

# Learning Skills, System Equity, and Implicit Bias Within Ontario, Canada

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## Abstract

The reporting of students' Learning Skills on the Ontario provincial report card provides educators and families with insight into students' work habits. However, the evaluation process is highly subjective. This study explores teachers' perceptions around student learning across demographic and institutional factors. This exploratory study is the first of its kind in Canada and draws data from the Toronto District School Board (TDSB), the nation's largest public board of education, serving approximately 246,000 students (2017–2018 data). Holding achievement as an independent variable, results indicate widespread differences in teachers' perceptions across student demographic identities and reveals significant implications on postsecondary access.

## Keywords

assessment, evaluation, teachers' work, urban education, equity, social inequality, race, social class, disability, gender

Every child attending public school in Ontario (elementary and secondary) is assessed on his or her Learning Skills. Teachers evaluate and record their perception of students' demonstration of responsibility, initiative, organization,

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self-regulation, as well as their ability to work independently and in collaboration with others. Up until now, there has been limited information on the relationship between Learning Skills (as reported on students' Ontario Report Cards) and student demographics, school-level variables, and elementary and secondary school achievement. Exploring these relationships are critical as the assessment of Learning Skills is one of the most subjective forms of evaluation formally reported to the Ministry of Education. Due to its level of subjectivity and intentional separation from academic assessments, the Learning Skills profile provides insight into how teachers perceive students' approaches to learning and captures teachers' perceptions and biases when explored in relation to demographic and institutional factors. At the core of our inquiry is the question of whether there is a disparity between students' achievement and teachers' perception of them as learners. If such a disparity exists, this study sought to determine whether this difference was consistent for all student populations across racial, gender, ability, and class characteristics. In particular, this study queried the role Learning Skills play in academic streaming (also known as academic tracking) as well as explored the implications Learning Skills may present on students' access to postsecondary education.

This exploratory study focused on the reported Learning Skills of students in the Toronto District School Board (TDSB), Canada's largest school board with approximately 246,000 students across 583 regular schools in the 2017-2018 school year (TDSB, 2018). It is intended to provide the first large-scale introduction to detailed Learning Skills patterns in Ontario.

## **The Relationship Between Learning Skills and International Assessment**

Assessment of Learning Skills derives from Assessment for Learning (AFL). According to DeLuca, Volante, and Earl (2015), AFL, as a more formal activity, can be traced to Bloom, Hastings, and Madaus (1971) and "Formative and Summative Evaluation of Student Learning," in highlighting how assessment was critical to student learning and classroom teaching, and how evaluation data could be used to improve and extend student development and achievement. DeLuca et al. (2015) also point to the 1988 metareview by Black and Wiliam, which showed that the intentional use of assessment in the classroom promoted student learning and improved student achievement (see also Mao & Peck, 2013). DeLuca et al. (2015) specify that AFL includes a subcategory of assessment *as* learning that focuses on using assessment tasks to help students develop metacognitive and self-regulation skills for lifelong learning. Canadian provincial assessment policies emphasize the value and benefits of integrating assessment for and as learning into classroom teaching

and learning. AFL “supports students’ growth towards educational standards while assessment *as* learning activities cultivate student autonomy, self-regulation, and general learning skills” (DeLuca et al., 2015, p. 50). AFL is also found in several countries outside of Canada, such as Ireland and Australia (for more detail, see Birenbaum et al., 2015).

Several international studies have shown a relationship between learning skills and student achievement. According to Joseph (2010), “successful students at all grade levels are self-regulated learners who assess their knowledge and examine their cognitive processes, abilities that become more important as students move from elementary to middle and high schools” (p. 100). Ashdown and Bernard (2012) investigated the effect of a social and emotional learning skills curriculum on the social-emotional development, well-being, and academic achievement of preparatory/Grade-1 students in Australia. The study found that the program had a statistically significant positive effect on levels of social-emotional competence and well-being, and an increase in reading achievement for lower achieving Grade-1 students.

However, DeLuca et al. (2015) discuss gaps in teachers’ capacity to implement assessment practices in their classrooms. The gaps may be related to teacher professional learning opportunities in assessment; practical barriers such as time and class sizes. There is also a lack of research on “the nuances of integrating AFL in diverse classroom contexts” (DeLuca et al., 2015, p. 51). Related to these limitations, outlined by DeLuca et al. (2015), is a lack of research on teacher assessment of learning skills, despite its widespread use for well over a decade.

## **How Are Learning Skills Determined in Ontario?**

Splashed across the front page of the Ontario provincial report card are six categories for which students are evaluated. Using measures of Excellent, Good, Satisfactory, or Needs Improvement, teachers are asked to report on six learning skill areas: Responsibility, Organization, Independent Work, Collaboration, Initiative, and Self-Regulation (see Figure 1). What makes Learning Skills such an interesting form of evaluation is that they are not intended to reflect students’ grasp on curricular subject matters or provincial assessments. They are also untethered from any formal or standardized assessment. Even though the Ministry of Education provides some generic guidelines on the evaluation, teachers have the discretion to develop their own means of evaluation based upon their understanding or perception of students’ learning. While we would expect there to be a strong relationship between students’ learning skills evaluation and their academic achievement,

each evaluation process is not necessarily tied to the other. Applicable to both elementary and secondary students in Ontario, the Ministry of Education stated,

The development of learning skills and work habits is an integral part of a student's learning . . . the evaluation of learning skills and work habits . . . should not be considered in the determination of student's grade. Assessing, evaluating, and reporting on the achievement of curriculum expectations and on the demonstration of learning skills and work habits separately allows teachers to provide information to parents and student that is specific to each of the two areas of achievement. (Ontario Ministry of Education, 2010, p. 10)

While the Learning Skills component of the Ontario Provincial Report Card has long been instituted across the province, significant changes emerged to the structure of evaluation in 2010 (Ontario Ministry of Education, 2010). Prior to 2010-2011 school year, elementary and secondary school students' Learning Skills were evaluated quite differently. For example, elementary students were evaluated three times a year across nine categories (e.g., Independent work, Initiative, Homework completion, Use of information, Cooperation with others, Conflict resolution, Class participation, Problem Solving, and Goal setting to improve work). Secondary students were only evaluated twice per year across five Learning Skill categories (e.g., Works independently, Teamwork, Organization, Work habits/Homework, Initiative). In 2010, the Ontario Ministry of Education made changes to have the same six Learning Skills evaluated for both elementary and secondary school students.

