

## **Differentiating Low Performance of the Gifted Learner: Achieving, Underachieving, and Selective Consuming Students**

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# Differentiating Low Performance of the Gifted Learner: Achieving, Underachieving, and Selective Consuming Students

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and Renae Low<sup>1</sup>

## Abstract

The study aimed to empirically verify findings from qualitative studies that showed selective consumers could be distinguished from underachievers with regard to academic self-perception and thinking style preference. Participants, gifted males from an independent secondary boys' school in Sydney, Australia, were categorized as achieving, underachieving, or selective consuming and administered the School Attitude Assessment Survey–Revised and the Thinking Style Inventory to assess academic self-perception and thinking style preference. A multivariate analysis (MANOVA) with a Bonferroni-adjusted alpha level to control for Type I errors showed a statistically significant difference in academic self-perception between achievers and underachievers only. Selective consumers could not statistically be distinguished from achievers or underachievers. Results, although not statistically significant, supported the trend currently reported in the literature that selective consumers differ qualitatively from underachievers.

## Keywords

achievement, underachievement, thinking style preference, gifted, academic self-perception, selective consumer

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Consensus is not often found in the literature on gifted underachievement. What does gifted mean? How do we identify giftedness? What does it mean to underachieve? Questions such as these have stimulated much research and debate with very little, if any, consensus on any answers. There has, however, been consensus about one issue—the consistently pervasive nature of academic underachievement among gifted learners. Despite decades of interest and commitment to this topic, it is estimated that 15% to 40% of identified gifted students are at risk of performing far below their academic potential (Seeley, 1993), with Rimm (2003) referring to underachievement as a “syndrome [that] continues in epidemic proportions” (p. 424). This situation is regrettable given that students with gifted ability are, according to Sternberg and Davidson (1986), the most precious natural resource a civilization can have. It seems pertinent and timely to ask why there has been so little progress in reducing gifted underachievement despite so many studies into the phenomenon. Is there an approach that might provide a new understanding of gifted underachievement in all its complexity?

On this question, Jim Delisle (1992) challenged gifted educators to revisit the current use of the label “underachievement.” Academic underachievement is generally conceptualized as a severe discrepancy between a student’s expected achievement and his or her actual achievement, which is not attributable to any diagnosed learning disabilities (Reis & McCoach, 2000). Delisle (1992, 2008) and Delisle and Galbraith (2002) believed that although this discrepancy formula offers a clean-cut and precise definition, the term itself—*underachievement*—is too broad to apply to every case where high ability is not matched by equally strong performance. Delisle said underachieving behavior is broader than merely an interplay between expected achievement and actual achievement. He suggested that there are more “amorphous indicators” at the heart of underachieving which, once understood, show that there are two different types of underachievers: (a) *conventional* underachievers and (b) *selective consuming* underachievers. Delisle and Galbraith argued that “by recognizing the vast and important distinctions between underachievers and selective consumers, and by altering our approaches to working with these children, we will have a better chance of achieving success with [managing underachievement]” (2002, p. 188).

Four studies have explored Delisle’s (1992) theory on the selective consumer (Hébert & Schreiber, 2010; Kanevsky & Keighley, 2003; Speirs Neumeister & Hébert, 2003; Thompson & McDonald, 2007). All four studies verified Delisle’s argument that a distinction can be made between selective consuming and conventional underachieving students. It is crucial to take heed of Jarrell and Borland’s (1990) exhortation that “it is incumbent upon all of us in the field of the education of the gifted. . . to subject every plausible conception of giftedness to the most rigorous test possible” (p. 289). They argued that all concepts should be scrutinized because educators, being consumers of the information research provides, will draw on findings from gifted education research to guide them in their teaching. In response to Jarrell and Borland’s exhortation, the aim of this study is to subject Delisle’s theory to rigorous scrutiny.

