

As noted in Table 11, there were more noticeable differences in mean scores for two statements based on the females' and males' responses. For the statement "I enjoy shopping just for the fun of it," females ( $n = 197$ ,  $M = 3.8$ ,  $SD = 1.0$ ) agreed noticeably more than males ( $n = 135$ ,  $M = 2.2$ ,  $SD = .94$ ). The larger standard deviation for females ( $SD = 1.0$ ) suggests that there was more variance among the female responses. Similarly, for the statement "Going shopping is one of the enjoyable activities in my life," females ( $n = 197$ ,  $M = 4.0$ ,  $SD = .95$ ) agreed noticeably more than males ( $n = 135$ ,  $M = 2.7$ ,  $SD = .95$ ).

#### *Reliability of the Individual Consumer Styles Inventory Statements*

Reliability analysis was conducted to investigate the reliability of the individual statements from the Consumer Styles Inventory. Table 12 shows the results of this analysis. Alpha coefficients for the individual statements ranged from  $-.16$  to  $.58$ . The individual statements were analyzed as intercorrelations for the entire instrument. As shown in Table 10, all 39 statements from the Consumer Styles Inventory are categorized by consumer decision-making styles, both from this study and the Sproles and Kendall (1986) study.

The six statements that loaded onto the one factor, the Recreational/Hedonistic consumer decision-making style, appeared to be the most reliable statements when compared to the entire instrument, as noted in Table 12. The remaining statements were categorized according to the consumer decision-making styles confirmed by Sproles and Kendall (1986). As shown in Table 11, the alpha coefficients for the remaining consumer decision-making style statements were not as reliable as the statements that loaded onto the factor, the Recreational/Hedonistic consumer decision-making style for this study.

Table 12

*Reliability (Cronbach's Alpha) of the Consumer Styles Inventory Statements (n = 333)*

Statement	Alpha
Factor/Consumer Decision-Making Style for this Study	
Recreational/Hedonistic	
I usually have one or more outfits of the very newest style.	.58
Going shopping is one of the enjoyable activities in life.	.58
I keep my wardrobe up-to-date with the changing fashions.	.57
I enjoy shopping just for the fun of it.	.56
Fashionable, attractive styling is very important to me.	.53
I prefer the best-selling brands.	.50
Factors/Consumer Decision-Making Styles based on the Sproles and Kendall (1986) Study	
Recreational/Hedonistic	
Shopping the stores wastes my time.	.46
Shopping is not a pleasant activity to me.	.31
I make my shopping trips fast.	.05
Novelty, Fashion Conscious	
It's fun to buy something new and exciting.	.50
To get variety, I shop different stores and choose different brands.	.18
Habitual, Brand Loyal	
I have favorite brands I buy over and over.	.45
I go to the same stores each time I shop.	.22
Once I find a product or brand I like, I stick with it.	.19
I change brands I buy regularly.	-.11

table continues

Table 12

*Reliability (Cronbach's Alpha) of the Consumer Styles Inventory Statements (n = 333)*  
continued

Statement	Alpha
<b>Brand Conscious, Price Equals Quality</b>	
Nice department and specialty stores offer me the best products	.37
The well-known national brands are best for me.	.35
The more expensive brands are usually my choices.	.32
The most advertised brands are usually very good choices.	.29
The higher the price of a product, the better its quality.	.24
<b>Perfectionist, High Quality Conscious</b>	
My standards and expectations for products I buy are very high.	.35
Getting very good quality is very important to me.	.32
I make special effort to choose the very best quality products.	.27
In general, I usually try to buy the best overall quality.	.25
A product does not have to be perfect, or the best, to satisfy me.	.22
I shop quickly, buying the first product or brand that seems good enough.	.17
I really don't give my purchases much thought or care.	.09
<b>Impulsive, Careless</b>	
I am impulsive when purchasing.	.27
Often I make careless purchases I later wish I had not.	.23
I carefully watch how much I spend.	.13
I should plan my shopping more carefully than I do.	.12
I take the time to shop carefully for the best buys.	-.04

table continues

Table 12

*Reliability (Cronbach's Alpha) of the Consumer Styles Inventory Statements (n = 333)*

continued

Statement	Alpha
Price Conscious, Value for Money	
I buy as much as possible at sale prices.	.27
I look carefully to find the best value for the money.	-.06
The lower price products are usually my choice.	-.16
Confused by Overchoice	
The more I learn about products, the harder it seems to choose the best.	.19
There are so many brands to choose from, I often feel confused.	.14
All the information I get on different products confuses me.	.12
Sometimes it's hard to choose which stores to shop.	.06

Results of the Relationship of Gender and Consumer Decision-Making Style(s)

**Research Question Seven: Is there a significant relationship between gender and the consumer decision-making style(s) of beginning college students?**

To investigate whether a significant relationship exists between the one factor, Recreational/Hedonistic consumer decision-making style for this study, and gender, the Mann-Whitney Rank Sum Test, was conducted. As shown in Table 13, a significant relationship exists by gender,  $p = .00$ ,  $z = -9.98$ , between the Recreational/Hedonistic consumer decision-making style composite scores and gender. Females reported higher levels of agreement than males with the statements for the Recreational/Hedonistic consumer decision-making style.

The Relationship of Mind Styles and Consumer Decision-Making Style(s)

**Research Question Eight: Is there a relationship between the Gregorc mind style scores and consumer decision-making styles of beginning college students? If so, to what extent?**

To determine whether a relationship exists between the one factor, Recreational/Hedonistic consumer decision-making style, and the students' Gregorc mind style scores, Pearson's correlation was conducted. It should be noted that the Gregorc mind style scores reported in Table 14 reflect a score for each mind style for each beginning college student, as this is an important characteristic of the Gregorc Style Delineator instrument. Using an alpha level of  $p < .01$ , the resulting alpha coefficients indicate a positive, significant relationship between the Recreational/Hedonistic consumer decision-making style composite scores (the sum of the six Consumer Styles Inventory statements) as shown in Table 14 and the Gregorc mind style scores for Concrete Random and Abstract Random. The negative alpha coefficient,  $p = -.21$  indicates a significant, inverse relationship between the Abstract Sequential mind style scores and the Recreational/Hedonistic consumer decision-making style. There was no significant relationship,  $p = .07$ , between the Concrete Sequential mind style scores and the Recreational/Hedonistic consumer decision-making style.

To further investigate the relationship between beginning college students' mind style scores and the one factor, Recreational/Hedonistic consumer decision-making style, Pearson's correlation was conducted between the six individual statements for the factor and the mind style scores for each student. As noted in Table 15, correlation coefficients of each mind style and

Table 13

*Mann-Whitney Rank Sum Test<sup>a</sup> of the Recreational/Hedonistic Consumer Decision-Making Factor Composite Scores by Gender (n = 332)*

Gender	N	Mean Rank of Composite Score <sup>b</sup>	Sum of Ranks
Female	197	209.92	41353.50
Male	135	103.14	13924.50

*Note.* With an alpha level of  $p < .05$ ,  $p = .00$ ,  $z = -9.98$ .

<sup>a</sup>Mann-Whitney Rank Sum Test was used for this analysis because the two gender samples violated assumptions of normality (George & Mallery, 2000). One student did not report gender.

<sup>b</sup>The Recreational/Hedonistic factor is comprised of a composite score (the sum of the six statement scores) of the Consumer Decision-Making Style Inventory statements that loaded onto this factor. The statements were scaled according to 1 = Strongly Disagree, 2= Disagree, 3 = In Between, 4 = Agree, 5 = Strongly Agree. The six statements that loaded onto the Recreational/Hedonistic factor were the following:

- Going shopping is one of the enjoyable activities of my life.
- I enjoy shopping just for the fun of it.
- I prefer buying the best-selling brands.
- I usually have one or more outfits of the very newest style.
- I keep my wardrobe up-to-date with the changing fashions.
- Fashionable, attractive styling is very important to me.

Table 14

*Pearson's Correlations of the Recreational/Hedonistic Consumer Decision-Making Style Composite Scores and the Gregorc Mind Style Scores (n = 333)*

Consumer Decision-Making Factor for the Current Study	Mind Styles			
	Concrete Sequential	Abstract Sequential	Abstract Random	Concrete Random
Recreational/Hedonistic	.07	-.21**	.17**	.04**

*Note.* Each student reported a numerical score for each mind style and is reflected in the mind style scores reported for this analysis. The Recreational/Hedonistic factor is comprised of a composite score (the sum of the six statement scores) of the Consumer Decision-Making Style Inventory statements that loaded onto this factor. The statements were scaled according to 1 = Strongly Disagree, 2 = Disagree, 3 = In Between, 4 = Agree, 5 = Strongly Agree. The six statements that loaded onto the Recreational/Hedonistic factor were the following:

- Going shopping is one of the enjoyable activities of my life.
- I enjoy shopping just for the fun of it.
- I prefer buying the best-selling brands.
- I usually have one or more outfits of the very newest style.
- I keep my wardrobe up-to-date with the changing fashions.
- Fashionable, attractive styling is very important to me.

\*\* Correlation is significant at the  $p < .01$  level (2-tailed).

Table 15

*Pearson's Correlations of the Recreational/Hedonistic Consumer Decision-Making Style Statements and the Gregorc Mind Style Scores (n = 333)*

Consumer Decision-Making Style Statements	Mind Styles			
	Concrete Sequential	Abstract Sequential	Abstract Random	Concrete Random
Going shopping is one of the enjoyable activities of my life	.02*	-.19*	.20*	.00*
I enjoy shopping just for the fun of it.	-.02*	-.22*	.20*	.05*
I prefer buying the best-selling brands.	.12*	.02*	.01*	.02*
I usually have one or more outfits of the very newest style.	.10	-.15*	.06	.04
I keep my wardrobe up-to-date with the changing fashions.	.06	-.13*	.10	.03
Fashionable, attractive styling is very important to me.	.06	-.15*	.12*	.04

*Note.* Statements were scaled according to 1 = Strongly Disagree, 2 = Disagree, 3 = In Between, 4 = Agree, 5 = Strongly Agree. Negative *r* correlations represent inverse relationships.

\* Correlation is significant at the  $p < .05$  level (2-tailed).

each statement of the one factor, Recreational/Hedonistic consumer decision-making style, were calculated an alpha level of  $p < .05$  (see Appendix M for the other statements). Students read each statement and determined how much they disagreed or agreed as reflected in reported response frequencies in Table 10.