In addition to listing the Learning Skills to be assessed, the Ministry also provides sample assessment indicators to guide teachers' evaluation. For example, if teachers perceive a student to be setting individual goals and monitoring his or her own progress, they may infer that this deserves a "Good" or "Excellent" appraisal of "Self-Regulation" (Ontario Ministry of Education, 2010). Whereas, if a teacher interprets a student as rarely taking responsibility or struggles to manage his or her own behavior, he or she may receive a "Satisfactory" or "Needs Improvement" in the area of "Responsibility." Despite positioning curricular and learning skill competencies as separate areas of evaluation, the Ministry of Education also acknowledges that "[i]n many subjects and disciplines in Grades 1 to 12, the development of learning skills and work habits is further strengthened through the achievement of the curriculum expectations" (Ontario Ministry of Education, 2010, p. 12). In addition, to its alignment with some curricular areas, the Ministry stated that the selected Learning Skills are also in alignment with additional Ministry-issued policy documents and echo identified skills supported by the Conference

Learning Skills and Work Habits		E – Excellent    G – Good    S – Satisfactory    N – Needs Improvement			
<b>Responsibility</b>					
<ul style="list-style-type: none"> <li>▪ Fulfills responsibilities and commitments within the learning environment.</li> <li>▪ Completes and submits class work, homework, and assignments according to agreed-upon timelines.</li> <li>▪ Takes responsibility for and manages own behaviour.</li> </ul>		<b>Organization</b>			
		<ul style="list-style-type: none"> <li>▪ Devises and follows a plan and process for completing work and tasks.</li> <li>▪ Establishes priorities and manages time to complete tasks and achieve goals.</li> <li>▪ Identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks.</li> </ul>			
<b>Independent Work</b>					
<ul style="list-style-type: none"> <li>▪ Independently monitors, assesses, and revises plans to complete tasks and meet goals.</li> <li>▪ Uses class time appropriately to complete tasks.</li> <li>▪ Follows instructions with minimal supervision.</li> </ul>		<b>Collaboration</b>			
		<ul style="list-style-type: none"> <li>▪ Accepts various roles and an equitable share of work in a group.</li> <li>▪ Responds positively to the ideas, opinions, values, and traditions of others.</li> <li>▪ Builds healthy peer-to-peer relationships through personal and media-assisted interactions.</li> <li>▪ Works with others to resolve conflicts and build consensus to achieve group goals.</li> <li>▪ Shares information, resources, and expertise, and promotes critical thinking to solve problems and make decisions.</li> </ul>			
<b>Initiative</b>					
<ul style="list-style-type: none"> <li>▪ Looks for and acts on new ideas and opportunities for learning.</li> <li>▪ Demonstrates the capacity for innovation and a willingness to take risks.</li> <li>▪ Demonstrates curiosity and interest in learning.</li> <li>▪ Approaches new tasks with a positive attitude.</li> <li>▪ Recognizes and advocates appropriately for the rights of self and others.</li> </ul>		<b>Self-Regulation</b>			
		<ul style="list-style-type: none"> <li>▪ Sets own individual goals and monitors progress towards achieving them.</li> <li>▪ Seeks clarification or assistance when needed.</li> <li>▪ Assesses and reflects critically on own strengths, needs, and interests.</li> <li>▪ Identifies learning opportunities, choices, and strategies to meet personal needs and achieve goals.</li> <li>▪ Perseveres and makes an effort when responding to challenges.</li> </ul>			

**Figure 1.** Learning skills and work habits categories and sample assessment indicators (TCDSB, current website).

Note. TCDSB = Toronto Catholic District School Board.

Board of Canada and the Organisation for Economic Co-operation and Development. Supporting such global alignments of priorities, the Ministry of Education was confident that there is “broad agreement, both nationally and internationally” (Ontario Ministry of Education, 2010, p. 12) of the types of skills that are critical to student success.

## Exploring the Troubling Relationship Between Learning Skills and Academic Streaming

There is little doubt that the effects and draw of globalization has influenced the Ontario Ministry of Education’s selection and implementation of the identified Learning Skills as part of its evaluation requirements. The emphasis on skills development, strong academic achievement, as well as career planning and advancement appear to be key priorities in the Ministry’s mission to support students and invest in the future prosperity of the province and nation (Ontario Ministry of Education, 2018). The timing of the investigation into Learning Skills is purposive, coming quickly on the heels of tremendous media and public scrutiny of the Ministry of Education’s continuing support for academic streaming at the secondary level (“End Unjust and Ineffective Practice of Streaming,” 2017; To, Lloyd, Bacchus, & Vicente, 2017). Academic streaming is the practice of school systems offering tiered

programs of study that vary in academic rigor and postsecondary outcomes. Through the exploration of TDSB data, clear pathways emerge at the secondary level. The majority of students who take Academic-level courses in Grades 9 to 10 further pursue courses at the University level in Grades 11 to 12. Similarly, the majority of students who take Applied-level courses in Grades 9 to 10 go on to enroll in College-level courses in Grades 11 to 12 (Brown, 2010; Parekh, 2013). The provincial expectation would be that students graduating from university preparation courses will go on to enroll in university (equivalent to an American 4-year college degree program) and students graduating from college preparation courses will go on to enroll in college (equivalent to an American 2-year associate's degree program). However, studies have shown that students taking the majority of their courses within the Applied/College pathway do not end up attending college and instead experience significant barriers in accessing any postsecondary education (Author 1, 2013; To et al., 2017). Not only are a growing number of national and international studies pointing to the critical importance of postsecondary education, both university and college, in securing long-term economic independence, health, and well-being (Ballingall, 2015; Fonseca & Zheng, 2011; Irwin, 2015; Kearney, Hershbein, & Jacome, 2015; Pew Research Center, 2014), but also studies showing alarming disparities across secondary streams and postsecondary access have led to intense public scrutiny of the practice (Author 1, 2013; Quan, 2017; Queiser & de Araujo, 2017; Rushowy, 2017).

Before students even enter high school, Learning Skills play a significant role in determining which secondary pathways students will ultimately pursue. In the Ontario Ministry of Education's (2010) Growing Success document, the Ministry positioned the consolidation and reporting of Learning Skills as in alignment with other Ministry policies and initiatives. One of these policies was the *Choices Into Action, 1999* policy document, replaced in 2013 by *Creating Pathways to Success: An Education and Career/Life Planning Program for Ontario Schools—Policy and Program Requirements, Kindergarten to Grade 12*.

