An Exploration Of Students' Perceptions Of Strategic Management Model Usefulness

William J. Ritchie, (E-mail: writchie@fgcu.edu), Florida Gulf Coast University
Elias Kirche, (E-mail: ekirche@fgcu.edu), Florida Gulf Coast University
Charles J. Fornaciari, (E-mail: cfornaci@fgcu.edu), Florida Gulf Coast University

ABSTRACT

This exploratory study proposes and tests a model depicting individual undergraduate student characteristics and their association with perceived strategic management model (SMM) usefulness. The constructs explored are: student's decision style; experience; major; affectivity; willingness to try new models; and the perceived ease of use of the SMM. Findings based on structural equation modeling and partial least squares regression indicate that positive affect, perceived ease of use, and willingness to try new models/theories explain a significant amount of variance in the students' perceived usefulness of the SMM. The study then discusses potential applications of its findings to individual classrooms, management practice, and business education as a whole. Finally, it provides suggestions for future research.

INTRODUCTION

Strategic Management, also known as Business Policy, is a required senior-level class in most undergraduate business programs. This capstone class provides students in a variety of business disciplines an opportunity to learn skills that are rooted in "the analysis of internal and external environments of a firm to maximize the utilization of resources in relation to objectives" (Bracker, 1980, p. 221). With its roots dating back to the work of Selznik (1957), Chandler (1962), Learned, Christensen, Andrews, & Guth (1965), and Porter (1980), the process of strategy development has often been presented to students as a model (see Figure 1) involving: scanning, strategy formulation, strategy implementation, and evaluation/control. Notwithstanding the fact that the body of knowledge in the field of strategic management extends well beyond the bounds of this process, this model is largely representative of the key domains that comprise an undergraduate case-based class in strategic management (c.f., David, 2006; Wheelen & Hunger, 2005; Thompson, Strickland, & Gamble, 2005).

Figure 1
Strategic Management Model

Despite the proliferation of knowledge relating to this model, there are few studies empirically evaluating factors that might contribute to its perceived usefulness among students. This is problematic, considering that recent studies call into question whether the academy of management matters (Hambrick, 1994; Mowday, 1993; 1997) and whether knowledge is actually transferred from the academy to practicing managers (Burke & Moore, 2003; Mohrman, Gibson, & Mohrman, 2001; Simmonds, Dawley, Ritchie, & Anthony, 2001). In light of the limited research relating to the evaluation of concepts taught in the academy, an analysis of individual student-level factors

associated with perceived usefulness seems warranted. Specifically, it is reasonable to assume that there is a correlation between students' initial perceptions of the usefulness of academic tools and their willingness to utilize these tools in subsequent years. Further, by understanding students' perceptions of the model, professors are better equipped to revise and improve upon the teaching methods they currently employ, ultimately producing better educated students. To this end, using structural equation modeling (SEM), and borrowing selected constructs from the information systems literature, the current exploratory study presents a model of the factor structure of student attitudes toward the SMM's usefulness.

The initial model is comprised of six constructs believed to explain a students' perceived usefulness of the SMM. These constructs are: a student's decision style; experience; major; affectivity; willingness to try new models; and the perceived ease of use of the model. Theoretical foundations for the constructs in this study were derived from a variety of literature streams. In addition to mainstream management (see Mohrman, et al., 2001 and Simmonds, et al., 2001) the concept of usefulness has been utilized in other academic disciplines such as statistics (c.f., Cruise, Cash, & Bolton, 1985; Dauphinee, Schau, & Stevens, 1997; and Wise, 1985) and information systems (e.g., Igbaria, Zinatelli, Cragg, & Cavaye, 1997).

The overall framework for "usefulness" and related constructs in this study draws heavily upon recent literature in information systems, where a number of research studies have centered on the "usefulness" of computer technology. The authors of the current study believe that a method for evaluating the usefulness of the SMM may be closely aligned with issues associated with the usefulness of technology for a number of reasons. First, similar to the computer technology realm, which may be new to end-users, the strategic management "model" is new to most students, therefore a variety of influences many impact its perceived usefulness. Second, the SMM has, in its most simplified form, four primary components but a myriad of other dimensions that lend to its complexity and influence a student's perception of its ease of use. Third, there are a number of individual characteristics such as education, past experience, and cognitive traits that may influence a students perception SMM usefulness, in much the same way that these experiences and traits impact perceptions of technology usefulness (see for example studies relating computer experience (Igbaria, et al., 1997) and education (Agarwal & Prasad, 1999) to usefulness). The broad application of these and other studies relating to technology acceptance (Davis, 1986) provide a fertile theoretical foundation for further application and development of related constructs necessary in evaluating the structure of SMM usefulness. In the following paragraphs, a brief rationale is presented for the hypothesized model in Figure 2.

## HYPOTHESES

Decision Style

An individual's decision (a.k.a. cognitive) style is considered to be an integral part of the cognitive models developed by business people (Finkelstein & Hambrick, 1996). In the words of Warr and Conner (1992), a cognitive style is "concerned with the 'how' rather than the 'what' and 'how much' of mental activity" (1992, p. 108). As such, one of the purposes of this study is to evaluate the influence of students' preferred cognitive style (on a continuum ranging from analytical to intuitive) on the perceived usefulness of the SMM. While there is no exact point where analytical thinking becomes intuitive thinking (Harrison, 1995), the analytical/intuitive continuum represents two traditionally different perspectives on decision making.