## Developing a Conceptual Understanding of the Selective Consumer

Delisle (1992, 2008) and Delisle and Galbraith (2002) argued that different motivational reasons underlie the poor academic achievement of selective consuming students and conventional underachievers. To illustrate the distinction, Delisle and Galbraith contrasted two types of students. Student 1, the conventional underachiever, is insecure about his ability to do well, cautious about pursuing new topics, and self-deprecating and self-critical about his academic ability. Student 2, however, knows he is smart, knows he is capable of obtaining straight-As, and enjoys learning, yet participates only in work that is of interest because he knows school is not the only place where learning occurs. He will not conform to “playing the game” for the sake of pleasing others because his personal goals include learning, rather than getting high grades. Student 1 is a lost soul in the academic miasma called school, while Student 2 is “very much in touch with both himself and the world of learning” (Delisle & Galbraith, 2002, pp. 175-176). Delisle and Galbraith focused on this distinction—these “amorphous indicators”—asserting that Student 2 is not an underachiever despite grades that indicate otherwise. Student 2 is a selective consumer, adept at taking the best from what school and teachers have to offer and leaving the rest behind. Selective consumers, Delisle and Galbraith suggested, are academically at risk whereas conventional underachievers are at risk academically and psychologically. From Delisle and Galbraith’s descriptions, two main characteristics emerge by which to develop an understanding of selective consumers: (a) their high academic self-perception and (b) their specific learning style preferences.

### *Selective Consuming Students and High Academic Self-Perception*

Underachieving gifted students are often described as having low academic self-concept (Butler-Por, 1993; Clark, 1988; Dowdall & Colangelo, 1982; McCoach & Siegle, 2003a, 2003b; Reis & McCoach, 2000; Whitmore, 1980). Academic self-concept is seen as a description and an evaluation of a student’s perceived academic ability (Byrne, 1996; Hattie, 1992, 2003). The student asks, “Can I achieve in this subject?” and questions whether he or she has the skills necessary to produce academic outcome. Underachievers generally display low self-belief about their academic skills, have a sense of low personal control, have low self-motivation, and are less goal directed, leading to dependence on their teachers for their learning (Ruban & Reis, 2006).

Delisle (1992, 2008) and Delisle and Galbraith (2002) regarded students with low academic self-perception as conventional underachievers and suggested that selective consumers do not share the same attribute. Delisle described the attitude of underachievers as self-deprecating. Although they would like to improve their grades, they believe they cannot, claiming they are not as smart as everyone says they are. This

picture, Delisle explained, contrasts sharply with the attitude of the selective consumer who has a more confident academic self-perception.

This disparity in academic self-perception between selective consumers and under-achievers has found support in all the studies addressing selective consumers. Speirs Neumeister and Hébert (2003) concluded,

A closer look at a student like Sam illustrates a picture completely different from that of an underachiever, revealing, instead, an image of a developmentally advanced, self-directed achiever. By delving deeper into an examination of the attitudes of intelligent young people who appear to be turning off to “playing the game of school,” we discover an important difference between underachievement and selective achievement. (p. 236)

Kanevsky and Keighley (2003) referred to the students in their study as “nonproducers” (a term used by Delisle himself before he changed it to selective consumers) once they realized the students had strong academic self-perception. Hébert and Schreiber (2010) reported that

the profile of the . . . men in this study were profiles of intelligent males who were mentally healthy, independent, satisfied with their accomplishments, and had positive academic self-concepts [and] based on our study of the motivations, rather than the behaviors, of the young men, one can hardly consider them underachievers. (p. 592)

They continued, “from this study, we realize that [we] need to be aware of the differences between underachievement and selective achievement” (p. 598).

### *Selective Consuming Students and Learning Style Preferences*

The second characteristic Delisle (1992, 2008) and Delisle and Galbraith (2002) attributed to selective consuming underachievers was a definite learning style preference, which has a considerable effect on their motivation to engage with school. Notwithstanding their high academic self-belief and high regard for learning, Delisle suggested that selective consumers tend to engage only if the learning environment caters to their learning style preferences.

In current literature, “learning style preference” refers to the premise that people learn in different ways (Redding, 1990; Tomlinson & Stone, 2009). Underlying the concept is the idea that people learn more effectively and efficiently when they can take advantage of their preferred ways of learning. Rayneri, Gerber, and Wiley (2006) also suggested that understanding individual learning styles may be crucial to dealing with underachievement. They concluded that

learning style plays a role in classroom performance [and] until teachers understand the needs and learning styles of gifted children and make efforts to appropriately differentiate the curriculum, underachievement and unfulfilled potential will continue to be a problem in classrooms. (p. 118)

The interaction between learning style preference and academic achievement, Delisle argued, is at the heart of selective consuming students' low academic achievement.