The learning skills and work habits described for Grades 1 to 12 align closely with the goals and areas of learning of the guidance and career education program (outlined in the policy document *Choices Into Action 1999*, pp. 6-7). (Ontario Ministry of Education, 2010, p. 12)

Furthermore, they were to “build on effective practices currently in place in many Ontario schools and classrooms” (Ontario Ministry of Education, 2010, p. 14). Within *Creating Pathways to Success* (Ontario Ministry of Education,

2013), Learning Skills are identified as an essential component to students' self-awareness and in the shaping of students' academic and career pathways. Prior to selecting a secondary program pathway, students are advised to consider "Who am I?" and to

identify the characteristics that describe who they are, and create and maintain a personal profile that reflects those characteristics (e.g., interests, strengths, intelligences, accomplishments, values, and skills, *including the learning skills and work habits evaluated on the provincial report cards*). (Ontario Ministry of Education, 2013, p. 15, emphasis added)

This activity is intended to lead students toward a particular secondary pathway that will align with their current identity, learning skills and work habits, and future aspirations.

Whether intentional or not, Learning Skills are used as key indicators by teachers and guidance counselors in their evaluation of students' previous and potential achievement as well as in their recommendations for students' pursuit of academic pathways. Therefore, while understood as a critically subjective measure, with no standardization or formal assessment, the cumulative perception of teachers on students' Learning Skills may play a pivotal role in their access to academic programming and postsecondary education opportunities.

## Theoretical Framework

The underlying theoretical framework that we employ to analyze these data is drawn from critical disability theory. Critical disability theory challenges normative ideologies around ability and disability (Davis, 2013). It can be used to examine the social, economic, and political causes and consequences of disablement in society at large, but is also an ideal framework to use when examining the causes and consequences of assessment, identification of ability, inability, and disability in schools (Brantlinger, 2006; Erevelles, 2000; Slee, 2013). Schools are often a primary location for which ability is measured, constructed (Danforth, Taff, & Ferguson, 2006; Mitchell, 2010), and concretized through the allocation of access to varying programs or academic opportunities (Duncan-Andrade & Morrell, 2008). Critical disability theory identifies how meritocratic approaches to ability often lead to an ascribed value of the individual, justifying the conditions of poverty and precarity many people with disabilities face (Barnes & Sheldon, 2010). In addition, Ladwig and McPherson (2017) discuss how ability and hard work are further externalized and moralized for the purpose of ranking, stating that

“[e]xternalising and moralising imply that ranking represents what is ‘naturally’ internal and fixed to those bodies” (p. 356). This is important for the theorizing of the role Learning Skills plays in schools, particularly in how the evaluation of Learning Skills is assigned to and affects different communities. To this end, it was critical to investigate whether there was a tendency from teachers to attribute these valued skills and characteristics to certain groups of students over others.

## **Framing the Study**

The Ministry of Education has suggested that Learning Skills should be evaluated separately from achievement within the curricular areas; however, it also leaves open the idea that academic achievement can be somewhat reflective of the development of Learning Skills. Regardless of whether Learning Skills and achievement should be evaluated separately, there is a logical case for inferring that the two would be closely related. For example, if students exemplify “Good” or “Excellent” Learning Skills, the result *should* translate into higher achievement. Conversely, should students be perceived as struggling with their approach to learning, it would be logical to assume that their struggle would also be reflected through lower achievement. If achievement and evaluation of Learning Skills were not related, it would call into question how students’ approach to learning was being evaluated. If students are academically highly successful, it would be concerning to suggest that their approach to learning is flawed as they clearly are employing strategies that work for them. Whether or not the correlation between Learning Skills and achievement exists, the most critical factor from an equity standpoint is that the correlation be consistent across identity characteristics. Therefore, using academic achievement as an independent variable, the following analysis queries whether there is a relationship between how teachers perceive students’ learning and students’ demographic characteristics. With achievement held constant, should differences exist in students’ Learning Skills evaluation across students’ racial, gender, disability, and parent education characteristics, it would call into question how teachers are evaluating students’ approach to learning and whether extraneous variables were influencing their perception of students’ learning.

## **Data Set and Method**

This exploratory study of Learning Skills used a cohort study that followed students in the TDSB from when they started Junior Kindergarten in the 2002-2003 school year, until they finished Grade 12 in the 2015-2016 school



year. There were 34,146 students in the full cohort. However, Toronto's Gateway City status results in very high immigration and mobility. Consequently, only a small proportion of students (9,009 or 26%) were continuously enrolled within the TDSB for the entire duration between Junior Kindergarten (2002-2003) and Grade 12 (2015-2016). This study therefore focuses on the 7,648 students who wrote the Grade 6 provincial Grade 6 assessments (i.e., the Education Quality and Accountability Office [EQAO] tests), for whom Learning Skills were centrally collected, and who wrote the TDSB Student Census as Grade-8 students.

Variables included,

*Gender:* At the time of collection, gender options were male and female and were collected upon students' entry into school as part of the TDSB's administrative data.

*Grade 6 EQAO Results in Mathematics:* The EQAO of Ontario conducts provincial wide testing in the areas of reading, writing, and mathematics for students in Grades 3 and 6, and mathematics for students in Grade 9. The test scores included in this analysis were for students' Grade 6 mathematics test scores (administered in 2009-2010). Dot score results were provided to the TDSB. Broader reporting categories are generally Levels 1 to 4 (Level 4 indicating highest achievement and Level 3 is the provincial standard). However, as the TDSB was to give students' exact dot score results, we are able to report in across six categories of achievement. For this article, we have focused on four EQAO levels—Levels "1 or below," "2 to 2.5," "2.6 to 2.9," or "3.0 to 3.4." Category "1 or below" signifies low achievement while "3.0 to 3.4" signifies achievement that is at or above the provincial average. The focus on these four achievement categories is to ensure that there was robust representation from all student groups across all categories.

