



Contents lists available at ScienceDirect

International Review of Economics Education

journal homepage: www.elsevier.com/locate/iree

Debilitating and facilitating test anxiety and student motivation and achievement in principles of microeconomics



Ahmad A. Kader, PhD

Department of Economics, University of Nevada, Las Vegas, Box 456005, 4505 Maryland Parkway, Las Vegas, NV, 89154-6005, United States

ARTICLE INFO

Article history:

Received 28 June 2015

Received in revised form 27 May 2016

Accepted 29 July 2016

Available online 5 August 2016

Keywords:

Economic education

Debilitating and facilitating test anxiety

Student motivation

Student achievement

ABSTRACT

In the Principles of Microeconomics class that I taught during the fall semester of 2013, 126 students participated in the completion of five questionnaires, with one describing student characteristics. The other four questionnaires included a 29-item Locus of Control Scale; a 19-item Test Anxiety Scale, with 10 items describing debilitating test anxiety and 9 items describing facilitating test anxiety; a 16-item Procrastination Scale; and a 5-item Fear of Failure Scale. Using the Test Anxiety Scale, the class was divided into two groups of students by a median split of 2.8 for debilitating test anxiety and 2.56 for facilitating test anxiety. The results of this study show that students who suffered more from debilitating test anxiety (higher than the 2.8 median split) scored lower average test scores, were non-white, procrastinated more, and experienced lower facilitating test anxiety. Students who experienced more facilitating test anxiety (higher than the 2.56 median split), scored higher average test scores, were males, were internally oriented, and suffered less from debilitating test anxiety. Regression results show that debilitating test anxiety has a significant and negative effect on student performance as reflected by the average class score for the semester.

© 2016 Elsevier Ltd. All rights reserved.

Economic educators have long been interested in the link between student performance and its determining factors. This includes a variety of variables ranging from students' prior background, level of achievement, and characteristics. Factors such as GPA, math ability, college entrance examination scores, and gender have been shown to have a strong influence on student performance (Anderson et al., 1994). Other determinants that have been examined in economic education include, age, ethnicity, attendance, student standing, study time, class size, and the role of information technology (Anderson et al., 1994; Agarwal and Day, 1998; Savage, 2009). Student personality type was added to the research effort to describe its relationship to student success in Principles of Economic courses (Borg and Stranahan, 2002). Metacognitive skill was introduced to describe the difference between self perception of knowledge and revealed knowledge as measured by test performance (Grimes, 2002). Locus of control also was introduced to describe the evaluation of teachers and to examine its effect on student performance (Grimes et al., 2004; Hadsell, 2010). Surprisingly, test anxiety and its effect on student performance in economics classes has been totally ignored in economic education literature. The purpose of this paper is to bridge this gap by incorporating test anxiety as a determinant of student performance and to examine its interaction with locus of control, procrastination, fear of failure, as well as with GPA, age, gender, and ethnicity.

E-mail address: ahmad.kader@unlv.edu (A.A. Kader).

<http://dx.doi.org/10.1016/j.iree.2016.07.002>

1477-3880/© 2016 Elsevier Ltd. All rights reserved.

1. Review of the literature

Research shows that a high level of test anxiety is negatively correlated with academic achievement among students in various disciplines including math, psychology, English, natural sciences, and foreign languages, to name a few (Hancock, 2001; Cassady and Johnson, 2002; Chapell et al., 2005). Hembree (1988) in his meta-analytic paper of 562 studies of test anxiety, found that it is significantly and negatively correlated with student performance from grade 3 and above. Test anxiety, according to various articles, affects not only student achievement but motivation. According to educational psychology, test anxiety is divided into two components affective (emotional) and cognitive (worry). The emotional part of test anxiety refers to the physical discomfort associated with the immediate uncertainty of test taking and includes dizziness, nausea, feelings of panic, abnormal heartbeat, and a decreased choice consistency (Hembree, 1988; Bolmont et al., 2002; Pollock et al., 2006). The worry component of test anxiety is associated with the consequences of failing the test in terms of comparing performance to peers and loss of self-worth, and it is this component that is significantly associated with the lower academic performance according to empirical literature (Hembree, 1988; Bandalos et al., 1995). The worry component of test anxiety divides participants into two types, worriers and non-worriers. The performance of worriers decreased when taking a test while it improves for non-worriers (McKay, 2005). The worrier type was identified by the Alpert and Haber Achievement Anxiety Test (1960) as debilitating and the non-worrier type as facilitating, and both represent the cognitive component of test anxiety. This is unlike the emotional component, which is a non-cognitive construct. Debilitating test anxiety is associated with decreased problem solving capability, and, hence, lower exam scores while facilitating test anxiety is associated with enhanced and proactive problem solving, and, hence, higher exam scores. Of the 20 studies analyzed by Hembree in his meta analytic paper, debilitating test anxiety has been found to be significantly and negatively related to aptitude and achievement tests with an average correlation coefficient of -0.29 while facilitating test anxiety has been shown to have a positive and significant effect with an average correlation coefficient of $+0.30$ (Hembree, 1988, 74).

