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Motivational and Learning Strategies

of Community College Students

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Abstract

This study investigated the construct validity of an online version of the Motivated Strategies for Learning Questionnaire (MSLQ) for use with community college students. The MSLQ which is an 81-item, self-report inventory which consists of 2 sections and 15 scales that assesses college students' motivational orientations and learning strategies. The sample consisted of 158 participants from four community colleges located in the Western United States. A reliability analysis produced coefficient alphas which ranged from .49 to .93 for the scale scores. When compared to data from the normative sample, there was consistency in the coefficient alphas for 6 of the 15 scales. Of the areas of inconsistencies, the differences in values for coefficient alpha ranged from .05 to .20. Results indicate that while the MSLQ may be valid for assessing motivational and learning strategies, users must take caution when interpreting scores obtained from different cultures. Suggestions for further research discussed.

Motivational and Learning Strategies of Community College Students

As the number of community college students continues to grow “The ability to provide appropriate academic experiences depend on an understanding of the facts that affect their learning” (Justice & Dornan, 2001, p. 248). To be successful learners, these students must be able to manage their cognitive learning strategies (Romainville, 1994). Many community college students may not be aware of learning strategies that can lead to successful learning. Therefore, these students may need guidance and direction on how to plan and monitor their learning efforts.

A number of researchers posit that assisting students in developing strategies for learning is a first step in helping students to plan and monitor their learning (Schraw & Dennison, 1994). To streamline efforts in this area, Maitland (2002) addressed the need for a formal evaluation system for assessing student learning strategies. Because community college students may have limited insight into their own motivational and learning processes, it would be useful to have a self-report measure that could be used to assess their motivational and learning strategies. The Motivated Strategies for Learning Questionnaire (MSLQ) is an instrument that could be used to this end.

The MSLQ (Pintrich, Smith, Garcia, & McKeachie, 1991) has been widely used to address the motivational and learning strategies of college students. The original instrument was normed on 386 students attending a public four-year university (*n*=362) and a community college (*n*=24) located in the Midwestern United States. Most of the participants in the normative sample, 94%, were students attending a four year college. Results of the normative study produced Cronbach alphas that ranged from .52 to .93.

The results also revealed that the scale scores were significantly correlated with final course grade; thus demonstrating predictive validity (Pintrich, Smith, Garcia, & McKeachie, 1991).

McClendon (1996) used the MSLQ to assess the motivational and learning strategies of preservice teachers. Participants in the study consisted of 1185 students enrolled in a teacher education program in Northeastern Ohio. The objective of the study was to assess the external validity of the MSLQ and to determine if the MSLQ could be used to predict course grades. Results from the study showed that scores from the Task Value Scale were the best predictors of final course grade. Results also indicated that the instrument contained adequate external validity; however, the results produced different factor structures for males and females.

Other researchers have used the MSLQ to address the motivation and learning strategies of students enrolled in food nutrition courses (Silagyi-Rebovich, Brooks, & Peterson, 1998). Participants in the study were 44 students attending a Southeastern university. The results revealed that there were significant correlations among the MSLQ scales. Further results indicated that three scales (metacognition, peer help, and help seeking) predicted grades on the first exam, but failed to predict performance on subsequent exams.

Cumulatively, research reveals that the MSLQ is a construct valid instrument that can be used to investigate and predict aspects of student motivation and achievement. More information is needed to determine the external generalizability of the MSLQ with different samples. More data is needed to determine whether the MSLQ produces consistent patterns of results for different cultural groups.

Method

Previous studies have demonstrated the utility of the paper version of the MSLQ with traditional college students. The purpose of this study was two fold: a) to examine the potential of the MSLQ for assessing the motivational and learning strategies of community college students.

Participants

Participants were college students (*N=158) en*rolled in various communications courses at several community colleges located in the Western United States. Participants were recruited the course instructors. Participants were granted extra credit for participation.

Procedures

Participants completed an online version of the MSLQ. The survey opened with an informed consent statement which explained the purpose of the research. The instructions indicated that completing the survey indicated consent to participate. Data collected from the instrument were stored in an online database until downloaded by the researcher.

Instrument

Items on the online version of the MSLQ are identical to items on the paper version. The MSLQ was designed to assess college students' motivational orientations and their use of different learning strategies for a college course. There are 81 items on the 1991 version of the MSLQ (Pintrich, Smith, Garcia, & McClatchy, 1991), which are divided into two sections; a motivation section and a strategies for learning section. The motivation section consists of 31 items that assess students' goals and value beliefs for

a course, their beliefs about their ability to succeed in a course, and their anxiety about tests in a course. The Motivation Section contains the following scales: Intrinsic Goal Orientation, Extrinsic Goal Orientation, Task Value, Control of Learning Beliefs, Self-Efficacy for Learning and Performance, and Test Anxiety. The Learning Strategies Section consists of 50 items regarding students' use of different cognitive and metacognitive strategies. The learning strategy section consists of the following 9 scales: Rehearsal, Elaboration, Organization, Critical Thinking, Metacognitive Self-Regulation, Time and Study Environment, Effort Regulation, Peer Learning, and Help Seeking.

Design and Analysis

A frequency count was conducted to assess the demographic variables. A reliability analysis was done to assess the internal consistency of items contained in the MSLQ. According to Westhuis and Thayer (1989), coefficient alpha is the best measure of internal consistency because of it "provides a good estimate of the major source of measurement error, sets the upper limits of reliability, [and] provides the most stable estimate of reliability" (p. 157). Thorndike (1967) stated that reliability estimates of .40 to .50 are sufficient for describing groups.