It is important to note that this study employs Grade 6 EQAO mathematics results as a measure of achievement. To verify the validity of this measure, for the same student cohort a parallel analysis was conducted with a similar, but earlier data sets drawing on the Grade 3 (2006-2007) EQAO reading, writing, and mathematics, and the Grade 6 (2009-2010) EQAO reading and writing results across racial categories. During these school years, the province had nine Learning Skills versus the current six. This analysis also included all six results categories (the abovementioned four plus "3.5 to 3.9" and "4.0 to 4.9," the highest possible score for the EQAO assessments). Across all three subjects (reading, writing, and mathematics) for Grade 3 and the reading and writing measures for Grade 6, similar patterns emerged for students' racial categories with the exception of the

highest achievement categories in which South Asian students were slightly more likely to be reported as having “Excellent” Learning Skills as compared with other groups. Full results can be found in the appendix.

*Student Demographic Variables:* In 2011-2012, Grades 7 to 12 students completed the TDSB Student Census that collects student demographic variables, such as parental education (default either parents’ highest level of education), family status, racial identity, and so forth.

*Special Education Status:* Students’ special education status as of Grade 8 was included.

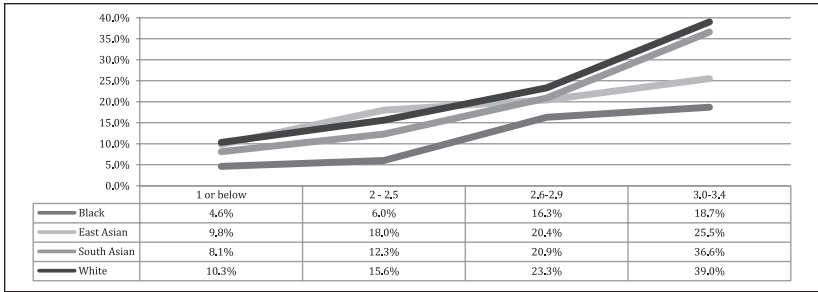
*Postsecondary Access:* Postsecondary access for students, as reported at the end of students’ Grade 12 year (fourth year in secondary school). This is reported by combining offers of admission to an Ontario college or university as reported through Ontario college and Ontario university application systems at the end of the 2016 application cycle. Important to note: Although there are some differences, Ontario 2-year college diplomas are generally considered equivalent to an American 2-year associate’s degree, while Ontario university degrees are normally considered equivalent to American 4-year college degrees.

*Learning Skills:* Students’ Grade 6 Learning Skills marks (2009-2010), as reported on students’ provincial report cards, were examined at the same time that the students wrote the provincial test in mathematics. An earlier TDSB analysis found that, generally, the correlation between Learning Skills marks across categories was so high, the reporting process should be considered as one variable, similar to how GPA and mean marks are calculated from multiple course results. Therefore, for this analysis, all six Learning Skills were averaged together for an overall score of Excellent, Good, and Less than Good.

This is an exploratory study and therefore focused on frequencies and general patterns. Due to the structure of both the achievement and Learning Skills variables being either categorical or ordinal, we conducted this investigatory study using three-way cross-tabulations, chi-square, and binary logistic regression analyses.

## **Initial Descriptive Results**

To isolate effects potentially related to teachers’ perceptions, the initial descriptive analysis included a three-way cross-tabulation. Keeping achievement, as captured through students’ Grade 6 EQAO mathematics scores, we examined variances in students’ reported Learning Skills within similar achievement categories. For the following four figures, we look at the extent



**Figure 2.** “Excellent” evaluation of learning skills across race and achievement.

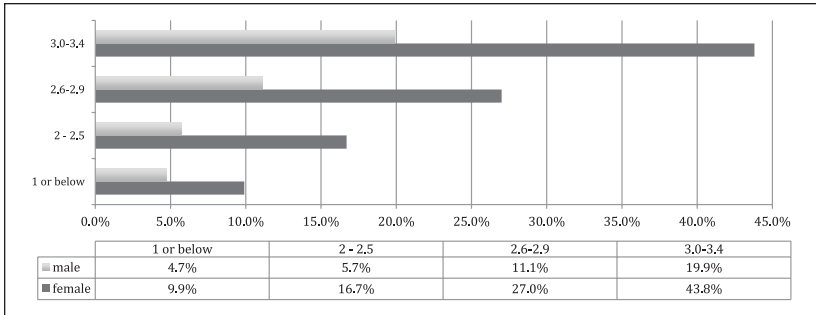
to which students received an “Excellent” in their reported Learning Skills across achievement and demographic variables.

### *Racial Identity and Learning Skills*

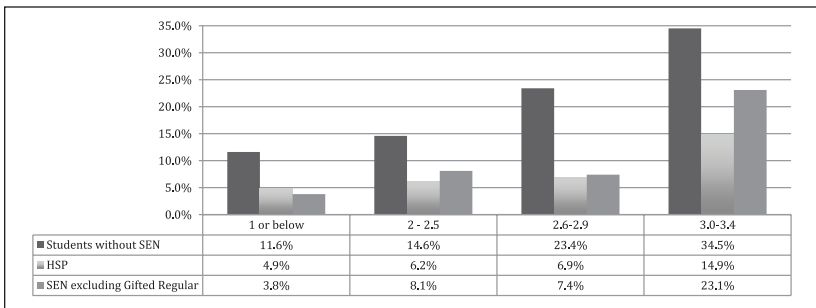
The first analysis looks at students’ self-described racial identity and the extent to which students were reported as having “Excellent” Learning Skills across achievement categories (see Figure 2). Regardless of achievement category, demographic trends remained fairly consistent. Aside from East Asian students being the most likely to receive an “Excellent” in their Learning Skills for achievement level “2 to 2.5,” generally students who self-identified as White were most likely to receive “Excellent” on their Learning Skills across all other achievement categories. Conversely, despite being compared at similar levels of achievement, students who self-identified as Black were the least likely to be reported as having “Excellent” Learning Skills across all achievement categories. Even at the higher level of achievement, indicating students are achieving at or above the provincial average, 39% students who identified as White were given an “Excellent” on their Learning Skills as compared with less than one fifth of students who identified as Black. This finding alone should be enough to question how racial identity and bias shapes teachers’ perception of ability.