The analytical process is similar to Barnard's (1938) "logical" process. In this case, decisions are largely the result of careful analysis and rationalization. Some would argue that when it comes to judgment, it is best to base decisions on analytical tools such as statistical analysis (Kleinmuntz, 1990; Meehl, 1954). As Harrison (1995) suggests, "the rational decision maker seeks an objectives-oriented outcome within the context of psychological forces operating at and below the level of awareness" (1995, p. 214). The intuitive process might be viewed similar to Barnard's (1938) "nonlogical" process or Mintzberg's (1987) emergent strategies. Intuition is largely the result of processes in the subconscious or preconscious mind and is often referred to as tacit knowledge and considered by many authors to be a basic function of the human psyche (Harrison, 1995, Hellriegel & Slocum, 1975). Popularized by Polanyi (1967), tacit knowledge has been described as "not reportable since it is deeply rooted in action and involvement in a specific context" (Raelin, 1997, p. 564). Choo (1998) describes tacit knowledge as "personal".

Nonaka (1994) suggests that it is rooted in action and "indwell(s)" the holder. In addition to painting a picture of the personal nature of intuition and tacit knowledge, these authors have shown that managers do rely on these attributes during the decision making process to render choices. In light of these findings, we believe that individuals with a tendency toward analytical decision-making will find linear nature of the SMM will be attractive and more "useful" than individuals who demonstrate a more intuitive decision style. To this end, the following hypothesis is proposed.

H[1:]   *Decision style has a direct effect on a student's perceived usefulness of the SMM*