Unfortunately, Delisle and Galbraith (2002) did not clearly conceptualize the learning style preferences of selective consumers. At best, Delisle said that selective consumers are characterized by a need for independent learning with minimal structure and minimal teacher-directed instruction. The few studies that explored selective consumers all concurred with Delisle's observations, but also did not clearly conceptualize these students' learning style preferences. Speirs Neumeister and Hébert (2003) found that the selective consumer in their study, Sam, did not attend classes where teachers were "close minded." He opted out of participating in and attending many of his classes because he had little need for the imposed structure of the university system, preferring instead to independently learn material. The authors concluded that "[Selective consumers] require little structure and need breathing room . . . and their performance in school fluctuates, depending on the particular content domain or the teacher" (p. 233). Thompson and McDonald (2007) reported that the selective consumer in their study refused to complete essay assignments that were teacher constructed. When assignments were student constructed, the selective consumer turned in a creative project that evidenced "his commitment to self-selected tasks and choice in assignment endeavors" (p. 215). Hébert and Schreiber's (2010) study concluded that

the . . . young men in this study . . . were mentally healthy, independent [and] satisfied with their accomplishments . . . [whose] achievements appeared to be shaped by adults . . . who . . . allowed [them] to pursue [their] interests according to [their] preferred learning style. (p. 592)

The work of Kanevsky and Keighley (2003) significantly contributed toward conceptualizing the learning preferences of selective consumers. Their study isolated five specific learning preferences, which they referred to as the five Cs: control, choice, challenge, complexity, and caring. Kanevsky and Keighley found that the selective consuming students in their study were motivated and engaged when they had a sense of *control* or self-determination in their learning, had opportunities to exercise *choice* for educational content and process, had a *challenging* curriculum that achieved *complexity*, and had *caring* teachers. However, Kanevsky and Keighley's depiction of the learning style preferences of selective consumers is deficient because the five Cs were not adequately operationally defined. To conduct any research, the operational definitions of constructs are essential for measurement of the construct to occur. To this end,

the theory of mental self-government proposed by Sternberg (1988, 1997) can provide an adequate framework for generating operational definitions for the five Cs.

Sternberg's (1988, 1997) theory of mental self-government has been used in education and psychology to, among other things, research and address specific and preferred learning conditions that could optimize learning. The theory states that individuals govern their learning according to their personal thinking styles. "Thinking style" is defined as "a favored way of expressing or using one or more abilities" (Grigorenko & Sternberg, 1997, p. 297). The theory posits that understanding thinking styles can shed light on a wide range of issues and controversies in gifted education, including distinguishing between different subgroups of gifted students. Studies into the role of thinking styles in academic achievement (Cano-Garcia & Hughes, 2000; Dai & Feldhusen, 1999; Sternberg & Zhang, 2005; Zhang, 2001, 2002, 2004; Zhang & Sternberg, 2006) indicated that thinking styles may affect student achievement either positively or negatively depending on the learning environments in which the students are located.

Sternberg's (1988, 1997) theory proposed that preferential thinking styles are organized like a political government. Using the word government metaphorically, Sternberg argued that just as there are different facets to governing a society, there are 13 different thinking preferences with which to govern our learning activities. These 13 different thinking styles are arranged along five dimensions that are analogous to five facets of governance: function, form, level, scope, and leaning. These five facets and the accompanying thinking styles are depicted in Figure 1. The premise of the theory is that each individual has a preferred profile comprising these 13 thinking styles, which he or she uses to manage his or her learning. Zhang and Sternberg (2006) found that some of the variables related significantly enough to one another to classify the 13 thinking styles into Type I, Type II, and Type III thinking styles. Type I styles comprise the *legislative*, *judicial*, *hierarchical*, *global*, and *liberal* styles, which involve creative approaches to problems and higher levels of cognitive complexity. Type II thinking styles are more simplistic with lower levels of cognitive complexity, and comprise the *executive*, *local*, *monarchic*, and *conservative* styles. The remaining four thinking styles, *anarchic*, *oligarchic*, *internal*, and *external*, belong to neither the Type I group nor the Type II group but may display characteristics of styles from both groups depending on the stylistic demands of a specific task. For example, whether one prefers to work alone (internal style) or one prefers to work with others (external style), one can work on tasks that require either Type I or Type II thinking styles (Zhang, 2002; Zhang & Sternberg, 2006).