### *Gender and Learning Skills*

In our second analysis, gender demonstrates to play a significant role in relation to reported Learning Skills. Consistently across all achievement categories, female students were consistently and notably reported as having “Excellent” Learning Skills as compared with their male counterparts, again despite sharing similar levels of achievement. Most



**Figure 3.** “Excellent” evaluation on learning skills across gender and achievement.

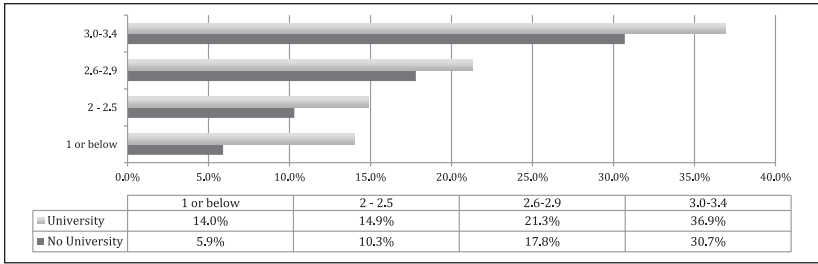


**Figure 4.** “Excellent” evaluation on learning skills across special education and achievement.

noticeably for students scoring at or above the provincial average (Levels 3.0-3.4), close to half of female students were reported as having “Excellent” Learning Skills compared with less than one fifth of male students. See Figure 3.

### Special Education and Learning Skills

The third analysis looks at special education status and the extent to which students received an “Excellent” in their reported Learning Skills while keeping achievement constant (see Figure 4). This analysis compares students who are identified as having a special education need (excluding Gifted) and are taught in the regular class (special education need excluding Gifted Regular), students who are in the Home School Program (HSP), a part-time special education program, and students who have not



**Figure 5.** “Excellent” evaluation on learning skills across parental education and achievement.

been identified with a special education need. Interestingly, despite scoring similar achievement, students who were not identified as having a special education need were consistently more likely to receive an “Excellent” evaluation on their Learning Skills as compared with students identified as having a special education need. For the highest three achievement categories, students who were in the Home School Program were the least likely to receive an “Excellent” evaluation. For students who scored a Level 3.0 to 3.4 (at or above the provincial average in achievement), the disparity is stark with over a third of students without a special education identification receiving “Excellent” in their Learning Skills, whereas just under a quarter of students identified and taught in the regular class and less than a one sixth of students placed in a part-time special education program received the same.

**Parental Education**

In the TDSB, the variable of Parental Education (default either parents’ highest level of education) is often used as a proxy for class or socioeconomic status. In the final three-way cross-tabulation, it becomes evident that despite sharing similar levels of achievement, students whose parents have accessed postsecondary education were perceived to have better Learning Skills in school. See Figure 5.

**Logistic Regression: Model I**

Binary logistic regression was employed to see the impact of key variables on the teacher overall assessment of “Excellent” on students’ Learning Skills. There were six types of independent variables in the model:

1. Special Education Needs was divided into Gifted Congregated classes, Gifted Regular (students with a Gifted exceptionality in Regular classes), students in full-time self-contained Intensive Support Programs, students in part-time self-contained special education programs (Home School Program), and students with Special Education Needs who have an Individual Education Plan and are taught in Regular classes. The reference was students without Special Education Needs.
2. Student Race was divided into the five key racial groups of Black, East Asian, South Asian, White, and Other (e.g., Latin, Mixed). The reference was students who self-identified as White.
3. Education looked at students whose parents had university education with the reference of other parental education levels.
4. Parental structure looked at students living in two-parent families compared with those in other family situations.
5. Gender looked at female compared with male students.
6. Neighborhood Income was based on 2006 income of the dissemination area (micro neighborhood) in which the student lived.

## Results

The full model ( $N = 7,648$ ) was significant with  $\chi^2$  of 1409.327,  $p < .001$ , showing that the model was able to differentiate between those students with and without “Excellent” Learning Skills. The Hosmer–Lemeshow Goodness-of-Fit test was not significant at .149, showing support for the model. The model correctly classified 74% of cases, and explained between 16.8% and 22.9% of the variance.

All of the independent variables had influence in the model: special education needs, race, parental education, family structure, and neighborhood income (see Table 1). Students in self-contained Gifted programs as well as students identified with a Gifted exceptionality but taught in the regular classes, were more likely to be assigned “Excellent” on their Learning Skills (odds ratios of 1.542 and 2.445). In contrast, students placed in Intensive Support Special Education Programs (ISP), HSP, and those who have been given an Individual Education Plan and taught in the regular class, were significantly less likely to be assigned “Excellent” in their Learning Skills. In terms of self-identified race, compared with White students, Black students were far less likely to be reported as having “Excellent” Learning Skills (.476), while East Asian and South Asian students were more likely (1.264 and 1.239). Students with university-educated parents,

**Table 1.** Logistic Regression and Odds Ratios on Having “Excellent” Learning Skills in Grade 6.

Independent variables	B	SE	Wald	df	Sig.	Exp(B)	95% CI for EXP(B)	
							Lower	Upper
Congregated special education needs (SEN; 2009-2010)			370.875	5	0.0000			
Gifted congregated	0.433	0.145	8.92	1	0.0030	1.542	1.161	2.05
Gifted regular classes	0.894	0.2	20.082	1	0.0000	2.445	1.654	3.615
Intensive support programs	-1.632	0.296	30.334	1	0.0000	0.195	0.109	0.349
Home school program	-2.118	0.183	134.331	1	0.0000	0.12	0.084	0.172
SEN excluding gifted in regular classes	-1.385	0.102	182.862	1	0.0000	0.25	0.205	0.306
Self-identified race			109.781	4	0.0000			
Black	-0.742	0.1	54.996	1	0.0000	0.476	0.391	0.579
East Asian	0.234	0.085	7.642	1	0.0060	1.264	1.071	1.492
South Asian	0.215	0.073	8.721	1	0.0030	1.239	1.075	1.429
Other race	-0.153	0.079	3.713	1	0.0540	0.858	0.735	1.003
Parents with university education	0.494	0.055	81.912	1	0.0000	1.639	1.472	1.823
Parents in two-parent families	0.524	0.078	45.222	1	0.0000	1.688	1.449	1.966
Female	0.816	0.052	243.219	1	0.0000	2.262	2.041	2.506
Living in higher income neighborhood	0.366	0.058	40.399	1	0.0000	1.442	1.288	1.615
Constant	-1.471	0.098	223.264	1	0.0000	0.23		

Note. CI = confidence interval.

those with two-parent families, and those living in higher income neighborhoods were also more likely to have Excellent Learning Skills. Female students had an odds ratio of 2.262, meaning they were over twice as likely to be perceived as having “Excellent” Learning Skills than male students.