Figure 2
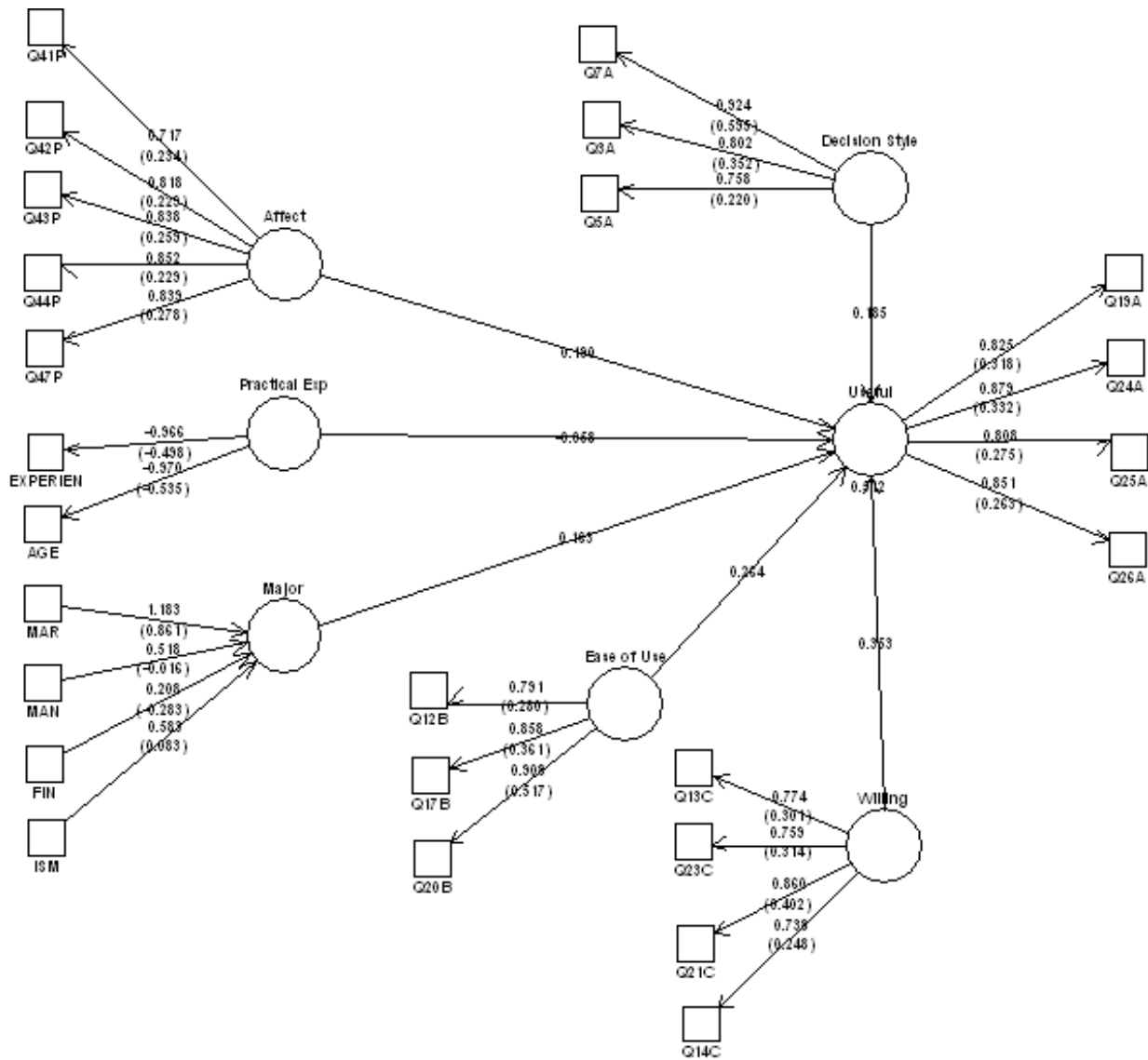
Experience

Experience has often been described as knowledge that is acquired via implicit learning (Raelin, 1997). Choo (1998) suggests that experiential knowledge is acquired through many years of interactions with individuals, both in the workplace and socially. There are numerous examples in the literature linking individual preferences with functional training and experiences. For example, executives are likely to perceive issues and seek out solutions that are within the domain of their functional experiences (March & Simon, 1958; Rajagopalan & Data, 1996). Related research suggests that executives with functional backgrounds that match the issues at hand are better able to evaluate the issue at hand (Hitt & Tyler, 1991; Useem, 1993). Since we know that past decisions serve as a basis for current decision contexts (Fredrickson, 1985), and that experiences basically "provide a lens through which he or she sees business problems and solutions" (Finkelstein & Hambrick, 1996, p. 91), it is reasonable to assume that a student's prior experience will impact their perception of SMM usefulness. Therefore, the following hypothesis is proposed.

H_2:   *The student's amount of experience in years will have a direct effect on the perceived usefulness of the SMM*

Student Major

Research indicates that there is a void in the realm of studying the effects of education on managerial perceptions (Finkelstein & Hambrick, 1996). Specifically, different types of formal education result in varying mental models that executives use to appraise environmental conditions (Hitt & Tyler, 1991). Therefore, the student's major was considered to be an important component of perceived SMM usefulness. For example, since a manager's formal education has been linked to the type of information they are attracted to (Hitt & Tyler, 1991), it is reasonable to assume that students with academic majors emphasizing behavioral models (such as management and marketing) compared to students with majors emphasizing operational models (such as finance and accounting) might have more favorable ratings of the SMM. To this end, the following hypotheses are proposed.

H_3:   *Student major has a direct effect on the perceived usefulness of the SMM*

Affect

There is a growing body of research suggesting that an individual's disposition is a critical component in the assessment of job-related attitudes (House, Shane, & Herold, 1996). One commonly used measure of disposition in management literature has been the positive-affect/negative-affect scale, aka PANAS (Watson, 1988). Positive affect (PA) has been generally associated with pleasing and pleasurable attitudes while negative affect (NA) is associated with attitudes of disharmony and ill will. Given that the concept of SMM "usefulness" is an attitudinally-based perception, it is plausible that an individual's disposition regarding the strategic management class at the time of the SMM assessment may be correlated with their perception of SMM usefulness. Therefore the following hypothesis is proposed.

H_4:   A *student's positive affectivity will have a direct effect on their perceived usefulness of the SMM*

Willingness To Try New Theories/Models

As mentioned earlier, a number of constructs in this study were borrowed from the information systems literature. Based upon the newness of the SMM to most students, it is reasonable to assume that a students' general openness to applying new ideas (e.g. theories and models), would have an influence on whether or not that student perceived the SMM to be useful. To this end, the author believes that the construct of "willingness to innovate", can be adopted from the information systems literature (found in the works of Agarwal & Prasad, 1998, p. 205 and others) and changed to "the willingness to try new theories/models" for purposes of the current study. The following hypothesis is proposed.

H_5:   *A student's willingness to try new theories/models will have a direct effect on their perceived usefulness of the SMM*

Ease of use

Another factor influencing a student's perceived usefulness of the SMM is his/her overall perception of the SMM's ease of use. Ease of use has been measured and applied extensively in the information systems literature (Davis, 1989) to measure "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 320). Research in this field has shown that there are significant relationships between ease of use and perceived usefulness (Igbaria, et al., 1997). In view of the fact that models in general, and management models in particular, all have varying degrees of complexity, it is reasonable to assume that the relationship between ease of use and perceived usefulness may be upheld in the management domain as well. To this end, the following hypothesis is proposed.

H_6:   *A student's perceived ease of use of the SMM will have a direct effect on their perceived usefulness of the SMM*

METHODS

Sample

Data for this study were collected using a 25-item survey instrument (5 point Likert-type scale) during the Spring 2003 term. The measures for the constructs were adapted from validated scales found in the information systems, organization behavior, and statistics literature streams. The survey instrument was administered to a total of 64 students in three strategic management classes taught by the same instructor during the last quarter of the semester. The timing of the survey administration was pre-determined to be upon completion of presentation of all components of the strategic management model (Figure 1). The survey instrument is available upon request.

Sixty-three surveys contained usable information. For adequate power in a partial least squares analysis (see below), it is recommended that the sample size be at least ten times the larger of "the (number of) indicators on the most complex formative construct, (or) the largest number of antecedent constructs leading to an endogenous construct" (Barclay, Thompson, & Higgins, 1995, p. 292). The sample size in this study is considered to be adequate for the current exploratory study in view of the fact that there are a total of six antecedent constructs (providing a survey to construct ratio greater than 10:1) leading to the endogenous variable "SMM Usefulness." Students were assured of survey anonymity and participation was voluntary. Fifty percent of the respondents were male and 50% were female. The average age of the students was 25 years old, with ages ranging from 20 to 47 years old. With 95% of the students indicating that they had work experience, the average number of years worked among respondents was eight years. All majors were represented in the survey group (14% accounting, 23% finance, 21% information systems, 23% management, and 19% marketing).

