

## **EXPLORING THE RELATIONSHIP OF FIRST-YEAR, FIRST-SEMESTER COLLEGE STUDENTS' MIND STYLES AND THEIR CONSUMER DECISION-MAKING STYLES**

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*The relationship between first-year, first-semester college students' mind styles and their consumer decision-making styles was investigated at a southeastern comprehensive public university. A significant relationship was found between the self-reported, dominant Gregorc mind style scores and one consumer decision-making style. Two instruments were administered: the Gregorc Style Delineator™ and the Consumer Styles Inventory. Although the results did not support multiple consumer decision-making styles as detected in earlier research (Sproles & Kendall, 1986, Sproles & Sproles, 1990), an exploratory factor analysis revealed one, overall consumer decision-making style, Recreational/Hedonistic, which suggested that these students tend to primarily shop to gain pleasure from the shopping experience.*

Decision making involves a process of cognitive learning. Learning is a continuous process and decision making is conducted at all stages of life. Appropriate decision making involves logical steps: determining the problem, considering multiple alternatives, and choosing the best alternative based on the particular situation (Deacon & Firebaugh, 1975; Goldsmith, 1996). More importantly, learning is a function of the decision-making process (Sproles & Sproles, 1990) and learning involves how people perceive and process information, also known as cognition (Farnham-Diggory, 1992). Onkvisit and Shaw (1994) indicated that consumer cognitive learning involves a process of personal problem solving to make decisions.

Numerous studies have documented that students enter college as consumers but may lack basic knowledge and skills to make consumer decisions (Avard, Manton, English, & Walker, 2005; Consumer Federation of America, 2003). One study was conducted (Sproles & Sproles, 1990) that determined learning styles are related to a consumer's decision-making style. Since the Sproles and Sproles study was published, other studies have investigated the consumer decision-making styles of college students (Canabal, 2002; Mitchell & Bates, 1998). However, no additional studies have further investigated the relationship between styles of learning and consumer decision-making styles for college students, a topic about which educators lack sufficient information. Educators could use such knowledge as a tool to assist students in developing a more elaborate understanding of their consumer decision-making behavior and how it relates to the type of learner they are. Knowledge of the relationship of learning styles and consumer decision-making styles can be used simultaneously in curricula to develop appropriate insight into marketplace decisions.

The focus of the current study was to determine whether a relationship exists between beginning college students' self-reported mind styles (how a person perceives and processes information, Gregorc, 1982a) and their consumer decision-making styles. According to Gregorc (1982a), what is going on inside the mind is manifested in outside behaviors and is defined as the style of learning (Gregorc, 1982a). For the purposes of this study, learning styles will be defined as mind styles. To investigate this relationship, a purposive sample was targeted consisting of first-year, first-semester college students at a southeastern, comprehensive public university.

## **Literature Review**

Although few studies have been conducted to investigate how college students learn and make consumer decisions, a review of the literature describes specific characteristics of mind styles, consumer decision-making styles, and college students' financial knowledge.

### Consumer Decision Making

Decision making is an important life skill at all stages in life. More importantly, learning is a part of the decision-making process (Gregorc, 1982a; Sproles & Sproles, 1990). Appropriate decision making involves logical steps: determining the problem, considering multiple alternatives, and choosing the best alternative based on the particular situation (Deacon & Firebaugh, 1975; Goldsmith, 1996). Appropriate skills in decision making require abstract thinking (Baxter Magolda & Porterfield, 1988), which involves considering multiple alternatives. However, students may enter college without prior educational training in decision making.

Sproles and Sproles (1990) provided a tool for educators and financial counselors to assist consumers in making better decisions in the marketplace. The Consumer Decision-Making Styles Inventory (Sproles & Kendall, 1986) has been applied in studies of other adult cultural populations (Canabal, 2002; Walsh, Mitchell, & Hennig-Thurau, 2001). No further studies have investigated the relationship between learning styles and consumer decision-making styles, especially with American college students.

Students are consumers. Students currently have more spending power than in previous generations and become consumers at a much earlier age. One reason for this increasing consumerism is easy access to shopping. Television and other media marketers use advertising to influence purchase decisions of children and youth. College students are targeted because they are perceived as potential loyal customers both currently and in the future (Feldman, 1999; Speer, 1998).