### Logistic Regression Model 2—Including Achievement

It could be suggested that much of the differences seen in Model 1 can be explained by a strong relationship between reported Learning Skills and achievement. After all, students’ learning skills and work habits, if assessed accurately, *should* be reflected in their achievement. And, in general, it appears indeed that the relationship of overall Learning Skills to academic achievement is quite strong. Table 2 shows the important connection of overall

**Table 2.** Grade 6 Mathematics Levels and Grade 6 Learning Skills.

Grade 6 mathematics level	Grade 6 learning skills			Total (%)
	Less than good (%)	Good (%)	Excellent (%)	
Level 1 or below	49.6	43.6	6.9	100.0
Levels 2 to 2.5	38.6	50.2	11.2	100.0
Levels 2.6 to 2.9	28.1	52.7	19.1	100.0
Levels 3 to 3.49	13.4	53.8	32.8	100.0
Level 3.5	11.1	47.9	41.0	100.0
Levels 3.6 to 3.9	5.8	39.9	54.3	100.0
Level 4	2.5	27.8	69.7	100.0
Total	18.4	44.3	37.4	100.0

	Value	df	Asymp. sig. (2-sided)
Pearson chi-square	2417.222	12	.000
Likelihood ratio	2503.512	12	.000
Linear-by-linear association	2109.651	1	.000
N of valid cases	8,610		

Learning Skills to Grade 6 provincial tests in mathematics. Of students who scored within the lowest EQAO category of achievement, “Level 1 or below,” half the students (50%) also had a Learning Skills appraisal of “Less than Good.” In contrast, of those with the highest EQAO mathematics achievement category, Level 4, over two thirds or 70% of students had a Learning Skills appraisal of “Excellent.” The relationship is significant at less than .001 using the chi-square test of significance.

Table 3 looks at postsecondary pathways of the same students 6 years later—by the end of 2016, when students would have completed their fourth year of secondary school. The same strong relationship with Grade 6 Learning Skills was still observed. Just over half (52%) of students confirming an offer of admission from an Ontario university had “Excellent” Learning Skills in Grade 6, while a majority of those confirming college had “Good” Learning Skills (54%). The outcomes of those who did not apply to postsecondary at all were split between those with “Less than Good” skills (41%) and “Good” skills (46%).

To more clearly explore the role achievement plays in mitigating the identified relationships between Learning Skills and students’ demographic characteristics, in Model 2, we included Grade 6 provincial mathematics results. Results are seen in Table 4. The full model ( $N = 7,634$ ) was significant with  $\chi^2$  of 2216.537,  $p < .001$ , showing that the model was able to differentiate



**Table 3.** Grade 12 Postsecondary Status and Grade 6 Learning Skills.

Grade 12 postsecondary status	Grade 6 learning skills			Total (%)
	Less than good (%)	Good (%)	Excellent (%)	
Confirmed university in Ontario	5.6	40.5	53.9	100.0
Confirmed college in Ontario	25.6	54.7	19.7	100.0
Applied postsecondary in Ontario	15.8	46.2	38.0	100.0
Did not apply to postsecondary	40.7	45.8	13.5	100.0
Total	18.4	44.3	37.3	100.0

	Value	df	Asymp. sig. (2-sided)
Pearson chi-square	1833.114	6	.000
Likelihood ratio	1909.930	6	.000
Linear-by-linear association	1504.442	1	.000
N of valid cases	8,629		

between those students with and without Excellent Learning Skills. The Hosmer–Lemeshow Goodness-of-Fit test was not significant at .473, showing support for the model. The model correctly classified 73% of cases, and explained between 25.2% and 34.2% of the variance. This is more variance than explained in Model 1, showing that the addition of Grade 6 mathematics achievement provides a fuller picture.

Interestingly, the higher the EQAO Grade 6 mathematics score, the more likely students were to have “Excellent” Learning Skills—students at the highest Level 4 were 16 times as likely to receive an “Excellent” Learning Skill. However, achievement, as measured through standardized mathematics scores, was not the only influence on Learning Skills: All the independent variables used in Model 1 continued to have influence on the assignment of “Excellent” Learning Skills (e.g., special education status, racial identity, parental education, family structure, and neighborhood income). Once the achievement variable was introduced, Giftedness no longer had a significant relationship to “Excellent” Learning Skills, nor did placement in ISP; self-contained Special Education classes largely comprised of students identified with a variety of exceptionalities including

**Table 4.** Model 2: Logistic Regression and Odds Ratios on Having “Excellent” Learning Skills in Grade 6 (Grade 6 Mathematics Achievement Added).

Independent variables	B	SE	Wald	df	Sig.	Exp(B)	95% CI for EXP(B)	
							Lower	Upper
Congregated special education needs (SEN; 2009-2010)			78.746	5	.000			
Gifted congregated	0.036	.153	0.055	1	.815	1.037	0.768	1.399
Gifted regular classes	0.326	.209	2.428	1	.119	1.385	0.919	2.087
Intensive support programs	-0.458	.319	2.059	1	.151	0.632	0.338	1.183
Home school program	-1.059	.198	28.529	1	.000	0.347	0.235	0.512
SEN excluding gifted in regular classes	-0.799	.109	53.483	1	.000	0.450	0.363	0.557
Self-identified race			38.920	4	.000			
Black	-0.425	.106	16.030	1	.000	0.654	0.531	0.805
East Asian	-0.254	.092	7.679	1	.006	0.775	0.648	0.928
South Asian	0.133	.078	2.941	1	.086	1.143	0.981	1.331
Other race	-0.149	.085	3.111	1	.078	0.861	0.730	1.017
Parents with university education	0.315	.058	29.101	1	.000	1.370	1.222	1.536
Parents in two-parent families	0.416	.083	25.366	1	.000	1.516	1.289	1.783
Female	0.974	.057	296.206	1	.000	2.648	2.370	2.959
Grade 6 provincial mathematics (2009-2010)			715.404	6	.000			
Living in higher income neighborhood	0.260	.062	17.874	1	.000	1.297	1.150	1.463
Math Levels 2 to 2.5	-0.015	.185	.006	1	.937	0.986	0.685	1.417
Math Levels 2.6 to 2.9	0.406	.182	4.992	1	.025	1.501	1.051	2.144
Math Levels 3-3.49	1.018	.171	35.563	1	.000	2.767	1.981	3.867
Math Level 3.5	1.361	.180	57.029	1	.000	3.900	2.740	5.553
Math Levels 3.6-3.9	1.882	.172	119.728	1	.000	6.569	4.689	9.203
Math Level 4 +	2.547	.175	210.735	1	.000	12.770	9.054	18.012
Constant	-2.711	.190	203.213	1	.000	0.066		

Note. CI = confidence interval.