Measures

Usefulness

Usefulness is defined as the students' measure of worth or relevance of the SMM in their academic and professional lives in terms of improved performance. This definition was adapted from prior literature in information systems by Davis (1993). All four items in this Likert-type scale (5=Strongly Agree, 1=Strongly Disagree) were adapted from the usefulness scale developed by Davis (1993) as well as subsequent adaptations for other applications (see Igbaria, et al., 1997). Sample items include statements such as "Using the SMM enhances my productivity in college" and "It is easy to see how the SMM can be useful in the workplace".

Decision Style

The analysis-intuition continuum was measured by a three-item Likert-type scale (5=Almost Always, 1=Almost Never) adapted from Daake (1995), Bennett (1997) and Ritchie (2001). The scale included statements such

as "I feel the need to really study the data an reports provided" and "I am uncomfortable with my conclusions unless I have the time to closely study the data, facts, and figures on an important issue".

Experience

Experience was measured with two items, the respondent's self-reported age and work experience. The survey items for this construct asked the respondent "What is your current age?" and "How many years of work experience do you have?"

Major

The survey instrument provided all five business majors offered in the college of business (accounting, finance, information systems management, management, and marketing). The data for the student's major area of study in the college of business was coded "1" for the respondent's identified major area, and "0" for the other areas, providing dichotomously coded categories.

Affect

The student's positive affectivity (PA) was measured using five Likert-type items (1=Very Slightly or Not at All; 5=Extremely) from the PANAS scale (Watson, et al., 1988). Students were provided with instructions stating "circle the number to the right that best describes the feelings or emotions you feel about this strategic management class."

Ease Of Use

The student's perception of the ease of use of the SMM was measured using three Liker-type items (5=Strongly Agree; 1=Strongly Disagree) adapted from scales in the information systems literature (Igbaria, et al., 1997). Minor changes were made to the survey items to reflect specifically the SMM. For example, two items included statements such as: "Learning to use the SMM is easy for me" and "It is easy for me to become skillful in using the SMM."

Willingness To Try New Theories/Models

Willingness to try new theories/models was measured using four Likert-type items (5=Strongly Agree; 1=Strongly Disagree) adapted from a scale used in the information systems literature (Agarwal & Prasad, 1998). Sample items included statements such as: "If I hear about a new management technique, I look for ways to apply that to my current situation at work or college" and "Among my peers, I am usually the first to try out new theories and management models".

Procedure

Partial least squares (PLS) (this study utilized PLS Graph, Version 3.0, 2003) was selected as the statistical tool for this analysis for a number of reasons. First, PLS is noted for its efficacy in exploratory studies where theory development may be the primary focus, whereas LISREL may be better suited for studies involving confirmation of a theoretical model (Barclay, et al., 1995). Covariance-based structural equation modeling (CBSEM) (e.g. programs such as LISREL) is theory-oriented and emphasizes the transition from exploratory to confirmatory analysis and is most often employed in the latter stages of theory testing. In contrast, PLS can be an efficient structural equation modeling method of analysis when theoretical knowledge is still uncertain and measurement scales are still being developed, placing minimal demand on measurement scales, sample size, and residual distribution (Chin, 1998).

Second, PLS can be used effectively with small sample sizes. Sample size precluded the use of the covariance-based approaches for SEM, which have been popularized by LISREL versions program (Joreskog &

Sorbom, 1993). In the case of the current study, sample size was constrained due to the need to minimize the number of controls necessary for different instructor effects.

Third, although drawing upon the basic principles of ordinary least squares and regression, the evaluation of construct parameters in PLS takes into account the overall model as factor and loading values are computed, rendering a more accurate assessment of parameters. The assessment of the PLS model is performed in two stages (Barclay, et al., 1995, p. 295). First, the reliability and validity of the model is determined, then, the structural model is assessed. Each of theses stages is addressed below.

The latent variable (LV) path model in PLS consists of the inner model (also referred to as inner relations or structural model) and indicates the relationship among variables based on substantive theory. LVs are variables that cannot be measured directly and their values are estimated by a set of observed variables (also called manifest variables). The outer model (also called measurement model) establishes the relationships between latent variables (LV) and respective manifest variables (MV). The formal model specification will depend on the nature of the relationship between the LV and its MVs. This relationship has the form of linear ordinary least squares (OLS) regression and can be expressed in a *formative* mode, in which the indicators are the regressands of a simple regression, or in a *reflective* mode, in which the indicators are the regressors in a multiple regression.

Evaluation of PLS models should apply prediction oriented measures such as the R^2 for dependent latent variables and Farnell and Larcker's (1981) average variance extracted (AVE) measure. Re-sampling procedures such as jackknifing and bootstrap are used to assess the significance of the estimates. Scale validity and the quality of construct measures are assessed through reliability analyses using Cronbach's alpha and composite reliability. Loadings and cross-loadings of indicators are also employed for reliability and discriminant validity of the measurement model.

RESULTS

Measurement Model's Reliability And Validity

The measurement model (also referred to as the outer model) defines how each block of indicators relates to its latent variable (Chin, 1998:313). Individual item reliability was assessed by evaluating loadings and cross-loading between constructs. Using .707 as a basis (Carmines & Zeller, 1979), loading amounts offer evidence that the survey items correlate with their respective constructs (see Table 1) and are above the .707 threshold.