As shown in Table 15, each mind style score represents each student's score for that mind style. As required for Gregorc Style Delineator<sup>®</sup>, each student reported one score for each mind style, Concrete Sequential, Abstract Sequential, Abstract Random, and Concrete Random. Thus, the decision was made to use each student's four mind style scores for this analysis and to not use the self-reported, dominant mind style scores. For Pearson's correlation, results can range between 1 and 0 with 1 representing a perfect correlation and -1 would represent a perfectly negative correlation (Brace, Kemp, & Snelgar, 2003). As shown in Table 15, Concrete Sequential mind style scores were significant with three out of six of the Consumer Styles Inventory statements. Scores for the Abstract Sequential mind style indicated significant relationships with all six Consumer Styles Inventory statements. Scores for the Abstract Random mind style indicated significant relationships with four of the six Consumer Styles Inventory statements. And, scores for the Concrete Random mind style indicated significant relationships with the same three statements as the Concrete Sequential mind style.

### Summary

The demographic profile and self-reported shopping habits of beginning college students were investigated. Females comprised 58.9% of the sample and males represented 40.9% of the sample, with one student not reporting gender. Students reported frequent purchases of clothing, and food items, both away from home and for home. The least frequent purchases reported were auto insurance and school supplies. For the Demographic Survey, Part II, females tended to agree more with the statements related to the enjoyment of shopping than males. The Chi-Square Test of Independence resulted in significant relationships between gender the self-reported shopping habits for clothing, food away from home, and gas/auto expenses. No significant relationships were found between perceived family income and self-reported shopping habits.

The percentages of the four dominant mind style categories among the sample were fairly evenly distributed between Concrete Sequential, Abstract Random, and Concrete Random. Fewer students self-reported being dominant in the Abstract Random mind style category. A Chi-Square Test of Independence revealed a significant relationship between gender and the self-reported, dominant mind styles.

In an exploratory factor analysis, only six statements from the Consumer Styles Inventory loaded onto the factor, Recreational/Hedonistic consumer decision-making style, and no other factors were confirmed. A Mann-Whitney Rank Sum Test revealed a significant relationship between gender and the factor, Recreational/Hedonistic consumer decision-making style, with female students self-reporting higher levels of agreement than males with the statements for this consumer decision-making style.

Pearson's correlation revealed relationships between three self-reported, dominant mind style scores and the factor, Recreational/Hedonistic consumer decision-making style. Pearson's correlation also revealed significant relationships between mind style scores and some of the six individual statements from factor, Recreational/Hedonistic consumer decision-making style.

## Chapter 5

### Summary, Conclusions, Discussion, and Recommendations

The purpose of this study was to determine whether a relationship exists between beginning college students' mind styles and their consumer decision-making styles. The self-reported frequencies of consumer purchases typically related to college students were also examined. This chapter provides a summary of the procedures used and a summary of findings, conclusions, and discussion of results for each research question. Recommendations for future research, practice, policy, and families are proposed.

### Procedure Summary

The Office of New Student Programs at Radford University recruited nineteen University 100 course instructors to allow their University 100 section of students to participate in this study. University 100 is a one-credit course that is taught in each residence hall's classroom during fall semester only of each academic year. The purpose of the course is to assist first-year, first semester students in their transition to the college environment and concentrate on skills to help them succeed academically, socially, and personally. The RU Connections program consists of residence halls that house all first-year, first-semester residents. Students were chosen to live in these residence halls on a first-come, first-served basis, based on the receipt date of the students' residence hall applications and room deposits. All recruited instructors participated in the RU Connections program through the Office of New Student Programs.

The Gregorc Style Delineator<sup>®</sup> and the Consumer Styles Inventory were administered during two regularly scheduled University 100 classes for each participating section. During the first class session of each University 100 section for which the instructor agreed to participate, each student completed the Gregorc Style Delineator<sup>®</sup>, Consumer Styles Inventory, and Demographic Survey. The entire sample of students included 416 first-year, first semester students. From these 416 students, 47 surveys were deemed unusable due to incompleteness of the surveys or the student being under the age of 18 (which was referred to as the usable sample). Thirty-six additional surveys were omitted due to having multiple dominant mind styles, resulting in a qualifying sample of

333 students. Based on Chi-Square analysis, there were no significant differences in the demographic profile between the usable and qualifying samples.

During the second class session, each student received a printed profile of his/her scores for each category of consumer decision-making style. Results of the profiles were briefly discussed and students were allowed to keep their printed profiles (see Appendix G). Statistical analyses were conducted with varied results, and those results are discussed below.

### Summary of Findings, Conclusions, and Discussion of Results

This section provides a summary of the findings for the study's research questions. Descriptive analyses were conducted. The summaries include a brief review of results, conclusions, and discussion for each of these analyses. Each discussion also includes possible explanations for the particular results and potential links to the literature examined.

The research questions that were investigated in this study were:

1. What are the demographic profile and self-reported shopping habits of beginning college students?
2. Is there a significant relationship between gender and self-reported shopping habits of beginning college students? If so, to what extent?
3. Is there a significant relationship between the perception of family income and self-reported shopping habits of beginning college students? If so, to what extent?
4. What is the distribution of the Gregorc mind styles among beginning college students?
5. Is there a significant relationship between gender and the Gregorc mind styles distributions among beginning college students? If so, to what extent?
6. Are there distinct consumer decision-making styles of beginning college students?
7. Is there a significant relationship between gender and the consumer decision-making style(s) of beginning college students? If so, to what extent?

8. Is there a significant relationship between the Gregorc mind style scores and consumer decision-making styles of beginning college students? If so, to what extent?

**Research Question One: What are the demographic profile and self-reported shopping habits of beginning college students?**

Descriptive analyses were conducted for the two parts of the Demographic Survey. Part I provided initial questions for general demographic information and Part II provided questions about frequencies of purchasing consumer goods that are considered typical for college students. Following is a discussion of these results.

*Demographic Profile*

The demographic profile of the beginning students was not surprising, however, the reported educational backgrounds of the students' mother, father, or guardian were different from what the researcher had anticipated. This sample reported 56.5% ( $n = 188$ ) of fathers or male guardians with a completed college degree or higher and 20.7% ( $n = 69$ ) who had completed some college. The sample also had 53.2% ( $n = 177$ ) of mothers or female guardians with a completed college degree or higher and 24.3% ( $n = 81$ ) who had completed some college. These results imply that the sample was homogenous in terms of their parents' education, which might have influenced the resulting one factor, Recreational/Hedonistic consumer decision-making style. For this study, the relationship between parents' or guardians' postsecondary education and beginning students' shopping habits was not examined, and it is possible that families with more education might earn higher incomes and provide more funding for school expenses, which, in turn, may influence self-reported shopping habits and how frequently discretionary money is spent on consumer goods.

A strong relationship might also influence consumer decision-making styles. Previous consumer research related to psychographics or lifestyles has focused on consumers' social characteristics (Onksvisit & Shaw, 1994; Wells, 1974), demographic variables such as age and social class (Garman, 2002; Kamaruddin & Mokhlis, 2003; Wells, 1974), and how these variables relate to consumer behavior. Additional studies have indicated that college students' discretionary incomes have increased, and students

continue to spend higher levels of discretionary income (Harris Interactive & Youth 360, 2002). However, these studies did not investigate potential relationships between their parents' education and the college students' self-reported shopping habits.

### *Self-Reported Shopping Habits*

The reported frequencies of consumer purchases by the beginning college students supported previous studies. Harris Interactive & Youth 360 (2002) reported college students spend an average of \$11.4 billion per year on beverages and snack foods. The current study found that 37.7% ( $n = 60$ ) of students purchase food for home daily, and 75.4% ( $n = 127$ ) purchase weekly.

Some questions arose as to wording of the some of the categories of consumer purchases listed on the Demographic Survey. For instance, students reported purchasing food away from home and purchasing food for home, but it is unknown how students interpreted these purchase categories. It is possible that food away from home might also be interpreted as eating in campus food courts other than dining halls, even if these food courts were part of the residence hall meal plans. Food away from home and food for home might also have included daily snacks bought in vending machines, etc.

### **Research Question Two: Is there a relationship between gender and self-reported shopping habits of beginning college students? If so, to what extent?**

#### *Summary of Findings*

For the current study, the Chi-Square Test of Independence revealed a relationship between gender and self-reported shopping habits of beginning college students for clothing, food away from home, and gas/auto expenses.

#### *Conclusions*

Based on the findings of this study, it can be concluded that females tend to purchase clothing more frequently than males. Males tend to purchase food away from home and gas/auto expenses more often than females.

#### *Discussion*

Previous studies have documented similar significant relationships between gender and self-reported shopping habits. Hayhoe, Leach, Turner, Bruin, and Lawrence (2000) found females were more likely than males to purchase clothing with credit cards

and males were more likely than females to purchase electronics, entertainment items, and food away from home with their credit cards.

Dittmar, Beattie, and Friese (1995) found that women tended to purchase appearance-related items, such as clothing, on impulse more than men and that men tended to purchase electronics items more often than women. The current study's findings revealed that females purchase clothing more frequently than males, but not on impulse. However, there was no significant relationship between gender and the frequency of purchasing electronics. The Dittmar et al. (1995) study also suggested that women tend to purchase based on emotional reasons and men tended to purchase based on items that focus on their self-identity.

**Research Question Three: Is there a relationship between the perception of family income and self-reported shopping habits of beginning college students? If so, to what extent?**

*Summary of Findings*

The present study did not find a significant relationship between perceived family income and the self-reported frequency of purchasing consumer goods.

*Conclusions*

Based on the findings of this study, it can be concluded that students tend to purchase consumer goods frequently with varying frequencies, regardless of family income.

*Discussion*

Although the present study did not ask questions related to credit card use, such a finding may suggest that college students may use credit cards as a means to purchase and afford clothing or that they have additional sources of income not reported on the Demographic Survey. Hayhoe et al. (2000) found that the higher the family's income, the more likely females were to purchase clothing with credit cards.

The seven original categories of family income were combined into three categories: Under \$75,000, \$75,000 and Above, and Do Not Know, as shown in Table 7. The Demographic Survey did not include additional categories for reporting family income above \$75,000. Since these ranges are unknown, it is difficult to determine

whether additional categories of reporting family income might have caused different results. The students in the \$75,000 and Above family income category comprised the largest number of students ( $n = 142$ , 42.6%). The second largest was Do Not Know ( $n = 102$ , 30.6%). The students who reported family income under \$75,000 showed unexpected patterns of shopping frequencies. For example, as noted in Table 7, 56.3% ( $n = 49$ ) of the students reporting family income under \$75,000 also reported weekly purchases of food away from home. On the other hand, 52.1% ( $n = 74$ ) of students reporting family income \$75,000 and above, reported weekly purchases of food away from home. In most cases, this category of family income category showed higher shopping frequencies of consumer goods than the \$75,000 and above category.