Mild Intellectual Disability, Developmental Disability, Behavioral, and Autism. (Note: Many students placed in special education schools would not have participated in EQAO nor in the student census, and therefore may not be included in this analysis.) However, in contrast, students placed in part-time Special Education programs (e.g., Home School Programs) as well as students identified with Special Education Needs who were taught in the regular classroom, were significantly less likely to be perceived as

having “Excellent” Learning Skills, despite the presence of an achievement variable in the model. Compared with White students, Black and East Asian students were significantly less likely to be reported as having “Excellent” Learning Skills (.654 and .775) while South Asian students had no significant difference, compared with White students.

As with Model 1, students with university-educated parents, with two-parent families, and students living in higher income neighborhoods were also more likely to be perceived as having “Excellent” Learning Skills, even when achievement is introduced. Female students had an odds ratio of 2.648, meaning they were almost three times as likely to have Excellent Learning Skills than male students. Compared with Model 1, the odds of female students having “Excellent” Learning Skills seem to have slightly increased, when achievement is introduced.

## Discussion

The results from this analysis strongly suggest the presence of implicit bias within teacher reported assessments on how students approach their own learning. With and without the presence of a standards-based achievement variable, clear relationships were evidenced between gender, disability, race, and class (or socioeconomic status) in the perception of how students learn. Trends show that the learning approaches of female students, students self-identified as White, students who have not been identified as having a special education need (excluding gifted), and students who come from historically privileged family contexts (e.g., have access to two parents, parents with university education, and living in higher income neighborhoods) were all perceived to be “better” than the learning approaches of their male, racialized, identified with special education needs, and less sociodemographically privileged counterparts, given the same level of achievement. One of the many deeply troubling outcomes from this study was not only that there are certain student groups who appear to be privileged through the assessment of learning skills, but also that Learning Skills in themselves seem to encapsulate a skewed meritocratic notion of education, prevalent in present-day schooling (Brantlinger, 2006). In this light, the results of the analysis are devastating. They suggest that there are certain groups of students who, regardless of how well they perform academically, are not perceived to embody the core characteristics implicitly valued by the education system.

The implications of this study are far-reaching in that they highlight critical points of juncture between the moralization of ability; the influence of racial, class, and gender bias; and the positionality of the teacher. When students are sorted across inequitable academic, postsecondary, and employment opportunities, there must be mechanisms in place to ensure that the

resulting stratification is justified (Duncan-Andrade & Morrell, 2008). The evaluation of Learning Skills may be one of the critical “sorting” components within the public education apparatus. Acknowledged by Ladwig and McPherson (2017), schools operationalize a construction of ability that is very much tied to the concept of the Protestant Work Ethic. Such a work ethic ascribes virtue to ability and, conversely, pathologizes or demonizes academic failure as a lack of virtue, a symptom of laziness or poor character. Traditional character and citizenship education programs similarly espoused virtues of early Victorian Christian morality, some of which continues to be reflected within the Ministry’s selected Learning Skills (e.g., responsibility, self-regulation, independent work, etc.). Important to remember is how traditional character education programs were initially tied to a burgeoning industry and the growth of capitalism. Learning Skills not only symbolize a robust work ethic but also promote a relational approach to work that privileges independence and individualism. Five of the six areas covered by Learning Skills promote individual qualities underscored by self-determination, autonomy, and the production of labor. Not only do Learning Skills delineate the “able” from the “unable” or “disabled” in relation to the specific Learning Skills areas, but they also moralize the degree of ability or inability. Through this moralization, the evaluation of Learning Skills produces students as deserving and undeserving of academic advantages, thereby justifying the resulting stratification of outcomes.

The subjective nature of evaluation and reporting of Learning Skills had been discussed. However, what has not yet been identified is the task teachers are required to perform to report on students’ Learning Skills. The act of evaluation asks teachers to judge students’ degree of ability or mastery of skills across identified areas as though ability was somehow an objective entity that exists, as it is perceived, uninfluenced by context or environmental factors. Therefore, it is also assumed that teachers not only “know” all the variable ways through which students can express their abilities, but also that teachers can also quantify their perceptions, even within such crude categories as “Excellent” or “Satisfactory.” Identifying the intersections between the subjectivity of evaluation and the moralization of ability, Ladwig and McPherson (2017) write,

[p]resumptions and deployments of an ostensibly “objective” descriptive trait—that is knowable, although internal, quantifiable and differentially stable—come home to roost in a moral dance, where teachers’ own sense of what they value for themselves and their students becomes the fulcrum for decisions about what to expect from whom . . . (Ladwig & McPherson, 2017, p. 11)

The consequences of presuming certain students do not embody the values and skills espoused in the Ministry's Learning Skills is the marginalization through the exclusion from rigorous programming opportunities and venturing into precarious pathways through school.

In the context of schooling, ability is not the only student characteristic at risk for moralization. Systemic bias affecting particular racial groups, students living in poverty, and boys also perpetuate stereotypical and often damaging notions of ethnicity, racial identity, class, and gender. Together, institutional responses to diverse identities collude to produce the notion of a "good student" and, in particular, solidify the construction of the dichotomous relationship between ability and disability. Similar to ability, racial identity, class, and masculinity have also been subject to moralization in how they mirror or diverge from dominant norms. The inclusion of masculinity within the narrative of exclusion points to the critical necessity to employ an intersectional approach to any analysis involving the construction of ability or disability. As a typically dominant characteristic, masculinity has a precarious relationship with power, largely determined on its intersection with ability. Interestingly, while patriarchal systems support the dominance of masculinity, it could be argued that it is construction of able, industrious, and White masculinity that is privileged (Hogeveen, 2005). Racialized, disabled, or impoverished masculinity produces significant dissonance within the hierarchy of identity, reiterating the critical need to approach such discourses from a social relational perspective.