Internal consistency was evaluated using two methods. First, Chronbach's alpha was calculated. Then, using PLS data, a method developed by Farnell and Larcker (1981) was utilized to calculate a measure of composite reliability (the sum of the loadings squared, divided by the sum of the loadings squared plus error). Both measures are also reported in Table 1. All construct measure fall within Nunnally's (1978) guideline of .7. It is noteworthy that differences between the Cronbach alpha and PLS measures are due to the fact that the PLS measure is calculated within the causal model, providing a superior gauge of internal consistency (Farnell & Larcker, 1981).

Discriminant validity is an indication of a construct's uniqueness with respect to other constructs in the model (Barclay et al., 1995). Using Farnell and Larcker's (1981) criteria that the square root of the average variance extracted (AVE) be larger than the variance shared with other constructs, there is adequate discriminant validity. The square roots of the AVE are presented on the diagonal in Table 2.

Structural Model Assessment

The structural model (also referred to as the inner model) depicts latent variable relationships. In order to assess the statistical significance of the overall loadings and the standardized βs, a bootstrap analysis was utilized (Chin, 1998). The bootstrap is a nonparametric method for approximating the accuracy of the estimates derived by PLS. The results (see Table 3) of the PLS analysis of the exploratory model revealed that three of the paths are statistically significant: positive affect (Hypothesis 4), willingness to try new theories/models (Hypothesis 5), and

SMM ease of use (Hypothesis 6). The predictive power of the model can be assessed by evaluating the R^2. The results indicate that 51% of the variance in SMM usefulness was explained. In light of the fact that there are a wide variety of constructs that might contribute to SMM usefulness and the limited number of constructs in this exploratory model, the explained variance in this simplified model can be considered substantial.

Table 1

Results of PLS Analysis of Variables

Variable	Affect	Usefulness	Willingness	Decision	Ease	Experience	Major
44p	0.85	0.35	0.33	0.08	0.22	0.09	0.14
43p	0.84	0.40	0.26	0.11	0.25	0.21	0.21
42p	0.82	0.35	0.27	-0.11	0.28	0.2	0.23
47p	0.84	0.42	0.50	0.08	0.25	-0.03	0.19
41p	0.72	0.36	0.39	-0.18	0.27	-0.04	0.33
26a	0.29	0.85	0.50	0.03	0.39	-0.12	0.16
24a	0.48	0.88	0.54	0.19	0.38	-0.01	0.36
19a	0.50	0.82	0.45	0.25	0.41	0.07	0.31
25a	0.25	0.81	0.55	0.13	0.35	-0.2	0.15
13c	0.27	0.44	0.77	0.12	0.24	-0.21	0.3
14c	0.33	0.36	0.74	0.08	0.22	-0.04	0.16
21c	0.42	0.59	0.86	0.01	0.28	-0.05	0.31
23c	0.33	0.46	0.76	0.13	0.46	-0.01	0.06
5a	0.00	,08	0.12	0.76	0.05	-0.08	-0.16
7a	0.15	0.21	0.15	0.92	-0.02	-0.08	-0.08
3a	-0.24	0.12	-0.04	0.80	-0.15	-0.1	-0.26
17b	0.20	0.35	0.21	-0.02	0.86	0	0.08
12b	0.20	0.27	0.19	0.02	0.79	0.08	-0.01
20b	0.36	0.50	0.49	-0.11	0.91	0.14	0.13
Experience	-0.06	0.06	0.12	0.06	-0.10	-0.96	0.09
Age	-0.12	0.07	0.08	0.14	-0.09	-0.97	-0.06
MAR	0.20	0.26	0.18	-0.13	0.04	-0.04	0.86
FIN	-0.20	-0.08	-0.24	0.24	-0.10	0.02	-0.28
ISM	0.06	0.03	-0.02	0.00	-0.10	-0.06	0.08
MAN	0.08	0.00	0.25	-0.14	0.23	0.13	-0.01
Alpha	0.87	0.86	0.79	0.79	0.82	0.93	*
Composite Reliability	0.91	0.91	0.88	0.87	0.89	0.97	0.33

* The "Major" construct was not a scale, therefore Cronbach's alpha is not appropriate.

Table 2
Means, Standard Deviations, Internal Consistencies, Correlation of Constructs
Exploratory Model

	No. Items	Mean	Standard Deviation	Alpha	Composite Reliabity	P. Affect	Useful	Major	Analysis	Ease	Willing	Practical
				Internal Consistency		**Correlation of Latent Variables**						
P. Affect	5	17.4	4	0.87	0.91	.81						
Usefulness	4	14.8	2.3	0.86	0.91	0.47	0.84					
Major	4	n/a	n/a	n/a	n/a	0.27	0.31	0.45				
Dec. Style	3	10.2	2.4	0.79	0.87	0.00	0.18	-0.17	0.83			
Ease of Use	3	11.2	1.9	0.82	0.89	0.31	0.46	0.09	-0.06	0.86		
Willingness	4	13.5	2.5	0.79	0.88	0.43	0.61	0.28	0.10	0.39	0.78	
Experience	2	34	11.9	0.93	0.97	0.10	-0.07	-0.01	-0.11	0.10	-0.10	0.98

The square roots of the average variance extracted are shown in the diagonal
Note: Due to standardization of data in PLS, the correlations in the off-diagonal are the
    same as covariances.

