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# Self-Efficacy and Anxiety among Undergraduate University Students

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**Abstract:** At present, there are currently strategic challenges facing the Malaysian government, including debt, deficit pressures, technology, innovation and globalization. Hence, Malaysian public service agencies recognize that they need to be resilient. In other words, they need to respond to people's demand (adaptation), provide efficient and effective services (competitiveness) and make themselves reputable (value). This study aims to answer this question:  What are the factors that predict innovation in Malaysian public sector? The results reveal that both innovative climate and participative leadership are associated with the implementation of innovation in public organizations. In conclusion, implications on management practices and research are further discussed.

**Keywords:** Innovation, public sector, climate, leadership, organization

## 1.  Introduction

According to Bandura, self-efficacy is the faith in one's capacities to arrange and execute the path of an action required to oversee forthcoming circumstances. In other terms, self-efficacy is an individual's confidence in their capacity to prevail in a specific circumstance [1]. Bandura portrayed these convictions as determinants of how individuals think, act, and feel. Recent times reveal teenagers often have lower levels of self-efficacy especially in studies [2]. Throughout their journey as a student they often face a lot of obstacles and difficulties which leads them to have lower levels of self-efficacy. Hence, having a lower level of self-efficacy makes them avoid the challenging task and lose confidence in their ability, thereby increasing their level of anxiety. This leads students to have social phobia and panic attacks [2].

## 2.  Literature Review

### 2.1 Self-Efficacy

[3] describes self-efficacy more explicitly as the conviction a person has in their capacity to address the difficulties in front of them and complete an undertaking effectively. Self-efficacy can be divided into two types which is general self-efficacy and social self-efficacy.  According to [4] general self-efficacy refers to the general faith of a person in their capacity to succeed, yet there are many increasingly categorically explicit types of self-efficacy such as parenting, scholastic and sports. Social self-efficacy is defined as an individual's confidence in their ability to engage in social interactional tasks necessary to initiate and maintain interpersonal relationships [5].

The psychological theory of self-efficacy is highly influenced by two major factors which are physiological and emotional arousal in an individual [6]. The higher the physiological and emotional arousal, the lower the level of self-efficacy experienced by an individual. Anxiety is one of the elements that can impact a person's self-efficacy level. [7] expressed that physiological and passionate feelings of excitement are among the elements that impact the person's self-

efficacy. [7] also suggested that in certain cases, when people are not triggered, miserable and worried nor experiencing cerebral pain, they experience a state of low anxiety [8]. In this state, an individual would have higher confidence to tackle their issues effectively. In other words, there is a negative relationship between levels of anxiety and levels of self-efficacy. Hence, in view of the self-efficacy hypothesis, factors such as low stress, reduced mental strains, increased efficient conditions, and positive social and educational program statuses may be related to higher levels of self-efficacy.

## 2.2. Anxiety

Anxiety is an emotion characterized by a disagreeable condition of inward unrest, frequently joined by apprehensive conduct such as pacing back and forth, somatic grumblings and rumination [9]. It is the emotionally terrible sentiments of fear over foreseen occasions, such as the sentiment of up and coming demise. Anxiety is an inclination of uneasiness and stress typically summed up and unfocused, resulting in an overreaction to a circumstance that is just emotionally observed as menacing [10]. It is regularly joined by solid tension, restlessness, fatigue and issues in fixation. Uneasiness can be suitable in certain circumstances; however, when experienced consistently, the individual may experience the ill effects of an anxiety disorder.

Anxiety is not the equivalent of fear, which is a reaction to a genuine or seen immediate threat, nervousness includes the desire for future threat. People who are confronting tension may pull back from circumstances which have incited uneasiness before. There are different sorts of anxiety. Existential anxiety can happen when an individual faces angst, an existential emergency, or nihilistic feelings [11]. Individuals can likewise face mathematical anxiety, somatic anxiety, stage dread or test anxiety. High levels of academic anxiety can negatively affect working memory [12]. Anxiety is also associated with high levels of worry that can affect academic performance. Hence, anxiety has been linked to poor academic performance.

## 2.3 Self-Efficacy and Anxiety

High self-efficacy may act as a defensive factor against the misery in anxiety or it can fuel anxiety levels in certain situations. In young people, low self-efficacy is unequivocally identified with anxiety and neuroticism, anxiety issue indications and burdensome manifestations [8]. Furthermore, those with low self-efficacy are likewise bound to encounter social fear, school fear, and emotional agitation. This relationship is not constrained to young children; secondary school competitors also benefit from high self-efficacy. When strongly confident in their own capacities related to games execution, they are buffered against the negative impacts of execution anxiety [13].

Another recent study was conducted on 312 students from Islamic Azad University to examine the relationship between research anxiety and self-efficacy. The findings show that the significance level for research, anxiety was calculated less than the error rate is calculated, therefore, it can be considered a good predictor for efficacy [14]. In other words, there is a significant negative relationship between research anxiety and self-efficacy.

This connection between general self-efficacy and anxiety was at first proposed by [7] himself. Bandura noticed that low self-efficacy is essentially the conviction that one does not have power over a circumstance and cannot oversee potential dangers, which intelligently prompts expanded anxiety (1988). The self-efficacy of an individual increases when they feel calmer and more relaxed. This outcome can start or proceed a self-rehashing cycle in which low self-efficacy prompts more noteworthy anxiety and more prominent avoidant practices, which prompts fewer opportunities to improve skills, and less chances to effectively adapt to trouble. Thus, this brings down the person's self-efficacy more significantly [15].