McNeal and Yeh (1993) suggested that families at all income levels teach their children similar consumer behaviors beginning in childhood. McNeal (1990) found that children tended to spend discretionary income on clothing, movies, sports, and live entertainment. The current study's findings of frequent shopping across income levels may support McNeal and Yeh's (1993) findings that families with different incomes are teaching similar consumer behaviors.

Although the Demographic Survey did not ask questions about where students shop, this should be considered. Students' prior access to shopping may also influence their self-reported shopping habits. Roy (1994) found those families with higher income levels tended to visit malls more frequently and suggested that recreational shoppers (those who enjoy shopping as an activity) tended to visit malls more often.

Additionally, when students enter college as first-year students, they plan to focus on building both academic success and a thriving social life (Erickson & Strommer, 1991; Katz & Associates, 1968; Moffatt, 1989). A successful social life might entail meeting and making new friends, fitting in, and spending time in social activities. The students participating in the RU Connections program live in residence halls that house only first-year, first semester students and emphasize residence hall programming to encourage students to meet and spend time with other students. According to Craig Herndon, Assistant Director of New Student Programs at Radford University, the goal of emphasizing residence hall programming is to focus on a smoother transition to the

college environment (personal communication, April 28, 2004). This may have also contributed to the students' tendency to spend more discretionary income on food away from home. These tendencies may also influence how students responded to both the Demographic Survey and the Consumer Styles Inventory, especially if they are spending more discretionary income on social activities with their peers. Nick (1997) also suggested that first-year students tend to spend more discretionary income on food and entertainment items for social activities, and that by the time they reach their sophomore year, college students tend to spend less on food and entertainment and spend more money on personal entertainment items.

Typically, on-campus residential communities promote student development through social activities and programs (Hirt & Nick, 1999). Hirt and Nick further suggested that first-year students are at a stage of development in which they are more dependent on others (such as peers, families). By the time they reach their sophomore year, students are more likely to make fewer purchases on social activities and more purchases on personal entertainment products that are more reflective of their personal independence and better adjustment to college life. For the current study, the more dependent stage of development of the first-year, first semester students might have also influenced their self-reported frequency of purchases of clothing, toiletries, food away from home, food for home, and gas/auto expenses.

#### **Research Question Four: What is the distribution of the Gregorc mind styles among beginning college students?**

##### *Summary of Findings*

The self-reported, dominant mind style scores from the present study were fairly evenly distributed, except for the Abstract Sequential mind style scores. The Concrete Sequential mind style represented 32.1% ( $n = 107$ ) of the sample; the Abstract Random mind style represented 32.7% ( $n = 114$ ) of the sample; the Concrete Random mind style represented 24.9% ( $n = 83$ ); and the Abstract Sequential mind style represented 8.7% ( $n = 29$ ) of the sample. No frequencies of population mind styles were provided by Gregorc's study (1982c) to compare to this study.

### *Conclusions*

Based on the findings of this study, it can be concluded that beginning college students tend to self-report that they are more dominant in the Concrete Sequential, Abstract Random, and Concrete Random mind styles and less dominant in the Abstract Sequential mind style.

### *Discussion*

Based on Baxter Magolda's research (1992), it was expected that beginning students would predominantly fall into the Concrete Sequential dominant mind style, as this mind style has similar characteristics to the absolute way of knowing. Within the usable sample, 32.1% of the students reported Concrete Sequential as their dominant mind style. People with Concrete Sequential mind styles and absolute *ways of knowing* have difficulty with abstract thinking. Baxter Magolda (1992) postulated that beginning college students do not become more abstract thinkers until later in college. In contrast, Gregorc (2001) proposed that mind styles remain constant over time and are not likely to change as one progresses through college. As an example, these students are not likely to change from a Concrete Sequential mind style to an Abstract Random mind style.

In addition, Baxter Magolda (1988) originally questioned the generalizability of the *ways of knowing* among other college populations, and it remains in question with this sample. However, the 24.9% who had Abstract Random dominant mind styles from the current study's findings partially support Piaget's Cognitive Development Theory, which suggested that between the ages of 15 and 20, adolescents become more abstract thinkers and become better problem solvers (Santrock, 1998). However, only 8.7% of the current sample possessed the Abstract Sequential dominant mind style. According to Gregorc (1982c), people with dominant Abstract Sequential mind styles tend to focus more on analysis and problem solving than people with dominance in the other three mind styles. Although Gregorc (1982c) did not report frequency distributions of mind style scores in his original study, Gregorc (personal communication, December 5, 2003) has observed, through years of seminars and research using the Gregorc Style Delineator<sup>®</sup>, that people tend to report Abstract Sequential as their dominant mind style much less frequently, which also seemed characteristic for this study.

**Research Question Five: Is there a significant relationship between gender and the Gregorc mind styles distributions among beginning college students? If so, to what extent?**

*Summary of Findings*

This study found significant relationships between gender and beginning college students' mind style scores for Abstract Random and Concrete Random. No significant relationships were found between gender and the Concrete Sequential mind style scores or the Abstract Sequential mind style scores.

*Conclusions*

Based on the findings of this study, it can be concluded that females tend to be more dominant in the Abstract Random mind style than males, and males tend to be more dominant in the Concrete Random mind style than females.

*Discussion*

Similar to the findings of this study, O'Brien (1991) found a significant relationship between gender and dominant mind style scores of college students. Females tended to self-report their dominant mind style as Abstract Random. Males tended to self-report their dominant mind style scores as Abstract Sequential or Concrete Random. No significant relationship was found between gender and the Concrete Sequential mind style.

In contrast, Gregorc (1982a) suggested that mind styles are specific to the individual and not related to gender (personal communication, December 5, 2003). Although the current study found a significant relationship between the dominant mind style scores reported and gender, no previous studies by Gregorc (personal communication, December 5, 2003) have been conducted to determine whether a directional relationship exists between the self-reported, dominant mind style scores between adult females and males. Therefore, no further comparison can be made between this study and Gregorc's (1982c) previous study. Gregorc (personal communication, December 5, 2003) postulates that the self-reported, dominant mind style scores are not gender-specific.

## **Research Question Six: Are there distinct consumer decision-making styles of beginning college students?**

### *Summary of Findings*

For the current study, exploratory factor analysis revealed one factor, the Recreational/Hedonistic consumer decision-making style.

### *Conclusions*

Based on the findings of this study, it can be concluded that beginning college students tend to self-report that they are Recreational/Hedonistic consumers.

### *Discussion*

This finding contrasts with the Kendall and Sproles (1986) study that found eight consumer decision-making styles. This also contrasts with other previous studies that either confirmed or partially confirmed the eight consumer decision-making styles (Canabal, 2002; Durvasula, Lysonski, & Andrews, 1993; Fan & Xiao, 1998; Hafstrom, Chae, & Chung, 1992; Kamaruddin & Mokhlis, 2003; Lysonski, Srini, & Zotos, 1996; Mitchell & Bates, 1998; Sproles & Sproles, 1990; Walsh, Mitchell, & Hennig-Thurau, 2001).

*Reliability of the Consumer Styles Inventory.* The method for testing alpha coefficients for examining reliability of the Consumer Styles Inventory used in this study was different than the Sproles and Kendall (1986) study. Because factor analysis produced just one factor, as compared to the eight factors of the Sproles and Kendall (1986) study, it is impossible to compare the reliability of the Consumer Styles Inventory instrument between the two studies. The most reliable statements (with alphas .50 and above) are the same statements that loaded onto the first factor from factor analysis. The remaining statements resulted in low alpha coefficients, which may suggest that further investigation of this instrument is warranted, especially with similar samples, since no other studies were found that used first-year, first semester college students to test this instrument.

*Recreational/Hedonistic Consumer Decision-Making Style.* Other studies have focused on characteristics of recreational shoppers. Shim and Gehrt (1996) further categorized the Sproles and Kendall (1986) consumer decision-making styles into three broader categories: social/hedonistic, overpowered, and utilitarian. Their

Social/Hedonistic category was comprised of the consumer decision-making styles of brand conscious, novelty/fashion conscious, recreational, and brand loyal. However, for the current study, the six statements that loaded on to factor 1, the Recreational/Hedonistic consumer decision-making style, supported the overall Social/Hedonistic category of Shim and Gehrt (1996).

*Prior Personal Finance Education.* Sproles and Kendall (1986) used a sample of secondary students in family and consumer sciences (formerly called home economics), and the current sample focused on first semester college students. Because the Sproles and Kendall (1986) sample targeted family and consumer sciences students, it is possible that these students may have received prior education in family resource management concepts, which might have influenced their responses to items about their consumer decision making. The background of resource management education of this study's sample is unknown.

Additionally, most of the individual statements from the Consumer Styles Inventory did not refer to specific types of product purchases, other than those related to clothing. For example, the statements "I usually have one or more outfits of the very newest style" and "I keep my wardrobe up-to-date with the changing fashions" refer specifically to clothing purchases. It is unknown how the current sample of students interpreted the statements or whether they may have interpreted the statements for products they frequently purchase for themselves. For example, when comparing responses to the Demographic Survey, females reported more frequent purchases of clothing than males, with 42.9% of females purchasing monthly and 46.7% of males reporting that they seldom purchase clothing. On the other hand, males reported slightly more frequent purchases of electronics than females, with 61.5% of males seldom purchasing and 14.8% of males purchasing monthly, whereas 69% of females seldom purchased electronics and 20.8% never purchased electronics.

When comparing other individual statements from the Consumer Styles Inventory, for the statement "I prefer the best-selling brands," it is unknown what types of consumer goods the students may have been using as reference points. For example, there are "best-selling" brand-name items within most of the categories of consumer

goods used in the Demographic Survey, such as clothing, toiletries, food for home, electronics, and school supplies.

*Consistency of Responses to the Consumer Styles Inventory.* Responses that were apparently inconsistent were found for some of the individual statements. For example, as shown in Table 10, a significant relationship was found between the Abstract Random mind style and the statement “I am impulsive.” However, there was no significant relationship between students with the Abstract Random mind style and the “I watch how much I spend” statement. It might be assumed that there would have been an inverse relationship between the “I watch how much I spend” statement and the Abstract Random mind style, however, this type of relationship did not occur.

*Factor Analysis of the Consumer Styles Inventory.* For this study, exploratory factor analysis resulted with one factor, Recreational/Hedonistic. Of the Consumer Style Inventory’s 39 statements, only six loaded onto this factor. No additional factors materialized. In contrast, the Sproles and Kendall (1986) study confirmed eight categories of consumer decision making. The six statements from this current study were listed in the Sproles and Kendall (1986) Recreational/Hedonistic, Novelty/Fashion Conscious, and Brand Conscious, Price Equals Quality decision-making styles, however, the combination of these statements more closely resembles a Recreational/Hedonistic decision-making style.