However, many young people are approaching adulthood without an understanding of how they make consumer decisions. At the secondary level, personal finance education is implemented in few states. As of 2002, 31 states had personal finance standards recommended in existing secondary curricula, yet only 17 states mandated a personal finance course before high school graduation (National Council on Economic Education, 2003). Nationwide, educators, college administrators, and consumer advocates are concerned about college students' spending habits, easy access to credit cards, credit card debt, and lack of financial knowledge (Avard et. al., 2005; Braunstein & Welch, 2002; Hayhoe, Leach, & Turner, 1999; Norvilitis & Maria, 2002).

College students spend an average of \$247 of discretionary income per month and typically purchase products related to leisure activities (Harris Interactive, 2004). They often spend more than they earn (Nick, 1997). A need for more education to assist students in

making better financial decisions has been identified (Avard et al., 2005; Braunstein & Welch, 2002; Hayhoe et al., 1999; Norvilitis & Maria, 2002). Sproles and Sproles (1990) found that consumers generally enter the marketplace with a variety of decision-making styles that influence purchase decisions. The study identified eight decision-making styles:

1. *Perfectionist, High-Quality Conscious*: A consumer has specific ideas about best quality products and consistently looks for these qualities.
2. *Brand Conscious, Price Equals Quality*: A consumer associates quality with higher-priced, national brands.
3. *Novelty-Fashion Conscious*: A consumer gains pleasure for seeking out the newest, most modern, and exciting product.
4. *Recreational /Hedonistic Shopping Conscious*: A consumer gains pleasure from the shopping experience.
5. *Price Conscious, Value-for-Money*: A consumer consistently searches for sales, bargains, and lower-priced products.
6. *Impulsive, Careless*: A consumer does not plan shopping trips and is not concerned about the amount of money spent.
7. *Confused by Overchoice*: A consumer is confused and overwhelmed with too much product information and/or too many product choices.
8. *Habitual, Brand-Loyal*: A consumer tends to consistently stick with the same brand of product (Sproles & Kendall, 1986).

### Mind Styles

Gregorc (1982a; 2001) focuses on how people acquire and use knowledge through their perception and processing of information (also known as mind styles). *Perception* involves how the person perceives stimuli. *Ordering* involves the steps used to put information in order. Four possible mind styles (Gregorc, 1982a) exist:

- *Concrete Sequential (CS)*: Perceive the concrete or physical world through the five senses, think in a very linear fashion, and have more difficulty considering multiple alternatives or solutions to questions or problems.
- *Abstract Sequential (AS)*: Can easily grasp abstract concepts, enjoy a very structured classroom environment, prefer to work alone, and continuously consider multiple alternatives and are strong in problem-solving skills.
- *Concrete Random (CR)*: Can more easily appreciate an unstructured learning environment, want to explore alternatives to questions and/or problems, appreciate hands-on learning activities, and can adapt well to both working independently and in group work settings.
- *Abstract Random (AR)*: Are very aware of what is happening externally, prefer a very unstructured learning environment, do not respond well to a step-by-step, logical presentation, tend to think with their emotions, and prefer lots of group work, discussion, and time to reflect on the learning experience.

The original learning styles instrument used in Sproles and Sproles' (1990) study was an adaptation of Kolb's Learning Styles Inventory (1976), which was based on Kolb's Theory of Experiential Learning (1984), whereby prior experience impacts the learner's current experience. Kolb's original inventory was developed for adults only and Kendall and Sproles (1986) adapted the instrument for high school students. Likewise, Gregorc's research also

employed Kolb's Theory of Experiential Learning and applies exclusively to adults' mind styles.

### College Students' Financial Knowledge

During beginning students' first year of college, many may be living away from home for the first time. With this newfound independence, they may need to make decisions about purchases that they have never made on their own (Speer, 1998). This transitional period may also include first-time decisions of acquiring credit cards or purchasing a car. Nick (1997) conducted a qualitative study of money management behaviors of traditional-aged freshmen, compared with college sophomores, and found that both groups usually spent more than they earned and rarely budgeted on a monthly basis. The American Savings Education Council (1999) found that only 20% of students (both high school and college) used a regular monthly budget.

Numerous studies have recognized the challenges and vulnerabilities that college students face when trying to manage credit cards on their own. Their parents may be unaware that they are acquiring credit and possibly incurring large sums of debt (Hayhoe, Leach, Turner, Bruin, & Lawrence, 2000; Norvilitis & Maria, 2002; Warwick & Mansfield, 2000). Yet, marketers actively target college students. These students are perceived as having more spending power, both currently and in the future, and generally will earn more money than adults without a college education (Feldman, 1999; Speer, 1998).

