, either avoiding failure or achieving a high grade in order to gain another reward. Many participants described how this focus on grades reduced their enjoyment of their student experience, caused a lot of stress, and was a detriment to their learning.

Other researchers have found that grades play a large role in students' conceptions of assessment. Brookhart and Durkin (2003) found that "getting a good grade" (p. 43) was the most commonly expressed motivation to study among high school students. Stefanou and Parkes's (2003) qualitative analysis found that fifth-grade students were primarily concerned with their grades when it came to assessment. Additionally, Lynam and Cachia (2018) found that grade targets worked as extrinsic motivators, and assessments guided students' efforts and what content they learned. Similar to the sentiments expressed by participant responses in the High Grade for External Reward sub-theme, Chamberlin and colleagues (2018) also found that many high-achieving students experienced stress and pressure from grades because they required high grades to apply to competitive graduate programs.

Themes: Intrinsic Motivation

The following section discusses the themes that are exclusive to the intrinsic responses/prompt: Pedagogy and Relatedness.

Pedagogy

This theme describes how students experience the way educators design assessments or structure classroom experiences in ways that enhanced their intrinsic

motivation. Under this theme, three sub-themes emerged from participant responses:

Autonomy, Interest, and Creativity.

Autonomy. Frequently, participants described how they were intrinsically motivated by assessments that were structured to allow them freedom of choice in the content or format of the assessment. These responses emerged as the sub-theme of Autonomy. Participants described how this freedom increased their enjoyment and learning, as well as the effort they put toward the assessment.

Because autonomy is a basic psychological need, its satisfaction can contribute to intrinsic motivation (Ryan & Deci, 2000). Autonomy is also the most important need to satisfy to achieve well-being, because it facilitates the satisfaction of competence and relatedness (Ryan & Deci, 2017). Therefore, it is expected that educators who enable their students to have freedom of choice and a lack of control through assessment increase students' intrinsic motivation. There is an abundance of research that supports that autonomy-supportive practices in the classroom lead to positive outcomes and enhanced intrinsic motivation. Specifically, autonomy support in the classroom has been shown to increase interest and enjoyment in learning (Black & Deci, 2000; Tsai et al., 2008), engagement and achievement (Jang et al., 2012), and many aspects of student functioning, such as self-regulated learning, skill development, and a positive self-concept, among others (Reeve & Cheon, 2021). Evidently, support for autonomy in the classroom is associated with many positive outcomes and increases intrinsic motivation; this is reflected in the responses from participants in this study who were intrinsically motivated by assessments that provided them with autonomy.

Interest/Lack of Interest. The sub-theme Interest comes from participant responses that describe how they are intrinsically motivated by assessments if they are

interested in the content of the assessment or the content they are learning. Participants explained how greater interest made them more willing to complete assessments, and that working on these assessments was easier. It is expected that assessments that students find interesting would be more likely to elicit intrinsic motivation, because individuals can only be intrinsically motivated “for activities that hold intrinsic interest for them” (Ryan & Deci, 2000, p. 71). The connection between interest and intrinsic motivation has been supported by Tsai and colleagues (2008), who found that seventh-grade students experienced more interest in lessons where they perceived they had more autonomy, including an autonomy-supportive climate, cognitive autonomy support, and less controlling behaviour. As well, they found that students that already had an individual interest in the lesson were less affected by controlling and non-controlling behaviour of their teachers. These findings indicate that students' interest is increased by autonomy support, which in turn enhances intrinsic motivation, and it protects against the threat of non-autonomy supportive and controlling instructor behaviour. As autonomy satisfaction is a requirement for the enhancement of intrinsic motivation, and the most important basic need to satisfy to be psychologically well (Ryan & Deci, 2017), it is evident that interest is a factor of assessment that leads to students' intrinsic motivation. Without an interest in learning or assessment, students are less likely to experience intrinsic motivation and are more likely to be extrinsically motivated. Therefore, the experiences participants described under the Lack of Interest sub-theme are supported by research evidence. Because these participants did not have an intrinsic interest in their assessments or classwork, they may perceive less autonomy-supportive behaviour from their teachers;

both of these factors contribute to the extrinsic motivation participants reported towards their assessments.