Responses to the Demographic Survey also support previous studies (Harris Interactive, 2004; Harris Interactive & Youth 360, 2002; Levin, 1988) that students are spending discretionary money on items such as clothing, electronics, and food. Although the current study did not focus on the amount of money spent on such items or whether the items are purchased with credit cards, additional questions on the Demographic Survey could have investigated how many credit cards students own and how much debt they carry, which might have confirmed previous research (Hayhoe, et al., 2000; Henry, Weber, & Yarbrough, 2001; Norvilitis & Maria, 2002; Warwick & Mansfield, 2000) and validated a continued need for personal finance and consumer education.

A lack of experience in consumer decision-making at this life stage might also explain the response rates and loadings of the six statements onto the Recreational/Hedonistic factor. Mitchell and Bates (1998) questioned the Sproles and

Kendall (1986) sample of secondary students since they were living at home and compared them to their own study sample of undergraduate students who tended to make more independent purchase decisions because they were living away from home. Sproles and Kendall (1986) also noted the lack of consumer decisions made during adolescence. This might explain a first-semester freshman's tendency toward "In Between" responses to the statement "I watch how much I spend." Similarly, Fan and Xiao (1998) questioned whether the age of Chinese respondents might impact their responses to the Consumer Styles Inventory, especially between younger consumers (college age) versus older, more mature consumers.

The Sproles and Kendall (1986) and Sproles and Sproles (1990) studies used family and consumer sciences secondary students in grades 9 - 12, and these students may have already had course content related to resource management principles. It is unknown whether the students in this study had prior resource management education. Based on previous studies (Braunstein & Welch, 2000; Danes & Hira, 1987; National Council on Economic Education, 2003; Kidwell & Turrisi, 2000; Norvilitis & Maria, 2002) that showed a national lack of personal finance education prior to college, it is possible that many of the current study's students also did not have this prior education and this may have impacted how they responded to the Consumer Styles Inventory.

*Factor Analysis Results From Other Studies.* Other studies that have conducted factor analyses have produced varied results. Most studies thus far have used sophomore to senior level college students. The only study that used an adult, non-college age sample was Walsh et al. (2001). No other studies were found that used the Consumer Styles Inventory with beginning college students.

In previous studies, some consumer decision-making styles were eliminated (Canabal, 2002; Fan & Xiao, 1998; Lysonski et al., 1996; Walsh et al., 2001) or new ones added (Hafstrom et al., 1992). It is recommended that statistical findings should not include factor loadings below .60 (George & Mallery, 2000), however, the Sproles and Kendall (1986) study reported factor loadings above .40. For the current study, only factor loadings .60 and above were used, which may explain differences in results from Sproles and Sproles (1990) compared with this study. Since the Sproles and Kendall (1986) and the Sproles and Sproles (1990) studies only reported factors with factor

loadings above .40, it is likely that there were more than 40 statements in the original Consumer Styles Inventory that were not available for the current study. The Sproles and Kendall (1986) study averaged 3 – 7 statements per consumer decision-making category. Too few statements might not adequately represent these categories (Green, Salkind, & Akey, 2000).

Other researchers have proposed refinement of the Consumer Styles Inventory statements through re-wording and grammatical revisions (Fan & Xiao, 1998; Hafstrom et al., 1992; Mitchell & Bates, 1998; Walsh et al., 2001) to better reflect the samples studied. They questioned whether changes might have occurred in the meanings of the statements and interpretation of results because of translation into their native languages of Chinese, Korean, German, respectively. Specifically, Mitchell and Bates (1998) questioned whether the grammatical make-up and meanings of the statements were appropriate for the United Kingdom study. Likewise, the Sproles and Sproles (1990) study targeted secondary family and consumer sciences students and the wording and meanings of the statements may have been customized to reflect that particular sample.

*Other Variables Possibly Affecting the Results of the Consumer Styles Inventory.*

Kamaruddin and Mokhlis (2003) investigated the relationship between social structural factors and socialization processes and their consumer decision-making styles. Significant relationships were found between demographics, peer influences, media and the students' consumer decision-making styles.

**Research Question Seven: Is there a significant relationship between gender and the consumer decision-making style(s) of beginning college students? If so, to what extent?**

*Summary of Findings*

The Mann-Whitney Rank Sum Test revealed that there is a significant relationship between gender and the recreational/hedonistic consumer decision-making style.

*Conclusions*

Based on the findings of this study, it can be concluded that females tend to self-report that they are more recreational/hedonistic shoppers than males.

### *Discussion*

Other studies have found similar results to this study. Bellenger and Korgaonkar (1980) found that recreational shoppers tend to be female, want to shop with others, focus on trendy fashions, want high quality merchandise, be more likely to shop at indoor malls, and be more likely to come from professional career homes. Williams, Slama, and Rogers (1985) further supported Bellenger and Korgaonkar (1980) in finding that recreational shoppers are also influenced by advertisements in their purchase decisions, are more sensitive to current fashion trends, seek variety in brands, and are more brand-loyal.

Taylor and Cosenza (2002) found that older female teens enjoy shopping for clothing and associate their social standing with the kinds of clothes they wear. They also liked shopping at malls and name-brand products were important, which also showed similarities to the current study.

The Chi-Square Test of Independence revealed that a relationship exists between self-reported shopping habits and gender and supports the fact that females responded to the Consumer Styles Inventory as more recreational shoppers than males. Knowing that first-semester students tend to focus more on social development (Erickson & Strommer, 1991; Katz & Associates, 1968; Moffatt, 1989) and that females in the current study tend to be more recreational shoppers than males, the significant relationship between gender and clothing purchases is not surprising.

**Research Question Eight: Is there a relationship between the Gregorc mind styles and consumer decision-making styles of beginning college students? If so, to what extent?**

### *Summary of Findings*

Using Pearson's correlation with an alpha level of  $p < .05$ , significant, positive relationships were found for the Recreational/Hedonistic consumer decision-making style and the Abstract Random and Concrete Random mind style scores. The Concrete Sequential mind style scores did not show significant relationships with the composite scores for the Recreational/Hedonistic consumer decision-making style. The Abstract

Sequential mind style scores had a significant, inverse relationship with the Recreational/Hedonistic consumer decision-making style.

### *Conclusions*

Based on the findings of this study, it can be concluded the Abstract Random mind style scores and the Concrete Random mind style scores are more characteristic of the Recreational/Hedonistic consumer decision-making style. The Concrete Sequential mind style scores do not reflect the Recreational/Hedonistic consumer decision-making style. And, the Abstract Sequential mind style scores are less likely to be characteristic of the Recreational/Hedonistic consumer decision-making style.

### *Discussion*

The lack of a significant relationship with the Concrete Sequential mind style scores and the Recreational/Hedonistic consumer decision-making style suggested that the students who have this dominant mind style do not enjoy shopping as a social activity. Persons with the Concrete Sequential as their dominant mind style are easily distracted, like structure, and may be overwhelmed by too many choices (Gregorc, 1982c), which supports this lack of significant relationship. People who possess more characteristics of the Abstract Random and Concrete Random mind styles tend to enjoy social activities and are less likely to be overwhelmed by many choices (Gregorc, 1982c), which supports the resulting significant relationships for this study. People with Abstract Sequential characteristics tend to want structured environments and opportunities for problem-solving and research, and would be less likely to enjoy social situations (Gregorc, 1982c), which supports the significant, inverse relationship with the Recreational/Hedonistic consumer decision-making style for this study.

A closer examination of the relationship of the mind style scores with the six individual statements in the Recreational/Hedonistic consumer decision-making style supported the overall findings of the Pearson's correlation. For example, the statement "I enjoy shopping for the fun of it," supports the findings of Pearson's correlation between the mind style scores and the overall Recreational/Hedonistic consumer decision-making style. However, the statement "Going shopping is one of the enjoyable activities of my life," which showed a positive, significant relationship with the Concrete Sequential mind style, was not consistent with the negative, significant relationship of the Concrete

Sequential mind style with the statement “I enjoy shopping for the fun of it.” Both statements should have had positive, significant relationships to the Concrete Sequential mind style. It is unknown how the students may have interpreted these two statements.

The Gregorc Style Delineator (1982b) was similar in design to the Kolb Learning Styles Inventory (1976) that was adapted for the Sproles and Sproles (1990) study. For this study, the Gregorc Style Delineator allowed for scores for all four of the mind styles and is a more broad assessment tool than the Secondary Learning Styles Inventory, which only reports one score for the reported learning style. And, the broadness of the categories of mind style from Gregorc Style Delineator may have influenced the results.

### Recommendations

The following suggestions for further research, practice, policy, and families are based upon the researcher’s opinions regarding the results and conclusions.

#### *Recommendations for Further Research*

The recommendations for further research relate to the three instruments used in this study.

*Demographic Survey.* Based on the findings of this study, the following recommendations are proposed.

1. Further refinement of the Demographic Survey may be necessary to ensure that definitions of the purchase categories are clear and whether additional questions may be useful, such as those related to credit card ownership, credit card debt, and prior education in consumer or personal finance concepts.
2. Although the present study did not explore emotional reasons for females’ and males’ self identity (Dittmar, Beattie, & Friese, 1975) as influencing self-reported shopping habits, it would be useful to consider these reasons in future studies, especially since the present study’s results did not support Sproles and Kendall’s (1986) Impulsive/Careless consumer decision-making style.
3. Since this study found that 42.6% of students reported perceived family income over \$75,000, future surveys should provide additional income categories to determine whether other patterns of shopping frequencies might emerge.

*Learning Styles Inventory.* While the Gregorc Style Delineator□ is an effective tool in assessing learning styles, additional studies might consider re-using the Secondary Learning Styles Inventory (Kendall & Sproles, 1986) which was an adaptation of the Kolb Learning Styles Inventory (1984) and was also used in the Sproles and Sproles (1990) study, especially since the broadness of the Gregorc Delineator□ could have influenced the current study's results concerning the Recreational/Hedonistic consumer decision-making style.

*Consumer Styles Inventory.* Based on the findings of this study, the following recommendations are proposed.