Results

Results from the frequency count showed that the majority of the participants, 73%, were female. The largest percentage of students, 40%, were freshmen followed secondly by sophomores, 33%. Regarding age, 38% of the participants indicated that they were less than 20 years old. An additional 28% indicated that they were in the 20-25 year old age bracket. Using age 25 as the upper boundary of the traditional age

college students as defined by Kim (2002), 66% of the participants could be classified as traditional college age. As for ethnicity, the largest ethnic group was Caucasian, 29%, followed, by Hispanic at 26%, and Black at 22%. The category of Asian or other was selected by 15% of the participants. Table 1 presents a summary of the demographic data.

Insert Table 1 about here

Coefficient alphas on the scale scores ranged from .49 to .93. Table 2 presents a summary of the results. A comparison of the alphas obtained from the normative sample revealed there were consistencies in the coefficient alphas for 6 of the 15 scales. Of the areas of inconsistencies, the differences in values for coefficient alpha ranged from .05 to .20. Results indicated higher alpha coefficients for the community college sample on the following scales: Extrinsic Goal Orientation, Control of Learning Beliefs, Elaboration, Organization, and Time and Study Environment. The normative sample generated higher coefficient alphas on the Critical Thinking, Effort Regulation, Peer Learning, and Help Seeking Scales.

Insert Table 2 about here

Discussion

Results from the current study revealed that using Thorndike's (1967) guidelines as the evaluation criteria; the MLSQ contains adequate internal validity for describing the motivational and learning strategies for community college students. The results also reveal that while the MSLQ may produce consistent results across samples, researchers must exercise caution when interpreting scores generated from the instrument. Scales on a given instrument are designed to summarize in a succinct manner large quantities of information gathered by the instrument and may not yield the same information across different groups. As the current research revealed, responses from the current participants generated coefficient alphas that were different from the normative sample coefficient alphas on 60% of the scales of the MSLQ. This difference indicates that while the MSLQ has adequate external validity, there may be differences in the pattern of responses for different cultural groups. This finding supports McClendon's (1996) assertion that the hypothesized model of the MSLQ "has a firm conceptualization of student motivation but has failed to fully operationalize students' cognitive strategies and resource management" (p. 4).

The current study contributes to existing knowledge by revealing that the MSLQ could be a useful resource for investigating the motivational and learning strategies of differing cultural groups. Results further extend the external validity of the MSLQ with community college students. The results suggest that while the MSLQ may be valid for assessing motivational and learning strategies, users must take caution when interpreting scores obtained from different cultures. Interpreting results from scale scores alone may mask important motivational and learning strategies of different

cultural groups. Interpreting results from individual items may provide more insightful information that could be used to structure intervention and remediation programs designed to enhance student motivation, learning, and performance.

Additional research is needed to investigate why community college students in this sample may have scored differently from the normative sample on a number of the MSLQ scales.

Table1

Summary Table of Demographic Data

Gender	*n*	percent
Male	39	25
Female	107	67.3
missing	12	8.2

Age in years	*n*	percent
20 and under	59	38
21-25	44	28
26-30	12	7
31-35	19	12
35-40	8	5
41 and over	16	10

Class Status	*n*	percent
Freshman	64	40
sophomore	48	30
junior	22	14
senior	6	4
other	7	4
missing	11	8

Ethnicity	*n*	percent
Black	35	22
Asian	13	8
Caucasian	46	29
Hispanic	41	26
Other	12	8
missing	11	8

Note: *N*=158

Table 2

Descriptive Statistics/Alpha Coefficients for Community College Students MSLQ Scales

		Community College Students			Normative Sample		
Scale	*n*	*M*	*SD*	Alpha	*M*	*SD*	*Alpha*
Intrinsic Goal Orientation	4	20.42	4.50	.73	20.12	4.36	.74
Extrinsic Goal Orientation	**4**	**20.80**	**4.99**	**.75**	**20.12**	**4.92**	**.62**
Task Value	6	33.78	7.06	.92	33.24	7.25	.90
Control of Learning Beliefs	**4**	**21.48**	**4.54**	**.73**	**22.96**	**3.92**	**.68**
Self-Efficacy for Learning/ Performance	8	44.48	9.54	.93	43.76	9.12	.93
Test Anxiety	5	20.43	7.12	.82	18.15	7.25	.80
Rehearsal	4	19.07	5.00	.70	18.12	5.40	.69
Elaboration	**6**	**28.37**	**7.12**	**.81**	**29.46**	**6.48**	**.76**
Organization	**4**	**18.18**	**5.12**	**.72**	**16.56**	**5.32**	**.64**
Critical Thinking	**4**	**20.85**	**5.68**	**.70**	**20.08**	**6.40**	**.80**
Metacognitive Self-Regulation	12	55.25	11.62	.82	54.48	10.80	.79
Time and Study Environment	**8**	**39.19**	**11.62**	**.82**	**38.96**	**8.4**	**.76**
Effort Regulation	**4**	**21.21**	**4.01**	**.49**	**21.00**	**4.40**	**.69**
Peer Learning	**3**	**9.51**	**3.84**	**.58**	**8.78**	**4.59**	**.76**
Help Seeking	**4**	**15.41**	**4.49**	**.60**	**15.36**	**4.92**	**.69**

Note: Bold font represents scales which present large differences in coefficient alphas for the current participants and normative sample.

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