Creativity. Under this sub-theme, participants explained how they were intrinsically motivated by assessments in which they could demonstrate their creativity. Participants discussed how being creative increased motivation, enjoyment, and engagement in their assessments. Some research has demonstrated a link between creativity, intrinsic motivation, and external rewards. Koestner and colleagues (1984) found that students given controlling limits experienced less intrinsic motivation, and their paintings were rated as less creative than children who were not given limits. In a study by Amabile, Hennessey, and Grossman (1986), children were assigned to two conditions: the reward condition, in which children promised to tell a story after having the chance to use an instant camera, and the no-reward condition, in which children were allowed to use the camera before they told the story; the use of the camera was not framed as a reward for telling a story. Results showed that children in the no-reward condition told more creative stories than those in the reward condition.

Amabile (1996) described the intrinsic motivation hypothesis of creativity: “the intrinsically motivated state is conducive to creativity, whereas the extrinsically motivated state is detrimental” (p. 107). This hypothesis posits that individuals who are extrinsically motivated perform tasks to achieve an external goal, and these external goals act as extrinsic constraints that decrease motivation and, therefore, creativity (Amabile, 1996; Hennessey & Amabile, 1987). Most environmental contexts that impose extrinsic constraints and therefore increase extrinsic motivation undermine intrinsic interest in both the activity and the creativity of one’s performance (Amabile, 1996). In contrast, people

will be most creative when they are motivated “primarily by the interest, enjoyment, satisfaction, and challenge of the work itself – rather than by external pressures” (Amabile & Hennessey, 1992, p. 55). Evidently, this idea mirrors the responses of participants in the current study describing their experience of being intrinsically motivated by assessments that enabled them to express their creativity. Participants described how the opportunity to be creative enhanced their intrinsic motivation and enjoyment of assessments, which is in line with Amabile’s (1996) argument that intrinsic motivation, interest, and pleasure in an activity is connected to one’s creativity. Additionally, Lynam and Cachia’s (2018) study of students’ perceptions of assessment had results similar to the finding of the current study. They found that students reported that assessments that enabled them to be creative increased their enjoyment of the assessments as well as their learning.

Relatedness

In this section, I discuss the sub-themes from the Relatedness theme together.

Collaboration and Building Relationships. Many responses from the intrinsic prompt fell under the theme of Relatedness, which describes participants’ relationships with others that were cultivated during the assessment experience. It is expected that relatedness and relationships with others would be associated with intrinsic motivation during assessment, as relatedness is a basic psychological need (Ryan & Deci, 2017). Relatedness is necessary for the thriving and well-being of an individual. The satisfaction of relatedness is also associated with the promotion of autonomous motivation, including intrinsic motivation. In a particular context, if relatedness is supported, an individual is more likely to be intrinsically motivated, and if relatedness is thwarted, an individual may become less intrinsically motivated (Ryan & Deci,

2016). Based on the responses to the intrinsic prompt, the participants in this study did experience enhanced intrinsic motivation because their basic need for relatedness was supported.

Under the sub-theme of Collaboration, participants' need for relatedness was satisfied by working or collaborating with other students, professors, or others. This finding echoes results from other researchers, who found that elementary and high school students were intrinsically motivated by group work and collaborative projects because of the opportunity to learn from others (Brookhart & Durkin, 2003; Stefanou & Parkes, 2003). Participants also expressed that they were intrinsically motivated when they were able to build positive relationships with others, usually educators or mentors. Responses like these emerged as the sub-theme of Building Relationships. Other studies have found similar results, demonstrating the importance of relationships between students and teachers in fostering motivation. For example, Crossman (2004, 2007) found that students' conceptions of assessment were influenced by positive relationships with teachers, which then impacted students' sense of self, self-worth, and confidence. Additionally, in other studies, teachers were able to foster intrinsic motivation through relatedness. Specifically, they were able to accomplish this by creating a positive classroom environment through student-teacher relationships (Wu et al., 2014), through enthusiastic communication about the value of learning and assessment (Seale et al., 2000), effective interpersonal communication (Goldman et al., 2017), and through comprehensive communication, encouragement of goals, and supportive feedback (Thomas & Oldfather, 1997).