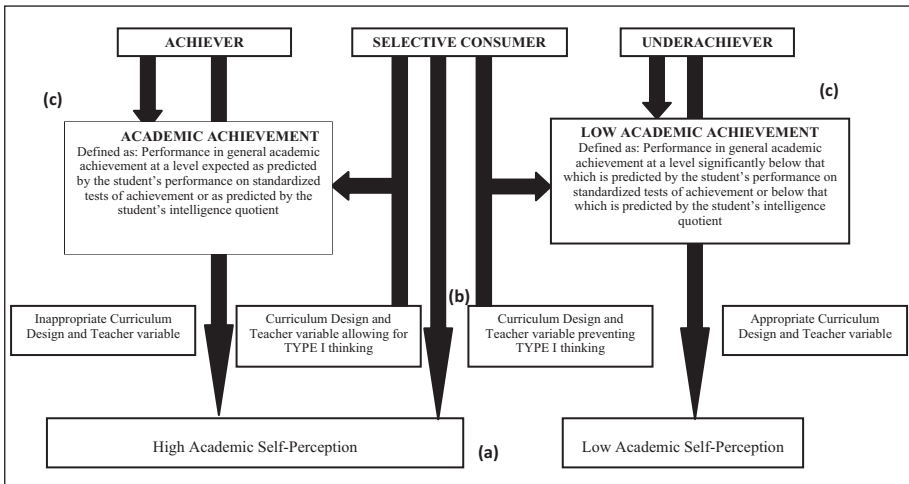
Using Sternberg's (1997) theory of mental self-government and Zhang's (2002) type-grouping, it is possible to construct a framework for conceptualizing Kanevsky and Keighley's (2003) five Cs. Figure 1 depicts this framework and shows that a student with a Type I profile may be expected to perform best on tasks that require creative strategies, in which rules can be evaluated and altered, abstract ideas can be considered, and novelty and ambiguity are allowed (Black & McCoach, 2008; Sternberg, 1997; Sternberg & Wagner, 1992). These students enjoy autonomy and

Thinking Styles in the Theory of Mental Self-Government				The 5 Cs learning preferences
Aspect	Type	Style	Key Characteristic	
Function	Type I:	Legislative	Prefers tasks that require creative strategies; prefers to do things in own way.	Challenge / Control
	Type II:	Executive	Prefers tasks with clear instructions and structure; prefers to follow and implement existing rules.	
	Type I:	Judicial	Prefers to evaluate rules and judge things; prefers tasks that allow for evaluation.	Choice
Form	Type I:	Hierarchical	Prefers to pursue and prioritize multiple goals.	Complexity
	Type II:	Monarchic	Prefers focusing on one thing at a time and pursue a goal single-mindedly	
	Type III:	Oligarchic	Prefers to juggle several things at one time, without setting priorities.	
	Type III:	Anarchic	Prefers work that would allow flexibility as to what, where, when, and how one works.	Choice / Control
Level	Type I:	Global	Prefers to pay more attention to the overall picture of an issue and to abstract ideas.	Complexity
	Type II:	Local	Prefer tasks that require attention to details; prefers working with concrete details.	
Scope	Type III:	Internal	Prefers to work alone, independent of others.	
	Type III:	External	Prefers tasks that allow for collaborative ventures with other people.	
Leaning	Type I:	Liberal	Prefers going beyond existing rules; prefers tasks that involve novelty and ambiguity.	Choice/Challenge/Complexity
	Type II:	Conservative	Prefers familiarity and to follow tradition; prefers tasks that require adherence to existing rules.	

**Figure 1.** A depiction of the learning style preference of selective consuming students with the theory of mental self-government and the five Cs  
Source: Adapted from Zhang (2004).

self-direction and are likely to resist the role of the compliant student who trudges obediently through meaningless tasks (Zhang & Sternberg, 2006). The relationship of





**Figure 2.** The conceptual framework of the selective consumer as developed in the present study

these Type I preferences to the need for control, challenge, complexity, and choice as explained by Kanevsky and Keighley's five Cs is noticeable.

Contrasting Type I students, Figure 1 shows Type II students generally prefer tasks that require following rules and procedures, solving prestructured problems, and working on activities that are already defined for them based on others' ideas. They prefer conformity to traditional ways of doing things and have high levels of respect for authority (Black & McCoach, 2008; Cano-Garcia & Hughes, 2000). All studies addressing the learning preferences of selective consuming students showed that learning environments consistent with such nonflexible, teacher-driven and prescriptive processes resulted in selective consuming students disengaging from the curriculum, resulting in low academic performance (Hébert & Schreiber, 2010; Kanevsky & Keighley, 2003; Speirs Neumeister & Hébert, 2003; Thompson & McDonald, 2007).