1. Researchers could consider administering the Consumer Styles Inventory and the Gregorc Style Delineator□ to working adults who have graduated from college (approximately in their mid-twenties) to determine whether differences in results may be influenced by more experience with actual consumer-decision making.
2. Pilot studies should be conducted with college students, which would allow researchers to determine whether refinement is needed for the statements of the Consumer Styles Inventory to incorporate more appropriate wording and grammar.
3. If refinement of the Consumer Style Inventory is warranted, and if future pilot studies determine this refinement is successful, a duplicate study of this current study might be conducted to re-investigate the relationship between mind styles and consumer decision-making styles.
4. Further investigation could be done to indicate whether social structural variables and socialization processes, especially concerning parents' or guardians' educational backgrounds, peers, or family income levels, may impact mind styles and/or consumer decision-making styles.
5. A future study might investigate whether differences exist in how students respond to the Consumer Styles Inventory based on their parents' educational background, especially with those whose parents have not completed a bachelor's degree.
6. Further research is also recommended to compare potential differences in consumer behavior from the Sproles and Kendall (1986) study's time frame and

- this current study. Other studies (Harris Interactive, 2004; Harris Interactive & Youth 360, 2002; Levine, 1988) have acknowledged the increase in discretionary spending of college students from the 1980s through the 2000s, and this might have also influenced responses to the questions of the Demographic Survey and the Consumer Styles Inventory statements.
7. Future studies of beginning college students might consider re-wording of the statements to reflect how they may interpret the Consumer Styles Inventory statements. Further research on characteristics of dialogue of this age group is recommended.
  8. An additional study of college students with the Consumer Styles Inventory might be conducted with statements that better reflect how college students may interpret these statements, especially as they may be making more purchase decisions independently than secondary students who still live at home. And, such revisions might also increase the reliability and factor loadings of the statements.
  9. Since the current study was unable to confirm the previous studies' consumer decision-making styles, other than the Recreational/Hedonistic consumer decision-making style for this sample, future studies should investigate the potential influence of marketing strategies, education, peer interaction, and family environments on how students report mind styles and also impact consumer decision-making. And, generalizability across different samples with different demographic characteristics should continue to be studied.
  10. This current study did not examine a possible relationship between socialization agents, social structural variables and consumer decision-making styles, however, additional research to determine whether these variables also influence consumer decision-making styles is suggested, especially since the Recreational/Hedonistic consumer decision-making style emerged as the only style characteristic of this sample. If such a relationship were found in future research, educators might target programming to better meet the needs of students coming from more diverse backgrounds.

### *Recommendations for Practice*

1. Although further investigation is needed to study the relationship between the Gregorc Style Delineator<sup>®</sup> and the Consumer Styles Inventory, there are multiple educational opportunities for these instruments to be used independently. Educational applications of the Gregorc Style Delineator<sup>®</sup> can be quite useful for first-year experience programs such as Radford University's University 100 courses. The Delineator<sup>®</sup> and the Gregorc Learner Extenda-Chart could be used simultaneously to assist students in using the information about their mind styles for self-assessment and reflection, and to improve and adjust their learning behaviors in the classroom as appropriate. Additionally, it should be used to help students learn how they relate to others personally and socially.
2. If a relationship exists between parents' education and self-reported shopping habits, educators might target programming to better meet the needs of students coming from diverse educational backgrounds.
3. Based on the findings of this study that beginning college students tend to be recreational shoppers, residence hall extracurricular programming and first-year experience offices should offer extracurricular activities that promote social development without encouraging students to spend discretionary money on recreation and entertainment through offering on-campus social events, seminars, and workshops of interest to students on campus. Opportunities are often made available for students to participate in volunteer work through service learning projects between the university and the community that not only emphasize the importance of community outreach but also encourage social development through interaction with their peers. Many universities already offer such opportunities through their first-year experience courses, residence hall programming, and career services.
4. The findings from the Demographic Survey can assist first-year experience instructors and other university educators to better understand differences in how females spend money versus males, thus, classroom activities can target specific programming efforts to the needs of both female students and male students. University and college offices of financial aid can make personal finance

- educational materials available to students and families from loan offices of financial institutions (many financial institutions have publications available for personal finance topics, especially related to credit) and could be given to students and families when they apply for loans or when bank statements are mailed to students (Danes & Hira, 1987).
5. Educational applications of the Consumer Styles Inventory might be helpful for educators and financial counselors to assist students and clients in making better purchase decisions. The original purpose of the Sproles and Kendall (1986) study was to provide such a tool for educators and counselors. Other areas that could benefit from the findings from the current study concerning the recreational, shopping nature of young adults could include freshmen student orientation programs, home-schooling associations, church groups, and families should target programming and opportunities to teach young people about making more appropriate shopping and financial decisions. Additionally, families should contact local agencies, such as Cooperative Extension, or other community organizations, such as scouting, to inquire about possible programming to target young adults and their consumer decision making.
  6. Educators and counselors should use the Consumer Styles Inventory to assist their students and clientele to discuss the individual consumer decision-making model, review their actual decision-making styles and relate to the appropriate steps in decision making for better consumer purchases and financial decisions. Also, an understanding of the self-reported shopping habits revealed from the Demographic Survey would be helpful in targeting programming specifically related to self-reported shopping habits by gender and family income.
  7. First-year experience courses should incorporate financial concepts into their curricula. College students tend to wait until they have financial problems before they seek financial counseling, thus, prevention of financial problems is essential (Hayhoe, Leach, & Turner, 1999), and these courses can provide such education early in students' academic careers. Programming should also emphasize the financial consequences of overspending, especially on recreational shopping.

Activities could include budgeting and discussions of the consequences of using credit cards.

Another example of incorporating financial concepts in these courses is through newspaper inserts (Chase, Hayhoe, & O'Neill, 2004) that can be used both in the classroom and outside the classroom. Such inserts can teach basic financial concepts to young adults through covering topics such as budgeting, credit, predatory lending, and identity theft. Such inserts can also be used in college and university newspapers. If personal finance courses or first-year experiences are not offered, school newspapers can provide these inserts to introduce students to these topics. Other ways to incorporate concepts into first-year experience courses are to provide financial training to instructors of these courses and encourage them to incorporate into the classroom. And, first-year summer orientation programs should encourage students to enroll in first-year courses where these topics could be taught (Santovec, 2003). Consumer educators, financial counselors, resource management faculty, and business faculty could provide both training for first-year course instructors and also volunteer to present seminars or workshops to students enrolled in these courses.

8. Other educators, such as Cooperative Extension specialists and agents and peer educators in family financial management programs, should provide training and workshops to university students, staff, and faculty on personal finance topics. The University of Arizona's Credit-Wise Cats program consists of students from family financial management majors who volunteer to be peer counselors to assist individual students and/or student organizations with understanding basic financial concepts. These peer counselors might also assist financial counselors in working with these organizations. More information on the Credit-Wise Cats program is available at <http://ag.arizona.edu/fcs/clubs/cwc/>. Extension faculty and peer educators might also use the Consumer Styles Inventory to work with students and clientele on using appropriate steps in decision making for consumer purchases and financial decisions.

### *Recommendations for Policy*

1. Based on the findings of this study that beginning college students are recreational shoppers, researchers, consumer advocates, and families should continue to petition policymakers for mandatory personal finance education at the secondary and higher education levels. Researchers (Braunstein & Welch, 2002; Garman, 2002; Greenspan, 2002; Hogarth, Beverly, & Hilgert, 2003) have acknowledged that the marketplace is more complex than ever and the continued fast pace of technology suggests a need for continued resource management for all ages, especially young adults. Hogarth, et al. (2003) confirmed other studies that found American households do not necessarily follow recommended financial practices and they learn most from others' experiences.

However, at the secondary level, personal finance education is implemented in fewer states than ever. As of 2002, 31 states had personal finance standards recommended in existing curricula, yet only 17 states actually mandate a personal finance course before high school graduation (National Council on Economic Education, 2003). Nationwide, educators and consumer advocates are concerned about college students' spending habits, easy access to credit cards, credit card debt, and lack financial knowledge (Braunstein & Welch, 2002; Danes & Hira, 1987; Hayhoe, Leach, & Turner, 1999; Kidwell & Turrisi, 2000; Norvilitis & Maria, 2002). Even college administrators are concerned about students' ability to make sound financial decisions (Kidwell & Turrisi, 2000).

Realizing that mandating personal finance curricular can be challenging in schools systems that are already competing for time to teach required academic courses (Braunstein & Welch, 2002), personal finance topics should be incorporated into existing courses, such as economics and mathematics. However, care must be taken to assure that all financial concepts are included and that they are taught in a sequence that makes them useful.

Researchers and educators should also continue to track the progress of having versus not having personal finance education on the long-term success of young adults and investigate consumer's knowledge on personal finance topics and adapt and improve educational strategies to reach as many consumers as possible. Through tracking such progress, researchers, educators, and consumer advocates can also

- influence policymakers at the secondary and higher education levels to provide personal finance education (Chase, Leech, & Hayhoe, 2004).
2. College offices of financial aid should provide personal finance education through collaboration with other campus departments that offer courses in personal finance and other types of related workshops. Colleges and universities should make personal finance courses part of their core curriculum. If the college or university does not require such a course through the core curriculum, they could train faculty and staff who work with these students and encourage them to take these courses (Danes & Hira, 1987). Many colleges and universities offer courses in personal finance and/or consumer skills and are taught through business courses and family and consumer science courses. These courses are suitable electives for majors in any field (Chase, Leech, et al., 2004).

#### *Recommendations for Families*

1. Families play an important role in teaching their children about personal finance before they go to college. Previous studies have documented that families generally expect that their children will learn personal finance through indirect training rather than direct training and that peers and family are considered the most dominant sources of personal finance information (Moore & Stephens, 1975). However, families can provide more direct education opportunities for their children and teens through assistance in teaching them how to budget their income with expenses, how to open a checking account and balance a checkbook, how to properly obtain a credit card, or how to acquire a car loan. Parents can also provide more direct training through everyday activities (Bowen, 2002), such as involving the children in discussing the difference between savings and credit, especially as they relate to media advertisements for credit and loans, and introduce games that incorporate finance principles, such as Monopoly or similar types of games. Families can also arrange joint meetings between themselves, their children, and their local finance institution to discuss personal finance topics.
2. Skills need to be practiced to reinforce learning and influence consumer behaviors. Once a student enters college, parents and families should continue to

- communicate regularly and encourage appropriate money management skills and provide only specific amounts of income to students on a regular basis (Chase, Leech, et al., 2004).
3. Families should investigate opportunities for involvement of the family in local organizations, such as 4-H or scouting (Hogarth, et al., 2003), where money management principles may be incorporated into programming for children and teens.
  4. Families should also support proposals and strategies to incorporate personal finance education in the secondary schools and higher education.

### Summary

Although significant relationships were found between gender and self-reported shopping habits, gender and dominant mind styles, and mind style scores and the Recreational/Hedonistic consumer decision-making style, continued research is warranted to determine whether further refinement is needed for the Consumer Styles Inventory and the Demographic Survey. Additional research is recommended to investigate the relationship between mind styles, consumer decision-making style(s), and shopping habits. However, multiple opportunities are possible using the instruments independently both in research and practice. Recommendations are proposed for further research, practice, policy, and families.

