Academic Achievement Among Traditional and Nontraditional College Students

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Abstract
The purpose of this study was to better understand the relationship between non-intellective factors and academic achievement (operationalized as grade point average, GPA) among traditional and nontraditional college students. College students completed online surveys that assessed demographic information and personality, motivational, and self-regulatory variables. A primary analysis was conducted using multiple linear regression followed by secondary analyses using independent t-tests and Pearson correlation coefficients. Traditional students’ GPAs had the strongest relationship with procrastination, grit, self-efficacy, and extrinsic motivation. Among nontraditional students, procrastination, motivation, self-efficacy, locus of control, and need for cognition were related to GPA. Further examination of variables that predict nontraditional students' academic achievement is warranted.

Background/Rationale
• Five domains of non-intellective variables have been determined: personality traits, motivation factors, self-regulatory learning strategies, students’ approach to learning, and psychosocial contextual influences (Richardson, Abraham, & Bond, 2012).
• The experiences, stressors, and obstacles presented to traditional (less than 25 years) and nontraditional (25 years or greater) students diverge greatly (Fortus, Newbold, & Mehta, 2011; Bye, Pushkar, & Conway, 2007).
• Previous research has yet to examine the relationship between these non-intellective variables and GPA outcomes in traditional (less than 25 years) and nontraditional (25 years or greater) students.

Purpose of the Current Study
The purpose of this study was to better understand the relationships between non-intellective variables and academic achievement (GPA) among traditional and nontraditional students.

Method
Participants
• 139 participants (M age = 29.43, SD = 11.58)
• 67 traditional students (M age = 23.78, SD = 1.78)
• 72 nontraditional students (M age = 37.42, SD = 11.04)
• Students under 18 years and first-semester freshmen excluded

Materials
• Personality Trait Instruments:
  - Need for Cognition-Short Scale (1-8)
  - Procrastination Assessment Scale for Students
  - Reasons (0-125), Frequency (1-93)
  - Grit Scale (1-5)
• Motivation Factor Instruments:
  - Academic Motivation Scale (1-5)
  - Intrinsic, Extrinsic, Amotivation
  - Academic Self-Efficacy Subscale (1-11)
• Achievement Anxiety Scale (1-5)

Design & Statistics
• A correlational research design was employed
• Statistical Analyses:
  - Primary Analysis:
    - Multiple linear regression
    - Predictor variables: Need for Cognition, Procrastination, Grit, Academic Motivation, Academic Self-Efficacy, Academic Locus of Control, and Achievement Anxiety, Student Type (dummy coding)
    - Outcome variable: Grade Point Average (GPA)
  - Secondary Analyses:
    - Independent t-tests to compare traditional and nontraditional students on continuous variables
    - Pearson correlation coefficients to examine relationships among all variables

Procedure
• After providing informed consent, participants completed online surveys and were fully debriefed afterwards.

Results
Primary Analyses
• Model was a good fit, F(18, 119) = 2.16, p < .008, R² = .246
• The only significant predictor was Amotivation (β = .22, p = .04)
• Multicollinearity assumption violated, removed all Locus of Control and Procrastination Reasons subscales, F(12, 125) = 2.13, p = .02, R² = .170
• Significant predictors:
  - Amotivation (β = .22, p < .04)
  - Self-efficacy Confidence (β = .23, p < .04)
• Significant trends:
  - Procrastination Fear of Failure (β = .21, p < .08)

Revised Model (run by Student Type)
• Traditional Student model: F(11, 52) = 2.50, p < .01, R² = .334
• Insignificant predictors:
  - Procrastination Fear of Failure (β = .36, p > .047)
• Significant predictors:
  - Grit (β = .32, p < .01)
  - Self-efficacy Confidence (β = .38, p < .02)
• Significant trends:
  - Amotivation (β = .31, p < .057)
• Nontraditional Student model: F(11, 59) = 1.58, p > .13, R² = .227
• Significant predictor:
  - Amotivation (β = .28, p < .04)

Secondary Analyses
• Independent t-tests:
  - GPA did not differ significantly by Student Type, F(136) = 1.71, p > .09
  - Traditional (M = 3.11, SD = 0.58), Nontraditional (M = 3.26, SD = 0.47)
• Reasons for Procrastination (p < .004) and Fear of Failure (p < .002) higher among Traditional students
• Intrinsic Motivation lower (p < .003) and Amotivation higher (p < .007) among Traditional students
• Higher Self-efficacy Stress (p < .002) and Need for Cognition (p < .002) among Traditional students

Pearson Correlations:
• Traditional Students:
  - Extrinsic motivation positively related to GPA, r(60) = .27, p < .025
  - Self-efficacy Confidence positively related to GPA, r(60) = .35, p < .004
• Nontraditional Students:
  - Need for Cognition (p < .03), Locus of Control (Poor Student Attitude, p < .049), and Amotivation (p = .01) negatively related to GPA
  - Self-efficacy Confidence positively related to GPA, r(60) = .25, p < .04
• Trend for a negative correlation between Grit and GPA (p = .09)

Discussion
• Significant non-intellective predictors of GPA among Traditional students were Procrastination (Fear of Failure), Grit, and Self-efficacy (Confidence). Extrinsic motivation also correlated positively with GPA.
• Among Nontraditional students, Amotivation was a significant predictor of GPA. Need for Cognition and Locus of Control (Poor Student Attitude) were negatively correlated with GPA. Self-efficacy (Confidence) was positively correlated with GPA.
• The variables investigated in this study had stronger relationships with GPA among Traditional students rather than Nontraditional students, a finding that corresponds with prior difficulties in predicting GPA among nontraditional students (see Bye et al., 2007).

Future Directions
• Understanding what variables better predict academic achievement among Nontraditional students requires new.
• A better understanding of the relationship between GPA, Grit, and Need for Cognition among nontraditional students is needed.

References