The American Savings Education Council (1999), the Employee Benefit Research Institute, and Mathew Greenwald and Associates jointly administered a self-reporting survey to students, ages 16-22, and reported that only 21% had taken a course in personal finance and two-thirds felt they should learn more about the basics of money management. Although the two-thirds reported a need for more financial knowledge, 65% reported having personal finance courses available to them but not enrolling in one of these courses. College students were more apt to have a personal finance course available to them than high school students (67% versus 57% respectively).

Studies also have documented where students actually learn how to make consumer and financial decisions. For example, The National Consumers League (2002) facilitated a national survey that found that 67% of teens obtain information on financial matters (such as credit) from their parents, however, the average American family carries a credit card balance of \$9,000. The American Savings Education Council (1999) supported this finding with their study that found 94% of students (ages 16-22) relied on parents as resources for financial information. Another study (Chen & Volpe, 2002) also found that young adults tend to learn more about financial literacy from their parents. On the other hand, another study (Harris Interactive, 2004) has suggested that children and youth influence their parents' and others' decision making on consumer purchases, such as clothing, food, and family vacations, and are considered cultural trend-setters, thus making them even more desirable targets for marketers. In contrast, McNeal and Yeh (1993) found that specific family income levels may have little influence in the way families teach consumer behavior patterns to their children.

### **Methodology**

This study was based on the Sproles and Sproles (1990) study and was conducted during two class meetings with first-year, first-semester students enrolled in a first-year

experience course. Two instruments were administered and a discussion of the results was conducted with each participating class.

### Participant Sample

A convenience sample of 416 out of 1806 full-time, first-year, first-semester students at a southeastern comprehensive public university, during Fall 2003, was selected. The students were enrolled in a first-year experience course and lived in co-educational residence halls that housed only first-year, first-semester students. 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. Students living in these residence halls were chosen on a first-come, first-served basis, based on the receipt date of the students' residence hall applications and room deposits, and are considered to be representative only of similarly situated students.

Three hundred thirty-two students comprised the final sample analyzed due to exclusion criteria such as incomplete surveys, being under the age of eighteen, not indicating gender, and reporting multiple mind styles. The final sample consisted of 197 (59.2%) females and 135 (40.5%) males.

### Instrumentation

Two instruments were used for this study: the Gregorc Style Delineator™ (Gregorc, 1982b) and the Consumer Styles Inventory (Sproles & Kendall, 1986). These instruments were administered as described below.

The Gregorc Style Delineator™. The Gregorc Style Delineator™ was administered to assess mind styles. This is a self-reporting, self-scoring instrument containing word matrices, and it can be completed in approximately 15 minutes with immediate feedback. Scores were tabulated for the four mind styles: (a) Concrete Sequential; (b) Abstract Sequential; (c) Abstract Random; and (d) Concrete Random. The instrument consisted of 10 categories of descriptive words and individuals ranked the words in rank order from "4" being the most like them to "1" being the least like them. The highest score indicated the dominant mind style. It is possible to have multiple, dominant mind styles. Characteristics of each mind style are listed and described on the back of each instrument. The Gregorc Style Delineator™ was used for this study to emphasize the ease of self-scoring in an educational setting.

The Consumer Styles Inventory. The Consumer Styles Inventory contained 39 statements that required one answer to be chosen for each item statement that best represented the student's response. A Likert scale was used, with "5" representing strongly disagree to "1" representing strongly agree.

The study was conducted during two regularly scheduled class meetings for each participating class. The first visit included facilitation of the research instruments. The second visit included follow-up and a discussion of the results.

## **Results**

Statistical analyses were performed to determine whether a relationship existed between the four self-reported, mind styles scores and eight consumer decision-making styles. The statistical methods used were similar to the Sproles and Sproles (1990) study. Although this study did not support findings from previous studies, significant relationships were found between three of the mind styles scores and one consumer decision-making style.

For the 332 students participating in this study, descriptive analyses indicated the self-reported, dominant mind style scores were fairly evenly distributed, except for the Abstract Sequential mind style scores. The self-reported dominant mind styles were as follows: Abstract Random, ( $n = 114$ , 34.2%); Concrete Sequential ( $n = 107$ , 32.1%); Concrete Random ( $n = 83$ , 24.9%); and Abstract Sequential, ( $n = 29$ , 8.7%).