### *A Conceptual Framework of the Selective Consumer*

Through exploring the thinking of Delisle (1992, 2008) and Delisle and Galbraith (2002), the research on selective consuming students (Hébert & Schreiber, 2010; Kanevsky & Keighley, 2003; Speirs Neumeister & Hébert, 2003; Thompson & McDonald, 2007), Sternberg's (1997) theory, and Zhang's (Zhang & Sternberg, 2006) type-grouping, it is possible to construct the framework for understanding the selective consumer illustrated in Figure 2. Here the selective consumer is depicted as (a) having a high academic self-perception, with (b) a preference for the Type I thinking style group, and who (c) fluctuates between achieving and underachieving based on

the learning environment and its compatibility with his or her Type I thinking preferences.

### *The Need for Quantitative Research*

The strength of the newly constructed framework depicted in Figure 2 lies in the potential impact it might have in managing underachievement. Delisle (1992, 2008) and Delisle and Galbraith (2002) said that educators might be more successful in managing gifted underachievement once they acknowledged selective consumers as a separate group of students. Such identification could be useful for educators; however, Jarrell and Borland (1990) made the point that the research and logic underpinning the concepts advanced by theorists must be evaluated before educators adopt them into their instructional methods. They stated that it is incumbent on all gifted learner educators to subject every plausible conception of giftedness to the most rigorous scrutiny.

Stanovich and Stanovich (2003) showed that one way of applying this “most rigorous test” to conceptions of giftedness is to demonstrate that the conception satisfied the principle of converging evidence. Evidence is considered highly convergent when (a) a *series* of research studies from (b) many *different types* of investigations produce a preponderance of evidence supporting a particular theory or concept. The constructed framework of selective consumers does not satisfy the converging evidence principle because it is derived from *qualitative research only* (Hébert & Schreiber, 2010; Kanevsky & Keighley, 2003; Speirs Neumeister & Hébert, 2003; Thompson & McDonald, 2007). Stanovich and Stanovich said that insights gained from qualitative investigations are useful in determining which variables deserve more intense study. But, the insights gained are only useful for the *early* stages of an investigation because qualitative descriptions lack the comparative information necessary to rule out alternative explanations. Stanovich and Stanovich argued that *quantitative* investigations are necessary to verify whether the link between concepts is real rather than the result of the peculiarities of a few case studies. Variables must be measured precisely, large groups must be tested to make sure the conclusion can be generalized, and, most importantly, many variables must be controlled so that alternative causal explanations may be ruled out. Against this understanding of the interplay between qualitative and quantitative research, this study argues that a quantitative investigation is required to objectively determine whether the current conceptualization of selective consumers depicted in Figure 2 is specific to this group of students.

This study aims to empirically verify whether gifted selective consumers can (a) be distinguished from gifted underachievers with regard to academic self-perception and (b) be distinguished from gifted achievers and gifted underachievers with regard to thinking styles. Based on the above discussion, the following results are expected: (a) Selective consumers will have significantly higher academic self-perception than underachievers and (b) selective consumers will have significantly higher Type I thinking style preferences than achievers and underachievers.

## Method

### Participants

A total of 112 gifted students from one independent secondary boys' school in Sydney, Australia, were invited to participate. Students were selected based on results from the Otis–Lennon School Ability Tests (OLSAT), an instrument designed to measure verbal, nonverbal, and overall reasoning ability. Students with an OLSAT score of 130+ qualified for participation. In all, 93 students (83%) agreed to participate and comprised 33 eighth-grade, 22 ninth-grade, and 38 tenth-grade students. Participants were categorized as achieving, underachieving, and selective consuming students.

*Categorization of participants.* The present study is the first attempt to categorize students as achievers, underachievers, or selective consumers. Two criteria were used for categorization: (a) results on a standardized academic achievement test, the General Achievement Test (GAT), and (b) student ranking within their grade.

*GAT results.* Because IQ ability strongly predicts potential academic achievement (Eccles & Wigfield, 2002; Marsh, Byrne, & Shavelson, 1988), it was anticipated that all participants had the ability to achieve high academic performance. Guided by Gagné's (2003) definition that talented performance occurs at the 85th percentile, a GAT result at the 85th percentile or higher was considered to be performance commensurate with the student's ability.

*Ranking within grade.* Given all participants' academic potential, it was anticipated that all participants had the ability to achieve an academic ranking for their grade cohort at the 85th percentile or higher. Academic ranking within the top 15% of a cohort was considered performance commensurate with a student's ability.