Table 3

Test of Hypotheses

	Exlporatory Model				Final Model		
Hypothesis	Path Coefficent	T-Value	Hypothesis Supported?	Hypothesis	Path Coefficent	T-Value	Hypothesis Supported?
H_1: Decision Style -> SMM Usefulness	0.19	1.34	No				
H_2: Experience -> SMM Usefulness	-0.06	0.57	No				
H_3: Major -> SMM Usefulness	0.16	1.11	No				
H_4: P. Affect -> SMM Usefulness	0.19	2.00*	Yes	H_4	0.19	2.26*	Yes
H_5: Willingness to Try... -> SMM Usefulness	0.35	2.75**	Yes	H_5	0.43	3.74*	Yes
H_6: Ease of Use -> SMM Usefulness	0.26	2.09*	Yes	H_6	0.23	1.89**	Yes
R^2 for Usefulness		0.51				0.46	

*p<.05
**p<.01

Table 4
Final Model
Results of PLS Analysis of Variables

Variable	Affect	Useful	Ease	Willing
Q47P	0.84	0.42	0.25	0.50
Q44P	0.85	0.34	0.22	0.33
Q43P	0.84	0.39	0.25	0.26
Q42P	0.82	0.35	0.28	0.27
Q41P	0.72	0.36	0.27	0.39
Q19A	0.50	0.82	0.41	0.45
Q24A	0.48	0.87	0.38	0.54
Q25A	0.25	0.82	0.35	0.55
Q26A	0.30	0.86	0.39	0.50
Q12B	0.20	0.27	0.79	0.19
Q17B	0.20	0.35	0.86	0.21
Q20B	0.36	0.50	0.91	0.50
Q13C	0.27	0.45	0.24	0.77
Q14C	0.33	0.36	0.22	0.74
Q21C	0.42	0.59	0.28	0.86
Q23C	0.33	0.47	0.46	0.76
Composite Reliability	0.91	0.91	0.89	0.86

Model Respecification

Based upon the results of the foregoing analysis, the model was respecified to include the three constructs that demonstrated both unidimensionality and path significance with respect to the SMM construct. The constructs meeting these criteria were willingness to try new theories/models, positive affectivity, and ease of use (see Figure 3).

Revised Measurement Model

Individual item reliability was assessed once again by evaluating the loadings and cross-loadings among the latent variables (see Table 4). Using .707 as a basis for PLS cross-loadings (Carmines & Zeller, 1979), the data offer

evidence that the survey items correlate with their respective constructs. Once again, all composite reliability measures were well above Nunnally's (1978) threshold of .7.

Discriminant validity is an indication of a construct's uniqueness with respect to other constructs in the model (Barclay et al., 1995). Drawing once again upon Farnell and Larcker's (1981) recommendation that the square root of the average variance extracted (AVE) be larger than the variance shared with other constructs, there is adequate discriminant validity. Table 5 provides the AVE on the diagonal and shared variances (correlations) in the rows.

In order to assess the statistical significance of the overall loadings and the standardized βs, a bootstrap analysis was utilized. The results (see Table 3) of the PLS analysis revealed that the three paths are again statistically significant. The model's predictive power is again substantive, with 46% of the variance in usefulness explained. The Stone-Geisser test (measured by the criteria Q^2) was also used to test predictive relevance. Q^2 represents another measure of how well observed values are reconstructed by the model and its parameter estimates. A $Q^2 > 0$ implies that the model has predictive relevance, whereas a $Q^2 < 0$ represents a lack of predictive relevance (Chin, 1998). Blindfolding with omission distance 19 was used to obtain cross-validated redundancy measure of 0.4997, indicating the model has predictive relevance.[1]

Table 5
Correlations of Latent Variables
Final Model

|	Affect	Useful	Ease	Willing
Affect	0.663			
Useful	0.459	0.708		
Ease	0.313	0.458	0.729	
Willing	0.435	0.609	0.386	0.615

DISCUSSION

A number of insights can be drawn from this exploratory analysis. First, from an educator's perspective, the findings in this study offer further insights with regard to the factors that contribute to students' perceived usefulness of the Strategic Management Model. In view of the fact that the average age of the students in this study was 25 years, one may argue that the results may be generalizable beyond its undergraduate sample focus (e.g., to graduate students). The respondents in this study also reported an average of eight years of work experience, lending further support to a broader application of our results.

Given the data in the study, the final model (Figure 3) offers initial evidence that willingness to innovate has the greatest influence on perceived SMM usefulness, followed by perceived ease of use and positive affect, respectively. Anecdotal information would suggest that factors such as the amount of a student's practical work experience and age might account for a significant amount of the variance in the students' perceptions of SMM usefulness, but this notion is not corroborated by the data in this study, suggesting that the classroom instructor may be able to have a greater influence over the student's perceived utility of the SMM than traditional thinking might dictate.

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[1] A confirmatory factor analysis was conducted using LISREL (version 8.54, Jöreskog, K.G. & Sörbom, D., 2003) to confirm the findings in the PLS analysis. Despite the small sample (N=63), the oblique model indicated that the constructs of ease of use, willingness to innovate, and affect were unidimentional ($X^2 = 52.60$, df = 50, p = .37, RMSEA = .02, RMR = .05, NFI = .9). A post-hoc analysis was also conducted, using a sample of students from an additional strategic management class (N = 23). The PLS results yielded an $R^2 = .56$.