It is the cognitive component of test anxiety that will be examined in this paper in terms of its effect on student performance. Also, its association with other cognitive variables such as procrastination, locus of control, and fear of failure will be examined. Procrastination is another cognitive variable and has been defined as the act of “voluntarily delaying or postponing an intended course of action despite expecting to be worse off for the delay” (Steel, 2007). Academic procrastination relates to the delay of a specific academic task and has been found most often with writing a term paper, preparing for an exam, and doing homework assignments (Solomon and Rothblum, 1984). It is detrimental to academic performance due to its link to adverse behaviors such as poor study habits, cramming for examinations, late submission of homework assignments and term papers, lower grades, and sense of guilt and depression. One study (Carden et al., 2004) shows that procrastination is negatively associated with debilitating test anxiety, although the correlation coefficient is small but significant. Locus of control is another cognitive variable that interacts with test anxiety. It is based on a conceptualized internal-external dimension. Individuals with an internal locus of control believe that events in their lives result primarily from their own actions, while individuals with an external locus of control believe that events in their lives are the result of someone else’s action or are due to luck, fate, or chance (Rotter, 1966). Internally oriented students believe in the connection between their behavior and its outcomes and as such they strive to have more control over their academic experience than externally oriented students. Because internals have more control of their environment, they tend to handle stress differently than externals. Internals tend to be more adaptive to stress and attempt to reduce it through problem solving strategies, while externals respond to stress emotionally and hence may withdraw from the stressful situation. Research in educational psychology indicates that internally oriented students suffer less from debilitating test anxiety than externally oriented students (Choi, 1998; Carden et al., 2004). Fear of failure is the other cognitive variable associated with test anxiety. It has negative consequences due to the shame and embarrassment and devaluation of self esteem and as such it enhances the level of anxiety.

One researcher has suggested that fear of failure should be counted as a third and distinct component of test anxiety, along with emotion and worry components. Other researchers treat it as a separate construct. It can be argued that a student with a high level of fear of failure may have the tendency to suffer more from debilitating test anxiety, while a student with a low level of fear of failure would tend to experience more facilitating test anxiety. Thus, it is expected that fear of failure would be positively correlated with debilitating test anxiety but negatively correlated with facilitating test anxiety. No research evidence is provided to test this relationship.

This paper differentiates itself from others by testing test anxiety as a determinant of academic performance in an economics course, which is done for the first time. Also, the separation of the test anxiety variable into debilitating and facilitating is designed to show how this separation might affect student behavior, particularly in the areas of locus of control, procrastination, and fear of failure. Furthermore, the study examines how debilitating and facilitating test anxieties interact with student characteristics variables such as GPA, ethnicity, gender, and age. A particular attention will be given to the gender issue since studies show that females have a higher level of test anxiety than males (Cassady and Johnson, 2002).

2. Data and methods

During the Fall Semester of 2013, this author taught a Principles of Microeconomics class consisting initially of 172 enrolled students. A questionnaire covering student characteristics including GPA, gender, age, and race was done at the end

Download English Version:

<https://daneshyari.com/en/article/6841856>

Download Persian Version:

<https://daneshyari.com/article/6841856>

[Daneshyari.com](https://daneshyari.com)