Figure 3 illustrates the categorization method used. To be categorized as an achiever, the student required a GAT result in the 85th percentile range or higher *as well as* an academic achievement ranking consistently in the top 15% for the grade. Underachievers had a GAT result below the 85th percentile range *plus* consistent academic ranking below the top 15% for the grade. Selective consumers demonstrated a GAT result in the 85th percentile range or higher *plus* an academic ranking that consistently fluctuated between ranking in the top 15% for the grade and ranking below the top 15%. The study readily concedes that these categorizations may not be universally accepted. Notwithstanding, they allowed for categorizing three distinct groups of students: those who were, by conventional standards, succeeding in school (achievers); those who fluctuated between achieving and low performance (selective consumers); and those who had never achieved at a level commensurate with their expected abilities (underachievers).

### Instrumentation

The instruments used to assess the dependent variables were The School Attitude Assessment Survey–Revised (SAAS-R; McCoach, 2002) and the Thinking Styles Inventory (TSI; Sternberg & Wagner, 1992). The SAAS-R measures five factors: (a) academic self-perception, (b) attitudes toward teachers, (c) attitudes toward school,

	<div>IQ 130+</div>	<div>Achievement Test 85+ %</div>	<div>Expected Ranking Within Grade</div>
Achiever	Yes	Yes	Yes
Underachiever	Yes	No	No
Selective Consumers	Yes	Yes	Yes and No

**Figure 3.** Student category based on academic achievement and grade ranking

(d) goal valuation, and (e) motivation/self-regulation. McCoach and Siegle (2003b) developed the SAAS-R to explore the relationships between these five factors and scholastic underachievement in academically able students. The SAAS-R uses a 7-point Likert-type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*, and consists of 35 questions. Following a study to validate scores from the SAAS-R, McCoach and Siegle reported an internal consistency reliability coefficient of at least .85 on each of the five factors, together with evidence of adequate construct validity and criterion-related validity. They concluded that “its use as a research instrument seems justifiable” (McCoach & Siegle, 2003b, p. 426).

The TSI is a 65-item self-report inventory, consisting of 13 scales, each corresponding to a thinking style in Sternberg’s theory. Each scale has five items. For each item, the participants rate themselves on a 7-point scale ranging from 1 = *not at all well* to 7 = *extremely well*. Results of studies showed that the 13 scales of the TSI were found to have internal consistency reliabilities ranging from .57 to .88 with a median of .82, with a Cronbach’s alpha coefficient in the low .70s (Zhang & Sternberg, 2006). Finally, the external validity of the inventory was assessed by testing thinking styles not only against a number of constructs that belong to this family of styles but also against constructs that are predicted to be related to thinking styles. Findings support the convergent and discriminant validity of the TSI (Zhang & Sternberg, 2006). However, a validity study of the TSI by Black and McCoach (2008) pointed out that studies using scores on the TSI have returned varying results in terms of subscale score reliability (coefficient  $\alpha$ ). These studies, Black and McCoach cautioned, all indicated a wide range of estimates across the 13 subscales, and, in addition, the factor structure of the subscales was not clearly established. The authors called on researchers to consider these psychometric weaknesses when making important educational decisions using the thinking styles measured by the TSI.

Procedure

All participants and their parents signed a consent form. Participants attended a group session to complete the two questionnaires designed to assess their school and academic attitude, as well as their thinking style preferences.

**Statistical analyses.** This study simultaneously compared the mean scores of the three groups of students on two dependent variables. A MANOVA was used with a Bonferroni-adjusted alpha level (to control for Type 1 error) to determine if there was a statistically significant variability between the student groups in relation to the combination of dependent variables measured. The variance of significant results was further analyzed with a post hoc Bonferroni test to determine which category of student accounted for the significant effect.

## Results

Table 1 summarizes the mean scores and standard deviations, the between-variables effect and the post hoc analysis of the three student categories with respect to the variables of the SAAS-R instrument. Mean score analyses showed that achievers had the highest mean over all five factors. Underachievers had the lowest academic self-perception, the lowest attitude toward teacher and class, and the lowest motivation and self-regulation and were equally lowest (along with selective consumers) on goal valuation. Underachievers' school attitude was higher than selective consumers' but lower than achievers'. Selective consuming students had higher academic self-perception, better teacher and class attitude, higher motivation and self-regulation, but a lower attitude toward school than underachievers. Compared with achievers, selective consumers had lower mean averages on all five variables.