Figure 3
Final Model
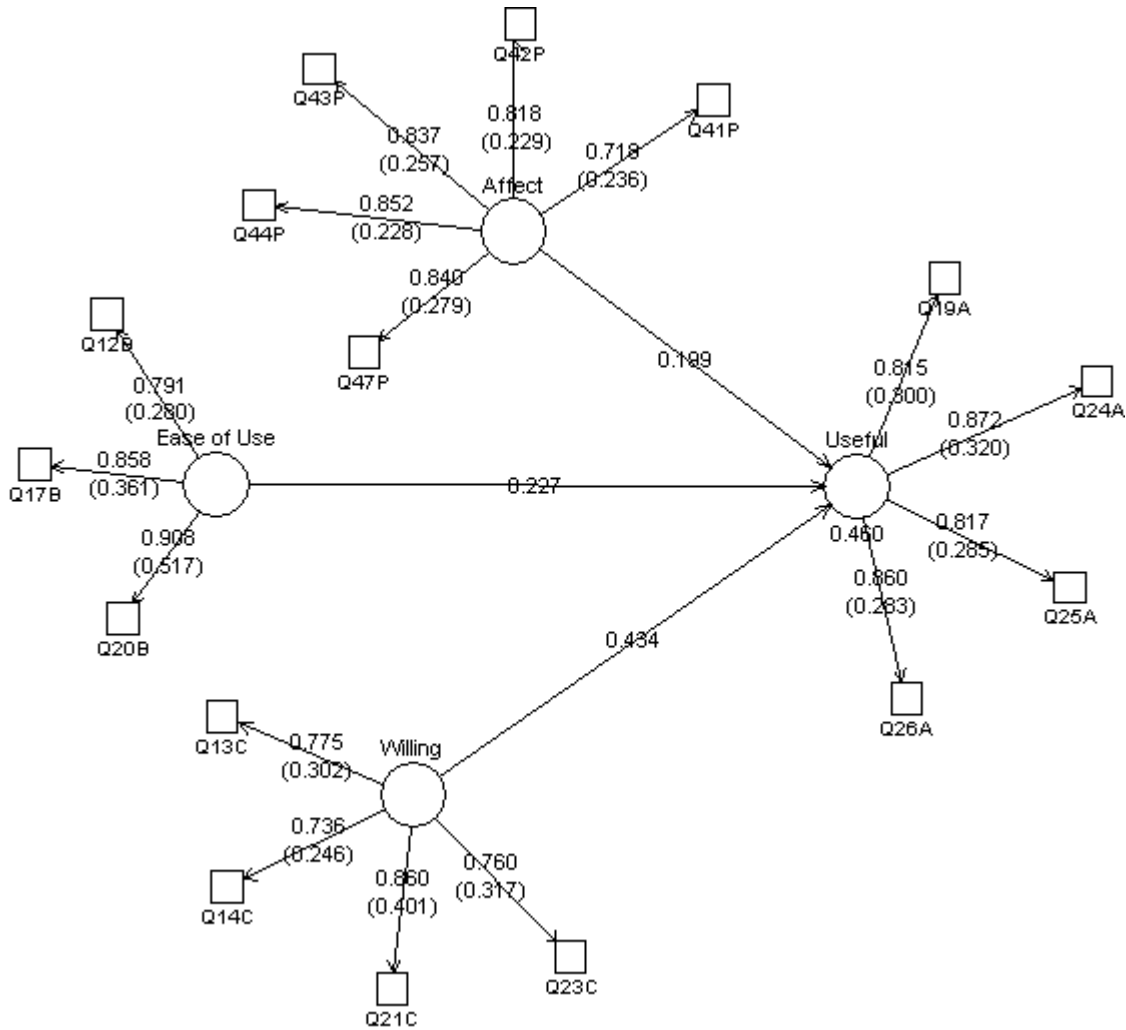
Indeed, one may argue that willingness to innovate, perceived ease of use, and positive affect are all factors that the instructor can significantly influence during the course of the semester. For example, several recent articles have argued that one of the biggest problems MBA programs face today (and we assert that via proxy, undergraduate programs as well) is that the curricula is increasingly out of touch with the real world needs of students and employers (Doria, Rozanski, & Cohen, 2003; Merritt, 2003; Mintzberg, 2004; Pfeffer & Fong, 2002). These authors argue that content issues are exacerbated by a business-school professorate that is largely unwilling to move beyond time-honored lecture and case-study teaching approaches to more innovative formats. Ironically, the results of this current study may mean that our students are interested in the material *in spite of how we teach it*. Taken a step further, it is easy to argue that teaching innovations, such as clinical/practice experiences and true teamwork approaches (Doria, Rozanski, & Cohen, 2003; Merritt, 2003; Mintzberg, 2004; Pfeffer & Fong, 2002), coupled with learners' willingness to try new ideas, could significantly enhance the usefulness of the SMM for our students.