#### Consumer Decision-Making Styles Inventory Factor Analysis

Exploratory factor analysis was performed to determine the consistency with which items previously associated with a particular consumer decision-making style maintained that association with this sample. Various studies have shown differences in factors in diverse populations (Canabal, 2002; Walsh et al., 2001).

Exploratory Factor Analysis, using principal components analysis and with direct oblimin and eigenvalues greater than 1, was conducted to determine whether the eight consumer decision-making styles could be confirmed from the Sproles and Kendall (1986) study. Only one factor, the Recreational/Hedonistic consumer decision-making style, with six statements loading .60 or higher, accounted for 15.18% of the variance, and is noted in Table 1. The statements that loaded onto the Recreational/Hedonistic consumer decision-making style are reported. This result was not consistent with the emergence of factors reported in other studies (Canabal, 2002; Mitchell & Bates, 1998; Walsh et al., 2001).

Table 1

*Factor Analysis of the Consumer Styles Inventory Statements Using Principle Components Analysis for the Current Study*

Statement	Factor Loading
Recreational/Hedonistic	
I keep my wardrobe up-to-date with changing fashions.	.68
Fashionable, attractive styling is very important to me.	.65
Going shopping is one of the enjoyable activities in my life.	.65
I enjoy shopping just for the fun of it.	.62
I prefer buying the best-selling brands.	.62

*Note.* The Recreational/Hedonistic factor accounted for 15.81% of the variance.

#### Pearson's Correlations for the Gregorc Mind Style Scores and the Recreational/Hedonistic Consumer Decision-Making Style

To determine whether a relationship existed between the one factor, Recreational/Hedonistic consumer decision-making style, and the students' Gregorc mind style scores, Pearson's correlations were calculated. It should be noted that the Gregorc mind style scores reported in Table 2 reflect a score for each mind style for each beginning college student. This is an important characteristic of the Gregorc Style Delineator™ instrument. Pearson's correlation was conducted to "assess the basic association between individual learning style and their consumer decision-making styles" (Sproles & Sproles, 1990, p. 138). In this study, mind styles replaced the learning styles instrument used in the original study. The mind style scores were the dependent variables and each statement from the Consumer Styles Inventory was an independent variable.

Table 2

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

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 these are 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, and 5 = Strongly Agree.

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

Using an alpha level of  $p < .05$ , the resulting alpha coefficients indicated 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 3 and the Gregorc mind style scores for Concrete Random and Abstract Random. The negative alpha coefficient,  $p = -.21$ , indicated 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.

Table 3

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

Consumer Decision-Making Style Statements	Mind Styles			
	Concrete Sequential	Abstract Sequential	Abstract Random	Concrete Random
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, and 5 = Strongly Agree. Negative  $r$  correlations represent inverse relationships.

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

To further investigate the relationship between the first-year, first-semester college students' mind style scores and the one factor, Recreational/Hedonistic consumer decision-making style, Pearson's correlation was computed between the six individual statements for

the factor and the mind style scores for each student. As noted in Table 3, correlation coefficients of each mind style and each statement of the one factor, Recreational/Hedonistic consumer decision-making style, were calculated using an alpha level of  $p < .05$ .

As required for the Gregorc Style Delineator™, 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. As shown in Table 3, Concrete Sequential and Concrete Random mind style scores were significant with the same 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.

### Delimitations

Only full-time, first-year, first-semester students, living on-campus, 18 years of age and older were targeted. These students also were enrolled in the first-year experience courses being taught in all-freshmen residence halls.

### Limitations

A limitation of this study was the students enrolled and in-attendance in each participating first-year experience course. Although a mandatory attendance policy was in effect for each class, participation was voluntary and limited to those who chose to participate.

## **Discussion and Conclusions**

The purpose of this study was to determine whether a relationship exists between first-year, first-semester college students' mind styles and their consumer decision-making styles. This section presents a discussion of the results and recommendations for future research, practice, and policy.

### The Gregorc Mind Styles

The results of the descriptive analysis indicated that the students' self-reported dominant mind styles scores were fairly evenly distributed, except for the Abstract Sequential mind style, which was the smallest percentage of dominant mind style reported by the students. No frequencies of population mind styles were provided by Gregorc's study (1982c) to compare to this study.