Student category differences on the SAAS-R factors were investigated using one-way between-groups MANOVA. Preliminary assumption testing conducted to check for normality, homogeneity of variance-covariance, and multicollinearity showed no serious violations across any sample group. Results showed a statistically significant difference between student categories on the combined dependent SAAS-R factors,  $F(10, 172) = 2.59, p < .01$ ; Wilks's Lambda = .76; partial  $\eta^2 = .13$ . Further ANOVA, using a Bonferroni-adjusted alpha level of .01 to control for the Type I error rate, showed that the only statistically significant factor, at the .01 level, was academic self-perception,  $F(2, 90) = 8.85, p < .001$ ; partial  $\eta^2 = .16$ . The factor motivation/self-regulation was statistically significant at the .05 level,  $F(2, 90) = 3.97, p < .05$ ; partial  $\eta^2 = .08$ . The post hoc Bonferroni tests conducted with academic self-perception showed a statistically significant difference at the .01 level between achieving and underachieving students. There were no other statistically significant differences on the four remaining SAAS-R factors.

Table 2 summarizes the mean scores and standard deviations of the three student categories with respect to Type I and Type II thinking styles. Achieving students recorded the highest means for four of the five Type I preferences. Selective consuming students had, overall, the lowest means for Type I preferences. Underachieving students had the lowest mean on two styles, with means on the other three Type I styles falling between achieving and selective consuming students. With Type II thinking styles, Table 2 shows underachieving students recorded the lowest means on all four Type II styles. No clear distinction could be made between Type II preferences for the

**Table 1.** Mean Scores, ANOVA, and Post Hoc Analysis for the Selective Consuming and Comparison Groups on the Five SAAS-R Factors

Mean scores on the five SAAS-R subscales										Post hoc analysis										
ANOVA										A and U/A			A and S/C			S/C and U/A				
A (n = 51)					U/A (n = 21)					S/C (n = 21)										
M	SD	M	SD	M	SD	df	F	Significance	Partial $\eta^2$	SAAS-R subscale	Mean difference	Significance	Mean difference	Significance	Mean difference	Significance	Mean difference	Significance		
5.81	0.55	5.17	0.68	5.42	0.71	2,90	8.85	0.00**	.16	Academic self-perception	.64**	0.00**	.39	0.05	.25	0.57				
5.15	0.97	4.75	0.64	4.89	1.07	2,90	1.49	0.23	.03	Teacher/class attitude	.39	0.32	.25	0.91	.14	1.00				
6.05	1.07	5.81	1.01	5.44	1.58	2,90	1.99	0.14	.04	School attitude	.24	1.00	.61	0.15	.37	0.37				
6.28	0.69	5.93	0.81	5.93	1.21	2,90	1.91	0.15	.04	Goal valuation	.36	0.37	.35	0.35	.00	1.00				
5.31	0.92	4.57	0.89	5.10	1.30	2,90	3.97	0.02*	.08	Motivation/self-regulation	.74	0.02	.22	1.00	.52	0.29				

Note: SAAS-R = School Attitude Assessment Survey-Revised; A = achiever; U/A = underachiever; S/C = selective consumer.

\* $p < .05$ . \*\* $p < .01$ .

**Table 2.** Mean Scores and Standard Deviations of the Selective Consuming and Comparison Groups on Type I and Type II Thinking Styles

Type I styles	<i>n</i>	Legislation		Judicial		Global		Liberal		Hierarchical	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Selective consumers	21	5.08	0.76	4.46	0.91	4.28	0.58	4.22	1.04	4.39	1.09
Underachievers	21	5.12	0.83	4.00	0.86	4.31	0.64	4.50	1.02	4.15	0.86
Achievers	51	5.32	0.64	4.41	0.91	4.42	0.67	4.63	1.07	4.79	0.94
Type II styles	<i>n</i>	Executive		Local		Conservative		Monarchic			
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Selective consumers	21	4.68	0.84	4.30	0.86	4.34	0.69	4.42		0.92	
Underachievers	21	4.24	1.00	4.22	0.66	4.02	0.92	4.00		0.89	
Achievers	51	4.77	1.17	4.26	0.97	4.41	1.07	4.22		0.87	

achieving and the selective consuming groups, given that each group had the highest mean on two of these four style variables.