## References

- American Savings Education Council. *Youth and money*. (1999). Retrieved March 6, 2002, from <http://www.asec.org/eventhm.htm>
- Arroba, T. (1977). Styles of decision making and their use: An empirical study. *British Journal of Guidance and Counseling*, 5(2), 149-158.
- Baxter Magolda, M. (1992). *Knowing and reasoning in college*. San Francisco: Jossey-Bass.
- Baxter Magolda, M., & Porterfield, W. D. (1988). *Assessing intellectual development: The link between theory and practice*. Washington, DC: American College Personnel Association. (ERIC Document Reproduction Service No. ED324617)
- Bellenger, D. N., & Korgaonkar, P. K. (1980). Profiling the recreational shopper. *Journal of Retailing*, 56(3), 77-92.
- Bettman, J. R. (1979). *An information processing theory of consumer choice*. Reading, MA: Addison Wesley.
- Blum, M. (1977). *Psychology and consumer affairs*. New York: Harper & Row.
- Bowen, C. F. (2002). Financial knowledge of teens and their parents. *Association for Financial Counseling and Planning Education*, 13(2), 93-101.
- Brace, N., Kemp, R., & Snelgar, R. (2003). *SPSS for psychologists: A guide to data analysis using SPSS for Windows*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Braunstein, S., & Welch, C. (2002). *Financial literacy: An overview of practice, research, and policy*. Washington, DC: Federal Reserve Board.
- Brobeck, S. (1991). *Student consumer knowledge: The results of a nationwide test*. Washington, DC: Consumer Federation of America. (ERIC Reproduction Service No. ED347304)
- Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Chicago: Rand McNally.
- Canabal, J. E. (2002). Decision making styles of young south Indian consumers: An exploratory study. *College Student Journal*, 36(1), 12-19.
- Carver, R. H., & Nash, J. G. (2000). *Doing data analysis with SPSS 10.0*. Pacific Grove, CA: Duxbury Thomson Learning.
- Chase, M. W., Hayhoe, C. R., & O'Neill, B. (2004, February). *What young adults need to know about money*. Presentation at the National Resource Center for The First-Year Experience & Students in Transition Annual Conference on the First-Year Experience, Dallas, Texas.

- Chase, M. W., Leech, I., & Hayhoe, C. R. (2004, February). *Strategies to enhance young adults' financial decision making*. Paper presented at the Eastern Family Economics and Resource Management Association, 2004 Conference, Tampa, Florida.
- Consumer Federation of America. (2003). *Consumers lack essential knowledge, and strongly support new protections, on credit reporting and credit scores* (news release). Washington, DC: Author.
- Crow, L. D., & Crow, A. (1965). *Human development and learning*. New York: Van Nostrand Reinhold.
- Danes, S. M., & Hira, T. K. (1987). Money management knowledge of college students. *Journal of Student Financial Aid, 17*(1), 4-16.
- Darden, W. R., & Ashton, D. (1975). Psychographic profiles of patronage preference groups. *Journal of Retailing, 50*(4), 99-112.
- Deacon, R. E., & Firebaugh, F. M. (1975). *Home management context and concepts*. Boston: Houghton Mifflin.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Lexington, MA: D.C. Heath.
- Dittmar, H., Beattie, J., & Friese, S. (1995). Gender identity and material symbols: Objects and decision considerations in impulse purchases. *Journal of Economic Psychology 16*, 491-511.
- Dunn, R. (1984). Learning style: State of the science. *Theory into Practice, 23*(1), 11-19.
- Dunn, R., Denig, S., & Lovelace, M. K. (2001). Two sides of the same coin or different strokes for different folks? *Teacher Librarian, 28*(3), 9-15.
- Dunn, R., Dunn, K., & Price, G.E. (1979). Identifying individual learning styles. In J. W. Keefe (Ed.), *Student learning styles: Diagnosing and prescribing programs* (pp. 39-54). Reston, VA: National Association of Secondary School Principals. (ERIC Reproduction Service No. 182859)
- Dunn, R., & Griggs, S. A. (2000). *Practical approaches to using learning styles in higher education*. Westport, CT: Bergin & Garvey.
- Dunn, R., & Stevenson, J. M. (1997). Teaching diverse college students to study with a learning-styles prescription. *College Student Journal, 31*, 333-339.
- Durvasula, S., Lysonski, S., & Andrews, J. C. (1993). Cross-cultural generalizability of a scale for profiling consumers' decision-making styles. *Journal of Consumer Affairs, 27*(1), 55-65.

- Erickson, B. L., & Strommer, D. W. (1991). *Teaching college freshmen*. San Francisco: Jossey-Bass.
- Fan, J. X., & Xiao, J. J. (1998). Consumer decision-making styles of young-adult Chinese. *The Journal of Consumer Affairs*, 32(2), 275-294.
- Fan, J. X., Xiao, J. J., & Xu, Y. (1997). Decision-making styles of young adult-Chinese consumers: An international comparison. *Consumer Interest Annual*, 43, 76-81.
- Farnham-Diggory, S. (1992). *Cognitive processes in education*. New York: Harper Collins.
- Feldman, J. (1999). Back-to-school buying guide. *Money*, 28(9), 165-168.
- Garman, E. T. (2002). *Consumer economic issues in America*. Cincinnati: Thomson Learning.
- George, D., & Mallery, P. (2000). *SPSS for Windows step by step: Simple guide and reference, 10.0 update*. Boston: Pearson Allyn & Bacon.
- Goldsmith, E. (1996). *Resource management for individuals and families*. St. Paul, MN: West.
- Green, S. G., Salkind, N. J., & Akey, T. M. (2000). *Using SPSS for windows: Analyzing and understanding data*. Upper Saddle River, NJ: Prentice Hall.
- Greenspan, A. (2003, September). *Remarks by Chairman Alan Greenspan*. Presentation at the 33rd Annual Legislative Conference of the Congressional Black Caucus, Washington, DC. Retrieved October 20, 2003 from the Federal Reserve Web site:  
<http://www.federalreserve.gov/boarddocs/speeches/2003/2003092/default.htm>
- Gregorc, A. F. (1979). Learning/teaching styles: Their nature and effects. In J. W. Keefe (Ed.), *Student learning styles: Diagnosing and prescribing programs* (pp. 19-26). Reston, VA: National Association of Secondary School Principals. (ERIC Reproduction Service No. 182859)
- Gregorc, A. F. (1982a). *An adult's guide to style*. Columbia, CT: Gregorc Associates.
- Gregorc, A. F. (1982b). *Style delineator*. Columbia, CT: Gregorc Associates.
- Gregorc, A. F. (1982c). *Gregorc style delineator: Development, technical and administration manual*. Columbia, CT: Gregorc Associates.
- Gregorc, A. F. (1984). Style as a symptom: A phenomenological perspective. *Theory into Practice*, 23(1), 51-55.
- Gregorc, A. F. (2001). *Mind styles* □ *FAQs book*. Columbia, CT: Gregorc Associates.

- Hafstrom, J. L., Chae, J. S., & Chung, Y. S. (1992). Consumer decision-making styles: Comparison between United States and Korean young consumers. *Journal of Consumer Affairs*, 26(1), 147-158.
- Harris Interactive & Youth 360. (2002). *College students spend \$200 billion per year*. Retrieved February 5, 2003, from <http://www.harrisinteractive.com/news/printerfriend/index.asp?NewsID=480>
- Harris Interactive. (2004). *Trends and tudes*. Retrieved February 5, 2004, from <http://www.harrisinteractive.com>
- Harrison, G., Andrews, J., & Saklofske, D. (2003). Current perspectives on cognitive and learning styles. *Education Canada*, 43(2), 44-47.
- Hayhoe, C. R., Leach, L., & Turner, P. R. (1999). Discriminating the number of credit cards held by college students using credit and money attitudes. *Journal of Economic Psychology*, 20, 643-656.
- Hayhoe, C. R., Leach, L. J., Turner, P. R., Bruin, M. J., & Lawrence, F. C. (2000). Differences in spending habits and credit use of college students. *Journal of Consumer Affairs*, 34(1), 113-133.
- Henry, R. A., Weber, J. G., & Yarbrough, D. (2001). Money management practices of college students. *College Student Journal*, 35(2), 244-249.
- Hirt, J. B., & Nick, H. (1999). How students manage money: Some developmental implications. *NASPA Journal* 37(1), 349-360.
- Hogarth, J.M., Beverly, S.G., & Hilgert, M. (2003). *Patterns of financial behaviors: Implications for community and policy makers*. 2003 Federal Reserve System Community Affairs Research Conference.
- Howell, D. C. (2002). *Statistical methods for psychology*. Pacific Grove, CA: Wadsworth Group.
- Huck, S. W. (2000). *Reading statistics and research*. New York: Longman.
- Jacoby, J. (1976). Consumer psychology: An octennium. *Annual Review of Psychology*, 27, 331-358.
- Jacoby, J., & Chestnut, R. W. (1978). *Brand loyalty measurement and management*. New York: John Wiley & Sons.
- Joniak, A. J., & Saksen, S. G. (1988). The Gregorc style delineator: Internal consistency and its relationship to Kirton's adaptive-innovative distinction. *Educational and Psychological Measurement*, 48(4), 1043-1049.

- Jump\$Start Coalition. (2002). *From bad to worse: Financial literacy drops further among 12th graders*. Retrieved October 1, 2003, from <http://www.jumpstartcoalition.com/upload/ExecutiveSummary2002.doc>
- Jung, C. G. (1971). *Psychological types*. Princeton, NJ: Princeton University Press.
- Kamaruddin, A. R., & Mokhlis, S. (2003). Consumer socialization, social structural factors and decision-making styles: A case study of adolescents in Malaysia. *International Journal of Consumer Studies*, 27(2), 145-156.
- Katz, J., & Associates. (1968). *No time for youth: Growth and constraint in college students*. San Francisco: Jossey-Bass.
- Kendall, E. L., & Sproles, G. B. (1986). Learning styles among secondary vocational home economics students: A factor analytic test of experiential learning theory. *Journal of Vocational Education Research*, 11(3), 1-15.
- Kidwell, B., & Turrisi, R. (2000). A cognitive analysis of credit card acquisition and college student financial development. *Journal of College Student Development*, 41(6), 589-598.
- King, P. M., & Kitchener, K. S. (1994). *Developing reflective judgment: Understanding and promoting intellectual growth and critical thinking in adolescents and adults*. San Francisco: Jossey-Bass.
- Kolb, D. A. (1976). *Learning style inventory technical manual*. Boston, MA: McBer.
- Kolb, D. A. (1981). Learning styles and disciplinary differences. In A. W. Chickering and Associates (Eds.), *The modern American college* (pp. 232-255). New York: Prentice-Hall.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Lastovicka, J. L. (1982). On the validation of lifestyle traits: A review and illustration. *Journal of Marketing Research*, 19, 126-138.
- Levine, J. (1988). Today's college students: Wealthy, wise...elusive. *Incentive*, 162(3), 24-30.
- Lysonski, S., Srimi, D., & Zotos, Y. (1996). Consumer decision-making styles: A multi-country investigation. *European Journal of Marketing*, 30(12), 10-21.
- Mandell, L. (1998). *Our vulnerable youth: The financial literacy of American 12<sup>th</sup> graders*. Washington, DC: Jump\$Start Coalition for Personal Financial Literacy.