Limitations

The results of this study should be considered in light of three main limitations. One limitation is that the prompt question posed to participants did not have many parameters. The prompts did not explicitly ask participants to name a specific assessment, which resulted in many

participants talking quite generally about assessments in a way that could not be used in the current study. Therefore, 69 responses to the extrinsic prompt and 45 responses to the intrinsic prompt had to be removed from the sample. This is a limitation because it is possible that the participants whose responses were removed may have had particular experiences that were, therefore, not captured in the data and results. In addition, the prompts did not ask participants to describe an assessment experience from a particular time period, such as university or high school. As a result, participants discussed a variety of experiences across their educational careers, from spelling tests in elementary school to graduate and professional school admissions tests such as the GRE or LSAT. Because of this, it was difficult to make comparisons and find similarities across assessment examples that are fundamentally different.

Another limitation is that because responses were in written form, the data in this study lacks the thick, rich, description that is possible when conducting interviews with participants. Many responses did not go into rich detail that could have enriched the data and provided more information about students' experiences. However, the benefit of written responses is that we were able to gather a much larger collection of responses, which increased the amount of data. Although the responses overall were not of great detail, the breadth of experiences discussed and the amount of responses we received enable us to have confidence in the validity of the thematic analysis and results.

Finally, the participants in this study came from a sample of undergraduate students in a course on classroom assessment at the University of Alberta. Therefore, the results of this study may not generalize to other populations of students. The results of provide a descriptive snapshot of the experiences of intrinsic and extrinsic motivation during assessment of this study's sample and may not entirely capture the experiences of

all students. Nonetheless, the current study's results still have implications for educators and future research, as discussed below.

Implications

This study has illuminated students' experiences of extrinsic and intrinsic motivation during assessment. While there are many studies investigating student conceptions of assessment, there is a lack of research that specifically investigates student perceptions of motivation regarding assessment. This study addresses this gap in the research.

The results of this study have implications for educators and researchers. Educators can use the results of this study to inform their assessment practices and design assessments that are more likely to be intrinsically motivating for students. This can be achieved by creating assessments that are relevant to students' lives and future careers, that enable them to have freedom of choice and to demonstrate improvement in their learning over time, for example. The results based on responses to the intrinsic prompt can be used in a multitude of ways to help educators design assessments that are more intrinsically motivating. In addition, these results can help educators to avoid features of assessments that are likely to elicit extrinsic motivation, such as heavily weighted assessments that encourage surface-level learning, or assessments that encourage competition with other students. Furthermore, educators can use the results to help mitigate the negative effects of extrinsic motivation during assessment. For example, knowing that many students experience stress and anxiety during extrinsically motivating assessment, teachers can adopt stress management techniques in the classroom in order to address this issue. Teachers can acknowledge and address the range of emotions students feel during assessment, from lack of enjoyment to fear of failure, and may work to reduce the pressure and competition students feel.

The results of this study also have implications for future research. Perhaps most importantly, researchers need to recognize that assessment is not automatically an extrinsic motivator. Students can and do have instances of experiencing intrinsic motivation during assessment. Thus, future research needs to ensure that the type or quality of motivation is considered. Future research could continue with qualitative analysis and conduct interviews with a smaller group of participants to ask more about their experiences of intrinsic motivation and assessment. Interviews would enable researchers to get more detail from participants, and they may ask more questions about how and why students are intrinsically motivated by certain assessments. This type of research could uncover more about the methods and features of assessment that encourage intrinsic motivation. In addition, future studies could compare assessments with varying characteristics and measure students' intrinsic and extrinsic motivation for each assessment. For example, researchers could compare students' motivation during an assessment that supports students' autonomy, an assessment that provides students with an optimal challenge, and an assessment that focuses on collaboration. To measure students' motivation, Lepper and colleagues' (2005) intrinsic and extrinsic motivation scale could be used. This type of quantitative research could uncover the features of assessment that are more likely to enhance intrinsic motivation.

Conclusion

This study contributed to the small body of literature on student motivation and assessment from a self-determination theory perspective. We examined university students' experiences of intrinsic and extrinsic motivation during assessment through a qualitative descriptive research design. The results illuminated the many factors associated with assessment that contribute to and are elicited by intrinsic and extrinsic motivation during the assessment

process, including emotions, characteristics and design of assessment, and the student's relationship to learning, among others. Importantly, the results demonstrated that students can engage with assessment intrinsically, and they oppose the idea that assessments are purely an extrinsic motivator. The results of this study have implications for educators and other practitioners who may be looking to design assessments that encourage intrinsic motivation and to reduce the negative effects of extrinsic motivation.

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