Student category differences on the Type I and Type II thinking style variable were investigated using one-way between-groups MANOVA. Preliminary assumption testing, conducted to check for normality, homogeneity of variance–covariance, and multicollinearity, showed no serious violations across any sample group. There were no statistically significant differences between achieving, underachieving, or selective consuming students on any of the thinking styles,  $F(18, 164) = 0.90, p = .58$ ; Wilks's Lambda = .83; partial  $\eta^2 = .09$ .

## Discussion

This study aimed to determine whether selective consumers had significantly higher academic self-perception than underachievers and whether selective consumers had a significantly higher Type I thinking style preference in comparison with achievers and underachievers. Results show selective consumers did not have significantly higher academic self-perception scores, and therefore the first hypothesis is not supported. Furthermore, the results show that selective consumers did not have higher Type I thinking preferences and therefore the second hypothesis also is not supported. Results did show a statistically significant difference in academic self-perception mean scores between achievers and underachievers.

Although the results show that selective consumers could not be statistically separated from underachievers, the results do support the *trend* reported in all studies addressing selective consumers showing that these students have higher academic self-perception than underachieving students (Delisle & Galbraith, 2002; Kanevsky & Keighley, 2003; Speirs Neumeister & Hébert, 2003; Thompson & McDonald, 2007).

The academic self-perception mean score of selective consumers (5.42) fell much closer to the mean score of achievers (5.81) than to that of underachievers (5.17). Achievers have a mean score difference of .39 from selective consumers, with a .64 score difference from underachievers. Further support for this trend is seen when academic self-perception scores are measured with McCoach's (2002) scoring rubric designed to categorize SAAS-R scores. The scores of selective consumers and achievers fall within the average/normal range on the rubric, whereas those of underachievers fall within the low/average range. Finally, with results showing that only achievers and underachievers have a statistical difference in academic self-perception, it is noteworthy that selective consumers do not also differ significantly from achievers—the point being that if selective consumers shared the same self-perception as underachievers, they would be expected to differ significantly from achieving students on that measure.

## Conclusion

Although this study did not yield statistically significant results to suggest that selective consumers differ from underachieving students, the study has produced support



for the current trend in the literature that these students do, indeed, differ qualitatively from the underachieving student.

However, there were many limitations to the present study, and any conclusions drawn from the data need to be evaluated in light of these limitations. First, the present study is an exploratory first attempt to quantify the findings emanating from the qualitative studies done with selective consumers (Delisle & Galbraith, 2002; Kanevsky & Keighley, 2003; Speirs Neumeister & Hébert, 2003; Thompson & McDonald, 2007). Because of the study's exploratory nature, the formula used to categorize the students is the first attempt in the field and, as such, will need further research into its validity as a categorization method. Also, the present study is the first attempt to isolate specific constructs from which to develop a framework for understanding the selective consumer as a separate student group. Whereas existing literature on selective consuming students (Delisle, 1992; Delisle & Galbraith, 2002; Kanevsky & Keighley, 2003; Speirs Neumeister & Hébert, 2003; Thompson & McDonald, 2007) mentions academic self-perception and learning style preferences as constructs, the present study is unique in identifying the selective consumer as having a preference for Type I thinking styles as explained in Sternberg's (1997) theory of mental self-government. This interpretation will need further research to validate it as a construct by which to define selective consumers. A further limitation is the use of the Thinking Style Inventory (Sternberg & Wagner, 1992) as the instrument to measure thinking style preferences. Although the TSI was designed by Sternberg and Wagner to measure the thinking style preferences of their theory, Black and McCoach's (2008) study into its validity concluded that the current operationalization of the thinking styles was weak. Repeat studies assessing the thinking style preferences of selective consuming students might have to consider alternate measures of thinking style preference. Another limitation is that the study did not control for factors such as learning difficulties and twice exceptionalities. Finally, the present study was limited to a convenient sample of students at one independent secondary school. A consequence of this limitation is that the generalizability of the findings might be limited.

Because this study was the first to try to quantify the findings of previous qualitative research on selective consumers, and because it obtained results that suggested some support (although not statistically significant) for the previous research outcomes, it is difficult to identify whether the lack of statistically significant results is due to the limitations identified above. It is hoped that the current research marks the beginning of a series of studies that might identify how to differentiate between selective consumers and conventional underachievers. The merit of separating selective consumers from underachievers lies in the impact it might have in the management of underachievement among gifted learners.

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