Teachers are critical actors in the day-to-day functioning of schools, the process of schooling, and, in many ways, play a key role in the success of students. From the reported Learning Skills' marks, the results of the study point to a clear bias in favor of students who identify as White, female, non-disabled, and whose parents have university education. While we do not have demographic data on elementary teachers in the TDSB, provincially, teachers have been historically predominantly White (Carr & Klassen, 1997) and have largely been female (73% of teachers across Ontario English boards identify as female; Ontario College of Teachers [OCT], 2011). The intention of this analysis and the implication of teachers is, by no means, intended to suggest that teachers are consciously attempting to privilege the aforementioned groups of students. That being said, results do require that attention be paid to two possible factors: the validity and role of subjective assessments and the positionality of teachers. There has been a recent spate of research studies pointing to a significant relationship between teachers' racial identity and their evaluation of students' ability and potential across racial identity. Gershenson and Papageorge's (2018) study examined teachers' expectations of students and found that White teachers were much more likely to hold higher expectations for academic success, as defined by postsecondary attainment, for White

students than Black students and that the disparity in their expectations were far more pronounced than their Black colleagues. In addition, Nicholson-Crotty, Grissom, Nicholson-Crotty, and Redding's (2016) study show similar results in their work on teachers' referrals of students to gifted services. Nicholson-Crotty et al. (2016) demonstrate how Black students were much more likely to be referred to gifted services when taught by a Black teacher. The results of the Learning Skills analysis may point to similar preferences of learning styles that align with teachers and students' identities.

These results also call into question how "subjective" and "objective" forms of measurement are defined and whether differences in methodologies are truly distinct. Several studies have shown how even the most "objective" forms of measurement are vulnerable to bias and can be influenced by extenuating circumstances (de Araujo, 2017; Löfgren & Löfgren, 2017). Considering similar disparities of racial, gender, and class identities are found across myriad forms of assessment and referrals for services across programs, it would be imperative to problematize these procedures. However, hope is not lost! In his recent work, Connor (2017) identified the vast differences between the identities and experiences of American public school teachers and their students. While he directly attributed the disparities in identity as a key component to the perpetuation of disproportionality, he also states that teachers can play a pivotal role in resisting these trends by critically examining their own decisions relating to student evaluations and referrals. Disproportionality and inequity resulting within teacher evaluations stem from broad hegemonic social and political histories and, although it must be taken up as such, teachers must play a role in resisting its perpetuation.

## Conclusion

The evaluation of students' Learning Skills, while related to student achievement, is intended to capture teachers' perceptions on *how* students approach learning. The Ontario Ministry of Education asks teachers to evaluate students' level of responsibility, independence, initiative, organization, collaboration, and self-regulation, all key skills valued in public schooling, and, ultimately, citizenship. The results of this study show that there is more to being perceived as successful learner than achievement. According to the Ministry of Education, assessed achievement and reported Learning Skills do not have to align and disparities are anticipated. The challenge this study uncovers is that the disparities between achievement and Learning Skills is inconsistent across student populations. When measured against achievement, students identified as male, racialized, disabled, or students experiencing other sociodemographic disadvantage may perform well academically, but are significantly less likely to be perceived as "Excellent" learners as compared with

students identified as female, White, nondisabled, or students living in sociodemographically privileged contexts. These stark outcomes raise questions around the subjectivity of the assessment of Learning Skills, the influence of teachers’ positionality, and the implicit bias within public schooling. The provincial policy implications linked to the evaluation of students’ Learning Skills hold the potential to influence students’ academic trajectories through the process of streaming and specialty program enrolment. This article is not suggesting that the merits of assessment should only rely on academic-based evaluation. However, the goal of this article is to raise awareness of the presence of implicit bias within current evaluation strategies and explore the broader implications on students’ identity and academic outcomes so that educators might be able to critically approach their assessment strategies.

### Appendix

Analysis of Learning Skills and Racial Identity Across Grade 3 Reading, Writing, and Mathematics and Grade 6 Reading and Writing EQAO Results.

EQAO subject	EQAO dot scores	% of Black students with “excellent” learning skills	% of East Asian students with “excellent” learning skills	% of South Asian students with “excellent” learning skills	% of White students with “excellent” learning skills
Grade 3 reading	0.0-1.9	0	4.2	4.6	5.7
	2.0-2.5	3.5	9.8	6.3	9.2
	2.6-2.9	8.4	18.3	15.5	23.1
	3.0-3.4	20.3	31.2	29.7	31.6
	3.5-3.9	41.6	49.1	52.0	55.1
	4.0-4.9	56.8	69.8	81.5	78.9
Grade 3 writing	0.0-1.9	0	0	0	6.7
	2.0-2.5	0.7	4.3	3.7	6.8
	2.6-2.9	4.1	11.6	9.1	19.4
	3.0-3.4	18.2	29.1	22.3	32.0
	3.5-3.9	36.1	49.3	44.7	59.9
	4.0-4.9	63.0	66.4	71.7	80.2
Grade 3 mathematics	0.0-1.9	1.3	0	2.2	5.3
	2.0-2.5	2.8	7.5	6.9	8.6
	2.6-2.9	10.6	16.3	10.4	15.6
	3.0-3.4	15.1	24.6	20.5	32.5
	3.5-3.9	32.3	40.1	46.1	47.9
	4.0-4.9	53.3	62.1	66.5	65.6

(continued)

## Appendix (continued)

EQAO subject	EQAO dot scores	% of Black students with “excellent” learning skills	% of East Asian students with “excellent” learning skills	% of South Asian students with “excellent” learning skills	% of White students with “excellent” learning skills
Grade 6 reading	0.0-1.9	2.6	7.1	4.7	5.6
	2.0-2.5	7.1	15.6	13.7	12.2
	2.6-2.9	9.1	16.9	19.7	18.1
	3.0-3.4	15.7	27.1	32.2	31.1
	3.5-3.9	33.7	45.3	55.2	52.1
Grade 6 writing	4.0-4.9	61.0	74.5	81.2	72.5
	0.0-1.9	5.3	0	0	10.0
	2.0-2.5	2.5	10.7	6.3	9.0
	2.6-2.9	8.3	13.8	15.4	16.1
	3.0-3.4	17.4	21.4	28.1	35.6
	3.5-3.9	36.9	49.0	54.7	57.8
	4.0-4.9	51.4	74.2	77.4	75.4

Note. EQAO = Education Quality and Accountability Office.

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