The results also suggest that we could improve our students' learning by making the content of our pedagogy more relevant. For instructors, if students' willingness to innovate can be tied to our approach in delivering the material, then relevance could be tied to the content itself. For example, a popular means of presenting the SMM in the classroom setting involves the use of case studies centering on large Fortune 500 companies (Doria, Rozanski, &

Cohen, 2003). The pages of the *Wall Street Journal* offer further evidence regarding the outcomes of the strategic moves of these organizations. While these large, public organizations offer fertile ground for the application of strategic management concepts, students may not readily perceive the direct application to business situations in which they are most accustomed because many students work in small, privately-held firms and family businesses. It is plausible that the disconnection between the large company and the family business may negatively influence their perceived usefulness of the SMM. The challenge then for instructors is to craft the presentation of the SMM in such a way that students find it relatively easy to apply to their "real life" situations. For example, an instructor may call upon student volunteers to serve as "living cases", where the class analyzes a current small-business situation on the spot. Another method might involve personal applications of the SMM such as the "S.W.O.T. Yourself" exercise that has appeared in strategy texts.

Relatedly, the above efforts might also influence students' overall affectivity about strategy and/or business policy. Arguably, this may be more challenging than influencing willingness to innovate and ease of use. Strategy is typically a required heavy workload course taken right before graduation at many colleges and universities, and students thus may be pre-disposed to a negative affect. However, evidence also suggests that the course enjoys a natural affective advantage with students due to its perceived "sexiness" when compared to other classes in the curriculum (Doria, Rozanski, & Cohen, 2003). For professors, the challenge then becomes trying to effectively manage the components that contribute to negative student affect, such as senioritis and course workload, while enhancing those that contribute to positive affect, such as real-time, real world, dynamic topics.

Proceeding a step further, the results also have potential implications for management practice. Collectively, the results reported here indicate that students perceive the strategic management model as useful if they posses a clear set of psychological attributes that enables them to approach the world with positive attitudes, exhibit a willingness to try new ideas, and perceive the model as easy to use. Conversely, the results suggest that cognitive decision styles (analytical versus intuitive), functional background (major) and years of experience have relatively little impact on perceived usefulness of the SMM. Thus, the findings tentatively suggest that workplace managers may want to focus less on classic selection criteria like employee background and experience when trying to identify someone to hire or train to work in complex areas like business policy and/or strategy. Rather, managers may instead want to focus more on the aforementioned psychological attributes as greater predictors of potential employee success in their selection process. However, the results also suggest that resistance to new ideas and models may increase if they are perceived by employees as overly difficult or too complex to learn, thus cautioning managers to present them with care, perhaps by using some of the classroom techniques discussed above.

Further, though not tested here, we can logically assume that the question of receptiveness to the SMM explored in this study also translates into real world applications of its concepts by students and managers. If this is so, then it is possible that the ongoing public debate regarding qualifications for successful senior management, and the role of business schools in the process (c.f., Mintzberg, 2004; Pfeffer & Fong, 2002), has less to do with previous positions, titles, experience, or the acquisition of formal quantitative skills. Instead, these qualifications may have more to do with a managers' emotional intelligences (Goleman, 1995), or psychological abilities like those mentioned previously, which help them assimilate and effectively use ideas like the SMM. If these are indeed correct conclusions, then both business schools and organizations may need to revisit the ways in which they develop students and managers.

Finally, from a researcher's perspective, this study offers preliminary evidence that the constructs of ease of use, willingness to innovate, and usefulness have applications across disciplines. It is interesting that the relationships between these constructs explain a significant amount of variance, even when applied to another context, possibly lending to the strength of the scales.

SUGGESTIONS FOR FUTURE RESEARCH

This study is an exploratory examination of the factors that effect students' perceived usefulness of the strategic management model. As such, it exhibits both the strengths and limitations of exploratory research. A limitation of the current study is that the sample of students was derived from a single mid-sized public university in

the Southeast. Future studies attempting to replicate and generalize this study in other settings may wish move it beyond the exploratory and into the confirmatory stages using a variety of comparison and contrast approaches. First, the settings for future studies could be varied across a number of common items such as institutional size (e.g., small, medium, and large), geographic location (e.g., Northeast, Midwest, and West), and type (e.g., public, private, or religious). Other programmatic factors such as mode of delivery, (e.g., online versus face-to-face) and program structure (e.g., full-time residential cohort versus part-time commuter) could also be explored as well.

In addition, future studies could expand the milieu of the study beyond the undergraduate realm. For example, it might be replicated in MBA or Executive MBA courses. While the strategic management model explored here is common for undergraduate textbooks, graduate classes sometimes use texts that take very different approaches (e.g., Mintzberg, Lampel, Quinn, & Ghosal, 2003). This would enable us to determine whether it is the factors, or the model itself, that contributes to student learning. Furthermore, it would be interesting to determine whether some of the factors that were not significant within this study, namely decision style, and major (or managerial background), would become more important with graduate level populations. It would also help to clarify whether the current study's population (where the average student age of 25 years and experience level of 8 years) contributed to, or had a null effect on the findings, and consequently, what differences in pedagogical approach would be required for undergraduate and graduate populations.

Finally, exploring additional factors could be expanded in future studies. It would be particularly interesting to replicate this study in the international setting, or to test for international differences, while considering additional constructs such as cross-cultural variables. This may help us to better understand the reported anecdotal differences in the views of the strategy process in places such as Asia and the United States. Further, while the constructs tested in the current study explain a significant amount of the variance in perceived SMM usefulness, there are numerous other student factors (e.g. demographic and psychological) that have yet to be tested for their impact on perceptions of SMM usefulness. For example, additional personality characteristics such as perceptions about the social environment, conscientiousness, agreeableness, or trait anxiety could be included in a similar study to determine the extent to which they influence perceptions of usefulness.

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