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™) that people tend to report Abstract Sequential as their dominant mind styles much less frequently. This also seemed characteristic for this study.

### The Recreational/Hedonistic Consumer Decision-Making Style

Exploratory factor analysis revealed only one factor, the Recreational/Hedonistic consumer decision-making style. 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; Sproles & Sproles, 1990; Walsh et al., 2001). Other studies that

have conducted factor analyses have produced varied results. Earlier studies used sophomore to senior level college students. The only study that used an adult, non-college age sample was Walsh et al. (2001).

### The Relationship of the Gregorc Mind Styles and the Recreational/Hedonistic Consumer Decision-Making Style

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.

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. Students whose dominant mind style was Abstract Sequential were less likely to be associated with the Recreational/Hedonistic consumer decision-making style.

The lack of a significant relationship between 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, prefer 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.

### Recommendations for Further Research

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.

1. Further research also is 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; Levine, 1988) have acknowledged the increase in discretionary spending of college students from the 1980s through the 2000s, and this might also have influenced responses to the questions the Consumer Styles Inventory statements.
2. Future studies of first-year, first-semester college students might consider re-wording 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. Additionally, the development of a new instrument for consumer decision-making styles may be warranted.

### Recommendations for Practice

Although further investigation is needed to study the relationship between the Gregorc Style Delineator™ and the Consumer Styles Inventory, there are multiple educational opportunities for these instruments to be used independently of one another. Educational applications of the Gregorc Style Delineator™ can be quite useful for first-year experience programs. The Gregorc Style Delineator™ and the Gregorc Learner Extenda-Chart (see <http://www.gregorc.com>), which more fully explains the mind styles, could be used simultaneously to assist students to better understand 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.

1. 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.

Other ways to incorporate concepts into first-year experience courses are to provide financial training to instructors of these courses and to encourage them to incorporate financial concepts into the classroom. 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.

2. Knowing that students may enter early adulthood without appropriate consumer decision-making, high school family and consumer sciences courses and college 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. Because of this, prevention of financial problems is essential (Hayhoe et al., 1999). Financial management courses can provide such education early in students' academic careers. Programming also should emphasize the financial consequences of overspending, especially on recreational shopping. Activities could include budgeting and discussions of the consequences of using credit cards. Additional learning activities might include consumer games, such as *Name that Denim* or *Taste Tests*, which help motivate students to learn better consumer decision-making (Wheeler & Thompson, 2001).

Secondary family and consumer science curricula may simultaneously teach students appropriate consumer decision-making skills while also meeting the National Standards for Family and Consumer Sciences (National Association of State Administrators for Family and Consumer Sciences, 1998). An example is newspaper inserts (Chase, Hayhoe, & O'Neill, 2004) with lesson plans 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. These activities also would meet the following National Standard for Family and Consumer Sciences: 2.6 Demonstrate management of financial resources to meet the goals of individuals and families across the life span. If personal finance courses or first-year experiences are not offered, school newspapers can provide these inserts to introduce students to these topics.

Another example of meeting national standards while teaching appropriate consumer decision-making and increase financial literacy is to incorporate the National Endowment for Financial Education's High School Financial Planning Program<sup>®</sup> (in cooperation with the United States Department of Agriculture-Cooperative State Research, Education, and Extension Service or their local credit union). This curriculum includes timely topics such as savings, budgeting, consumer decision-making, and investing. Training is available to educators and they may choose to use all or parts of the curriculum to best suit their needs.

Family and Consumer Science educators may also partner with agencies, such as their local Cooperative Extension offices, to teach consumer decision-making through the simulation game, Reality Store<sup>SM</sup>, to teach appropriate decision-making. Students need to choose a specific career and must make consumer decisions, such as paying bills, within the limits of the salary allotted for their chosen career.

3. An introductory program about the use of credit is *To Be a Have or Have Not: The Choice is Yours*. Originally designed for college student orientation programs, this program also has been used with high school juniors and seniors. Visit <http://www.ahrm.vt.edu/Extension/www/index.shtml> to view the program.

### Recommendations for Policy

Based on the findings of this study that first-year, first-semester 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; Greenspan, 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 education for all ages, especially young adults. Hogarth, Beverly, and Hilgert (2003) confirmed other studies that found American households do not necessarily follow recommended financial practices, and young adults learn most from others' experiences.