- Mandell, L. (2001). *Improving financial literacy: What schools and parents can and cannot do*. Retrieved March 6, 2002 from <http://www.jumpstartcoalition.org>
- Maynes, E. S. (1976). *Decision-making for consumers: An introduction to consumer economics*. New York: MacMillan.
- McNeal, J. (1990). Children as customers. *American Demographics*, 12(9), 36-39.
- McNeal, J., & Yeh, C.H. (1993). Born to shop. *American Demographics*, 15(6), 34-39.
- Messick, S. (1976). Personality consistencies in cognition and creativity. In S. M. Associates (Ed.), *Individuality in learning: Implications of cognitive style and creativity for human development*. San Francisco: Jossey-Bass.
- Miller, R. L., & Stafford, A. D. (2001). *Economic issues for consumers*. Belmont, CA: Wadsworth Thomson Learning.
- Mitchell, V.-W., & Bates, L. (1998). UK consumer decision-making styles. *Journal of Marketing Management*, 14, 199-225.
- Moffatt, M. (1989). *Coming of age in New Jersey: College and American culture*. New Brunswick, NJ: Rutgers University Press.
- Moore, R. L., & Stephens, L. F. (1975). Some communication and demographic determinants of adolescent consumer learning. *Journal of Consumer Research*, 2, 80-92.
- Moschis, G. P. (1976). Shopping orientations and consumer uses of information. *Journal of Retailing*, 52(2), 61-70.
- National Consumers League. (2002). *2002 teens and financial education*. Retrieved October 1, 2003, from <http://www.nclnet.org/moneyandcredit/teensurvey1.htm>
- National Council on Economic Education. (2002). *Survey of the states: Economic and personal finance education in our nation's schools in 2002*. Retrieved November 11, 2003 from <http://www.jumpstartcoalition.com/upload/NCEE2003.pdf>
- Nick, H. (1997). *Money management behaviors of traditional-aged college freshmen and sophomores: A qualitative study*. Unpublished master's thesis, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- Norvilitis, J. M., & Maria, P. S. (2002). Credit card debt on college campuses: Causes, consequences, and solutions. *College Student Journal*, 36(3), 356-363.
- Office of Institutional Research, Assessment, and Planning. (2004). *Radford University fast facts*. Retrieved February 8, 2004, from <http://www.radford.edu/~irpa>

- O'Brien, T. P. (1991). Relationships among selected characteristics of college students and cognitive style preferences. *College Student Journal*, 25(1), 492-500.
- Onkvisit, S., & Shaw, J. J. (1994). *Consumer behavior: Strategy and analysis*. New York: MacMillan.
- Perry, W. G. (1970). *Forms of intellectual and ethical development in the college years: A scheme*. New York: Holt, Rinehart and Winston.
- Perry, W. G. (1981). Today's students and their needs. In A. W. C. Associates (Ed.), *The modern American college*. San Francisco: Jossey-Bass.
- Rice, A. S., & Tucker, S. M. (1986). *Family life management*. New York: MacMillan.
- Roy, A. (1994). Correlates of mall visit frequency. *Journal of Retailing*, 70(2), 139-161.
- Santovec, M. L. (2003). First-year course teaches financial literacy. *Recruitment and Retention in Higher Education*, 16(1), 4-5.
- Santrock, J. W. (1998). *Child development*. Boston: McGraw-Hill.
- Shim, S., & Gehrt, K. (1996). Hispanic and native American adolescents: An exploratory study of their approach to shopping. *Journal of Retailing*, 72(3), 307-324.
- Speer, T. (1998). College come-ons. *American Demographics*, 20(3), 41-45.
- Sproles, E. K., Cox, D., & Sproles, D. G. (1987). Characterizing vocational students' learning styles: A replication and generalization of findings. *Journal of Vocational Education Research*, 12(4), 1-11.
- Sproles, E. K., & Sproles, G. B. (1990). Consumer decision-making styles as a function of individual learning styles. *Journal of Consumer Affairs*, 24(1), 134-147.
- Sproles, G. B. (1979). *Fashion: Consumer behavior toward dress*. Minneapolis: Burgess.
- Sproles, G. B. (1983). Conceptualization and measurement of optimal consumer decision making. *Journal of Consumer Affairs*, 17(2), 421-438.
- Sproles, G. B. (1985). *From perfectionism to fadism: Measuring consumers' decision-making styles*. Paper presented at the 31st Annual Conference of the American Council on Consumer Interests, Fort Worth, TX.
- Sproles, G. B., & Kendall, E. L. (1986). A methodology for profiling consumers' decision-making styles. *Journal of Consumer Affairs*, 20(2), 267-279.
- SPSS, Inc. (1999). *SPSS base 10.0 applications guide*. Chicago: Author.

- Stephenson, P. R., & Willett, R. (1969). *Analysis of consumers' retail patronage strategies*. Paper presented at the American Marketing Association, Cincinnati, OH.
- Stone, G. P. (1954). City shoppers and urban identification: Observations on the social psychology of city life. *American Journal of Sociology*, 60(1), 36-45.
- Taylor, S. L., & Cosenza, R. M. (2002). Profiling later aged female teens: Mall shopping behavior and clothing choice. *The Journal of Consumer Marketing*, 19(4/5), 393-409.
- Terry, M. (2002). Translating learning style theory into developmental education practice: An article based on Gregorc's cognitive learning styles. *Journal of College Reading and Learning*, 32(2), 154-176.
- Thorelli, H. S., Becker, H., & Engledow, J. (1975). *The information seekers: An international study of consumer information and advertising image*. Cambridge, MA: Ballinger.
- Vogt, W. P. (1999). *Dictionary of statistics and methodology*. Thousand Oaks, CA: Sage.
- Walsh, G., Mitchell, V. W., & Hennig-Thurau, T. (2001). German consumer decision-making styles. *Journal of Consumer Affairs*, 35(1), 73-95.
- Warwick, J., & Mansfield, P. (2000). Credit card consumers: College students' knowledge and attitude. *Journal of Consumer Marketing*, 17(7), 617-626.
- Wells, W. D. (1974). Life style and psychographics: Definitions, uses, and problems. In W. D. Wells (Ed.), *Life style and psychographics* (pp. 317-358). Chicago: American Marketing Association.
- Westbrook, R. A., & Black, W. C. (1985). A motivation-based shopper topology. *Journal of Retailing*, 61(1), 78-103.
- Williams, T., Slama, M., & Rogers, J. (1985). Behavioral characteristics of the recreational shopper and implications for retail management. *Journal of the Academy of Marketing Science*, 13(3), 307-316.
- Woolfolk, A. (2001). *Educational psychology*. Needham Heights, MA: Allyn and Bacon.

Appendix A  
Radford University Freshmen Student Enrollment Information  
Fall 2003

Radford University Freshmen Student Enrollment Information for  
Fall 2003

Demographic Information	Number	Percentage
<b>Ethnicity</b>		
White	1623	89.9
Black	86	4.8
Hispanic	40	2.2
Asian	50	2.8
American Indian	7	0.4
Total	1806	100.0
<b>Residency</b>		
Resident Alien	19	1.1
U.S. Citizen	1776	98.3
Non-Resident Alien	11	0.6
Total	1806	100.0
<b>Enrollment Status</b>		
Full Time	1804	99.9
Part Time	2	0.1
Total	1806	100.0
<b>Gender</b>		
Female	1099	60.9
Male	707	39.1
Total	1806	100.0

*Note:* Adapted from *RU Fast Facts: Information You Can Use*, available from <http://www.radford.edu/~irpa> and published by the Office of Institutional Research, Planning, and Assessment at Radford University as a public document. Reprinted with permission from the Executive Director (J. Sheffler, personal communication, April 7, 2004).

Appendix B  
Radford University Total Enrollment Information  
Fall 2003

Radford University Total Enrollment Information for Fall 2003

Total Student Enrollment				
	Male	Female	Totals	Percentage
New Freshmen	707	1099	1806	19.6
Other Freshmen	217	221	438	4.7
Sophomores	873	1202	2075	22.5
Juniors	807	1071	1878	20.4
Seniors	773	1197	1970	21.4
Graduate Students	244	808	1052	11.2
Total Enrolled	3621	5598	9219	100.0

Enrollment for Graduate and Undergraduate Students by Ethnicity

	Undergraduate	Graduate	Total	Percentage
White	7293	962	8255	89.54
Black	486	61	547	5.94
Hispanic	162	6	168	1.82
Asian	208	18	226	2.45
American Indian	17	5	22	.22
Alaskan	1	0	1	.01
Unknown	0	2	0	.00
Total by Ethnicity	8167	1052	9219	100.00

table continues

Radford University Total Enrollment Information for Fall 2003 continued

Enrollment by Gender			
	Undergraduate	Graduate	Total
Female	4790	808	5598
Male	3377	244	3621
Total	8167	1052	9219

Number of Students by Enrollment Status

	Undergraduate	Graduate	Total
Full Time	7719	808	5598
Part Time	448	606	1054
Total	8167	1052	9219

Citizenship Enrollment for Undergraduate and Graduate Students

	Undergraduate	Graduate	Total
U.S. Citizen	7990	1013	9003
Resident Alien	97	10	107
Non Resident Alien	80	29	109

Housing Information

	Undergraduate	Graduate	Total
Living in a Dorm	2870	19	2889
Not Living in a Dorm	5297	1033	6330
Total	8167	1052	9219

*Note:* Adapted from *RU Fast Facts: Information You Can Use*, available from <http://www.radford.edu/~irpa> and published by the Office of Institutional Research, Planning, and Assessment at Radford University as a public document. Reprinted with permission from the Executive Director (J.Sheffler, personal communication, April 7, 2004).

Appendix C  
Gregorc Style Delineator □ Directions Page

# GREGORC STYLE DELINEATOR™ RESEARCH INSTRUMENT

## DIRECTIONS

Before starting with the word matrix on the next page, carefully read all seven of the following directions and suggestions:

1. **Reference Point.** You must assess the relative value of the words in each group using your SELF as a reference point; that is, who you are deep down, NOT who you are at home, at work, at school or who you would like to be or feel you ought to be. THE REAL YOU MUST BE THE REFERENCE POINT.
2. **Words.** The words used in the *Gregorc Style Delineator* matrix are not parallel in construction nor are they all adjectives or all nouns. This was done on purpose. Just react to the words as they are presented.