1. Because mandating personal finance curricula can be challenging in school systems (and college and universities) that already are 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.
2. Researchers and educators also should continue to track the progress of having versus not having personal finance education on the long-term success of young adults. It is important to 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 also can influence policymakers at the secondary and higher education levels to provide personal finance education (Chase, Leech, & Hayhoe, 2004).
  3. Many colleges and universities offer courses in personal finance and/or consumer skills that are taught in business and family and consumer sciences units. These courses are suitable electives for majors in any field (Chase, Leech, & Hayhoe, 2004).

A significant relationship was found between the self-reported mind style scores and the Recreational/Hedonistic consumer decision-making style for the beginning college students in this study. However, additional research is warranted to further investigate this relationship. Knowing that students are consumers and that first-year, first-semester students tend to be recreational shoppers, numerous recommendations for research, policy, and practice have been proposed. Specific ideas are suggested for educators in higher education programming to assist students in avoiding pitfalls of poor consumer decisions.

## References

- American Savings Education Council. (1999). *Youth and money*. Retrieved March 6, 2002, from <http://www.asec.org/eventhm.htm>
- Avard, S., Manton, E., English, D., & Walker, J. (2005). The financial knowledge of college freshmen. *College Student Journal*, 39(2), 321-338.
- 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)
- Braunstein, S., & Welch, C. (2002). *Financial literacy: An overview of practice, research, and policy*. Washington, DC: Federal Reserve Board.
- Canabal, J. E. (2002). Decision making styles of young south Indian consumers: An exploratory study. *College Student Journal*, 36(1), 12-19.
- 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.
- Chen, H., & Volpe, R. P. (2002). Gender differences in personal financial literacy among college students. *Financial Services Review*, 289-307.

- 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.
- Deacon, R. E., & Firebaugh, F. M. (1975). *Home management context and concepts*. Boston: Houghton Mifflin.
- 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.
- Goldsmith, E. (1996). *Resource management for individuals and families*. St. Paul, MN: West.
- Greenspan, A. (2003). Remarks by Chairman Alan Greenspan at the 33rd Annual Legislative Conference of the Congressional Black Caucus, Washington, D.C., September 6, 2003. Retrieved from <http://www.federalreserve.gov/boarddocs/speeches/2003/2003092/default.htm>.
- 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. (2001). *Mind styles™FAQs book*. Columbia, CT: Gregorc Associates.
- Harris Interactive. (2004). *Trends and tudes*. Retrieved February 5, 2004, from <http://www.harrisinteractive.com>
- 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 Consumer Affairs*, 34(1), 113-133.
- 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.
- Hogarth, J.M., Beverly, S.G., & Hilgert, M. (2003). *Patterns of financial behaviors: Implications for community and policy makers*. Paper presented at 2003 Federal Reserve System Community Affairs Research Conference.
- Kolb, D. A. (1976). *Learning style inventory technical manual*. Boston, MA: McBer.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.
- Levine, J. (1988). Today's college students: Wealthy, wise...elusive. *Incentive*, 162(3), 24-30.
- McNeal, J., & Yeh, C.H. (1993). Born to shop. *American Demographics*, 15(6), 34-39.
- Mitchell, V.W., & Bates, L. (1998). UK consumer decision-making styles. *Journal of Marketing Management*, 14, 199-225.
- National Association of State Administrators for Family and Consumer Sciences (1998). *National Standards for Family and Consumer Sciences Education*. Decatur, GA: Southern Association of Colleges and Schools.

- 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.
- Norvilitis, J. M., & Maria, P. S. (2002). Credit card debt on college campuses: Causes, consequences, and solutions. *College Student Journal*, 36(3), 356-363.
- Onkvisit, S., & Shaw, J. J. (1994). *Consumer behavior: Strategy and analysis*. New York: MacMillan.
- Santovec, M. L. (2003). First-year course teaches financial literacy. *Recruitment and Retention in Higher Education*, 16(1), 4-5.
- Speer, T. (1998). College come-ons. *American Demographics*, 20(3), 41-45.
- 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., & Kendall, E. L. (1986). A methodology for profiling consumers' decision-making styles. *Journal of Consumer Affairs*, 20(2), 267-279.
- 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.
- Wheeler, J. P. & Thompson, N. E. (2001). Consumerism in the classroom: Effective strategies for today's teenage consumers. *Journal of Family and Consumer Sciences Education*, 19(2), 26-31.

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