4. **React.** To rank the words in a set, react to your *first impression*. There are no "right" or "wrong" answers. The real, deep-down you is best revealed through a first impression. Go with it. Analyzing each group will obscure the qualities of SELF sought by the Delineator.
5. **Proceed.** Continue to rank all ten vertical columns of words, one set at a time.
6. **Time.** Recommended time for word ranking: 3 minutes.
7. **Start.** Turn the page and start now.

3. **Rank.** Rank in order the ten sets of four words. Put a "4" in the box above the word in each set which is the best and most powerful descriptor of your SELF. Give a "3" to the word which is the next most like you, a "2" to the next and a "1" to the word which is the least descriptive of your SELF. Each word in a set must have a ranking of 4, 3, 2 or 1. No two words in a set can have the same rank.

4 = MOST descriptive of you  
1 = LEAST descriptive of you

Example

	X
a.	4 sun
b.	2 moon
c.	3 stars
d.	1 clouds

Copyright © 1982, Anthony F. Gregorc, Ph.D

All rights reserved. No part of this document may be reproduced or transmitted in any form or by any means, including photocopying, without the written authorization of the copyright owner, except where permitted by law.

*Reproduced with permission of Anthony F. Gregorc, Ph.D.*

Appendix D  
Consumer Styles Inventory

Permission to use this research instrument was obtained from  
Drs. George and Elizabeth Sproles.

## Consumer Styles Inventory

**Instructions:** This Consumer Decision Making Styles Inventory contains statements on different interests and priorities some consumers have. Please read each statement and circle the box next to the response indicating how much you agree or disagree with the statement as a description of you. You should only check one box per statement. There are a total of 40 statements. By completing this survey, you are providing your consent to participate in this study.

For identification purposes of this study, please list your email address. This email address will be held strictly confidential and not identifiable to others. Your email address will not be used for any other purpose other than this study and will not be shared with others.

Email address \_\_\_\_\_

1	A product doesn't have to be perfect, or the best, to satisfy me.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
2	All the information I get on different products confuses me	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
3	Fashionable, attractive styling is very important to me.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
4	Getting very good quality is very important to me.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
5	Going shopping is one of the enjoyable activities of my life.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
6	I am impulsive when purchasing.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
7	I buy as much as possible at sale prices.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
8	I carefully watch how much I spend.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
9	I change brands I buy regularly.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
10	I enjoy shopping just for the fun of it.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
11	I go to the same stores each time I shop.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
12	I have favorite brands I buy over and over.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree

13	I keep my wardrobe up-to-date with the changing fashions.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
14	I look carefully to find the best value for the money.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
15	I make my shopping trips fast.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
16	I make special effort to choose the very best quality products.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
17	I prefer buying the best-selling brands.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
18	I really don't give my purchases much thought or care.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
19	I shop quickly, buying the first product or brand I find that seems good enough.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
20	I should plan my shopping more carefully than I do.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
21	I usually have one or more outfits of the very newest style.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
22	I take the time to shop carefully for the best buys.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
23	In general, I usually try to buy the best overall quality.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
24	It's fun to buy something new and exciting.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
25	My standards and expectations for products I buy are very high.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
26	Nice department and specialty stores offer me the best products.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
27	Often I make careless purchases I later wish I had not.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
28	Once I find a product or brand I like, I stick with it.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
29	Shopping is not a pleasant activity to me.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
30	Sometimes it's hard to choose which stores to shop.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
31	The higher the price of a product, the better its quality.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree

32	The lower price products are usually my choice.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
33	The more I learn about products, the harder it seems to choose the best.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
34	Shopping the stores wastes my time.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
35	The more expensive brands are usually my choices.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
36	There are so many brands to choose from that I often feel confused.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
37	The most advertised brands are usually very good choices.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
38	To get variety, I shop different stores and choose different brands.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
39	A product doesn't have to be perfect, or the best, to satisfy me.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree
40	The well-known national brands are best for me.	Strongly Disagree	Disagree	In Between	Agree	Strongly Agree

You have now completed the Consumer Decision Making Styles Inventory. Thank you for your participation in this study.

Appendix E  
Demographic Survey

## Demographic Survey

**Directions:** Please complete the following questions. This information is confidential individual identities will not be revealed. This information will be combined only for summary and evaluation research.

Place a check in front of all responses that are appropriate for you or fill in the blanks where it is appropriate.

1. My age is: \_\_\_\_\_

2. My gender is:

\_\_\_\_\_ Female

\_\_\_\_\_ Male

3. My racial or ethnic identity is:

\_\_\_\_\_ White/non-Hispanic

\_\_\_\_\_ Black/non-Hispanic

\_\_\_\_\_ American Indian/Alaskan Native

\_\_\_\_\_ Asian/Pacific Islander

\_\_\_\_\_ Hispanic

4. My family's total household income per year is the following:

\_\_\_\_\_ Under \$15,000

\_\_\_\_\_ \$15,001 - \$30,000

\_\_\_\_\_ \$30,001 - \$45,000

\_\_\_\_\_ \$45,001 - \$60,000

\_\_\_\_\_ \$60,001 - \$75,000

\_\_\_\_\_ Over \$75,000

\_\_\_\_\_ Do not know

5. What is the highest level of schooling your father or guardian completed?

\_\_\_\_\_ Did not complete high school

\_\_\_\_\_ Completed high school

\_\_\_\_\_ Some college

\_\_\_\_\_ Completed college or more than college

\_\_\_\_\_ Do not know

6. What is the highest level of schooling your mother or guardian completed?

- \_\_\_\_\_ Did not complete high school
- \_\_\_\_\_ Completed high school
- \_\_\_\_\_ Some college
- \_\_\_\_\_ Completed College or more than college
- \_\_\_\_\_ Do not know

7. My home town or city is \_\_\_\_\_ and state \_\_\_\_\_

8. How often do you shop for the following? Circle the answer box that most applies to you for each item listed. Choose only one box per item.

Item	How Frequent					
<b>Clothing</b>	Daily	Weekly	Every two weeks	Monthly	Seldom	Never
<b>Toiletries/personal hygiene products (such as hair care, cosmetics, toothpaste, soap, etc.)</b>	Daily	Weekly	Every two weeks	Monthly	Seldom	Never
<b>Food away from residence hall room (eating out/off campus)</b>	Daily	Weekly	Every two weeks	Monthly	Seldom	Never
<b>Food for residence hall room (snacks, etc.)</b>	Daily	Weekly	Every two weeks	Monthly	Seldom	Never
<b>Gas and auto expenses</b>	Daily	Weekly	Every two weeks	Monthly	Seldom	Never
<b>Auto insurance</b>	Daily	Weekly	Every two weeks	Monthly	Seldom	Never
<b>Electronic equipment (TVs, VCR's, computers, etc.)</b>	Daily	Weekly	Every two weeks	Monthly	Seldom	Never
<b>School supplies</b>	Daily	Weekly	Every two weeks	Monthly	Seldom	Never
<b>List additional items here that you may buy frequently that are not listed in this chart</b>						

Appendix F  
The Gregorc Style Delineator Score Sheet

# The Gregorc Style Delineator

## Score Sheet

**Instructions:** You may keep your copy of the Gregorc Style Delineator. However, please record your results on this score sheet. By completing this score sheet, you are providing your consent to participation in this study.

For identification purposes of this study, please list your email address below. This information will be held confidential and will not be shared with others.

---

Scores

<i>Mind Style Category</i>	<i>Score</i>
Concrete Sequential	
Abstract Sequential	
Abstract Random	
Concrete Random	

Appendix G  
Consumer Style Characteristics Profile

## Consumer Style Characteristics Profile for \_\_\_\_\_

Following are the results of your Consumer Decision Making Style Inventory. These results will help you better understand how you might make decisions in the marketplace.

The “Your Mean Score Ranges” chart contains possible scores for each style characteristic. These Scores will fall into one of the ranges within the “Mean Score.” The “Definition of Score” will describe whether your score is within a high, medium, or low range of this characteristic. Each score for each characteristic are listed in the “Your Mean Score” column in the “Profile” chart. These scores help determine how much this characteristic might describe your decision-making style in the marketplace. How well does this represent your style of consumer decision-making?

### Your Mean Score Ranges

Mean Score	Definition of Score
5	You are high in this style characteristic
4	You are above average in this style characteristic
3	You are average in this style characteristic
2	You are below average in this style characteristic
1	You are low in this style characteristic

### Profile

Style Characteristics	Your Mean Score	Description
Perfectionist		A consumer searches carefully and systematically for the best quality in products.
Brand Conscious		A consumer is oriented toward buying the more expensive, well-known national brands.
Novelty-Fashion Conscious		A consumer appears to like new and innovative products and gain excitement from seeking out new things.
Recreational Shopping Conscious		A consumer finds shopping a pleasant activity and shops for the fun of it.
Price-Value Conscious		A consumer has particularly high consciousness of sale prices and lower prices in general.
Impulsive		A consumer tends to buy at the spur of the moment and to appear unconcerned about how much he/she spends.
Confused by Overchoice		A consumer perceives too many brands and stores from which to choose and likely experience information overload in the market.
Habitual, Brand-Loyal		A consumer repetitively chooses the same brands and stores.

Source: Sproles, G. B. & Kendall, E. L. (1986). A methodology for profiling consumers' decision-making styles. *Journal of Consumer Affairs* 20(2), 271-274. Reprinted with permission from the authors.

Appendix H  
Institutional Review Board Approval  
Virginia Polytechnic Institute and State University

**Institutional Review Board**

Dr. David M. Moore  
IRB (Human Subjects) Chair  
Assistant Vice Provost for Research Compliance  
CVM Phase II - Duckpond Dr., Blacksburg, VA 24061-0442  
Office: 540/231-4991; FAX: 540/231-6033  
e-mail: moored@vt.edu

August 28, 2003

**MEMORANDUM**

TO: Melissa Chase Near Environments AHRM 0410  
Daisy Stewart Teaching and Learning 0467  
Lisa Driscoll ELPS 0302

FROM: David M. Moore 

SUBJECT: IRB EXEMPTION APPROVAL – “ The Relationship of Mind Styles to  
Consumer Decision-making Styles” – IRB # 03-402

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of August 28, 2003.

cc: file  
Department Reviewer: Bonnie Billingsly T&L 0313

Appendix I  
Institutional Review Board Approval  
Radford University