In summary, the level of social self-efficacy helps to play an active role in every area of life. These self-efficacy beliefs in a social context have the power to improve performance in academic tasks and career choice to generate optimism that eventually diminish the thoughts of hopelessness which is the prominent symptom of anxiety [16]. Sun described competency in social situations as "aspects of social behavior that are important with respect in preventing anxiety in children and adults". Self-efficacy beliefs influence individual's thought patterns and emotional reactions in a way that positive mood enhances perceived self-efficacy and despondent mood diminishes it [17].

Thus, the relationship between self-efficacy and anxiety is still unclear as previous research only discussed on one type of self-efficacy which is the general self-efficacy. Therefore, it would be useful to explore the relationship between general and social self-efficacy with anxiety experienced by university students. The independent variables of the study are general self-efficacy and social self-efficacy of the students whereas the dependent variable of the study is the student's level of anxiety. The predicted hypotheses in the following research are stated below:

H1: There is a negative effect between general self-efficacy and anxiety among university students.
H2: There is a negative effect between social self-efficacy and anxiety among university students.

## 3.  Methodology

The context of this survey was focused on the university/college students of two kinds of institutions. Stratified sampling was used when collecting the data from the participants where they were selected based on age group and only if they are at the undergraduate level of study.

### 3.1 Research Instruments

Self-report questionnaires were used to collect quantitative data. The questionnaires were chosen to measure the respondents' beliefs, attitudes and values [18]. The questionnaires were divided into three parts which were Part A and Part B. Part A comprised of the Self-Efficacy Scale (SES) and Part B consisted of the Self-Rating Anxiety Scale (SAS) respectively.

The Self-Efficacy Scale (SES) consists of a 30 item-scale. The questions were designed in a five-point Likert-type Scale. The response options were Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. The score ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). There were two constructs for Part A (General Self-Efficacy and Social Self-Efficacy). Items 2, 3, 4, 7, 8, 11, 12, 15, 16, 18, 20, 22, 23, 26, 27, 29 and 30 were used to measure General Self-Efficacy. Items 6, 10, 14, 19, 24 and 28 referred to Social Self-Efficacy. The remainder items were not scored because they were filler items. Items 3, 6, 7, 8, 11, 14, 18, 20, 22, 24, 26, 29 and 30 were then reverse-scored. The SES in Part A was scored easily by summing the individual items to comprise the subscale scores. The higher scores represented higher level of self-efficacy and lower scores indicated lower level of self-efficacy.

For Self-Rating Anxiety Scale (SAS), there were 20 items in the Self-Rating Anxiety Scale (SAS) scored along a four-point Likert Scale. They ranged from 1 to 4 according to "Some of the time", "Little of the time", "Most of the time" and "All of the time". There were two symptoms of the most commonly found characteristics of anxiety disorder (Affective and Somatic symptoms). Five of the items were worded symptomatically positive and 15 were worded symptomatically negative. The SAS in Part B was scored by summing the values in each item to produce a new score. The score ranged from 20 to 80. SAS index was derived by dividing the raw score by 80 that produced an index that ranged from .25 to 1.00. Higher scores equated to more anxiety whereas lower scores represented less anxiety.

### 3.2 Pilot Study

A pilot study was conducted among students at Quest International University before the actual research was carried out. This was to test out the questionnaire and see the reliability and validity of the questions when used in the context of a Malaysian population. The results from the pilot study could warn the researchers about potential problems they might encounter while using these questionnaires again for a Malaysian population. It could also help to improve the efficiency and quality of the research instruments.

According to the result, the test had an acceptable reliability with alpha Cronbach value of .65. There were no complaints from the respondents regarding the context and wording of the questionnaire. Hence, there was no problem in giving out the questionnaire to the participants in the actual research.

### 3.3 Participants and Procedures

There were 120 participants involved in this study. The age range of the students of both institutions were from 18 to 24. The students were from a population group from the Public and Private Universities/Colleges in Perak. There were 69 students from Private University/College and 51 students from Public University/College.

The questionnaires were distributed online via Google Forms to all participants in both public and private universities/colleges. They were given a short briefing of the purpose of the particular research on the landing page of the form. Consent to participate was indicated by advancing to the next page of the form before the collection of personal information.

### 3.4 Data Analysis

The data analysis of this survey was carried out after the questionnaires were collected and using IBM SPSS Statistics version 22 to analyse the collected data. Demographic details were analysed by using descriptive statistics to describe the characteristics of public and private universities/colleges. Multiple regression was used to analyse the collected data when constructs were present. This is to test if there were any effects between self-efficacy and social self-efficacy on anxiety.

## 4.  Results

Based on Table 1, it is notable that mean self-efficacy, MSE = 3.3528 whereas mean anxiety, Manx = 2.7139. The median for self-efficacy is 3.2667 whereas for anxiety is 2.70000. Furthermore, the mode for self-efficacy is 3.10 whereas for anxiety is 3.05. Therefore, it can be said that self-efficacy and anxiety are at moderate levels.

**Table 1 - Descriptive statistics for self-efficacy and anxiety among university students (N=120)**

| Variables | Mean | Median | Mode |
|---|---|---|---|
| Self-Efficacy | 3.3528 | 3.2667 | 3.10 |
| Anxiety | 2.7139 | 2.7000 | 3.05 |

Based on Table 2, The R-square value is .163 which means that general self-efficacy and social self-efficacy contributes 16.3% of variance on anxiety. It is noticeable that general self-efficacy has a regression coefficient of -.436 and therefore, as general self-efficacy increases by one (1) unit, anxiety decreases by -4.692 units, $t(2)=-.436$, $p<0.01$. Hence, general self-efficacy is a significant predictor in affecting anxiety. Apart from that, social self-efficacy has a regression coefficient of .121 and therefore, as social self-efficacy increases by one (1) unit, anxiety increases by 1.303 units, $t(2)=.121$, $p<0.01$. Hence, social self-efficacy is not a significant predictor in affecting anxiety.

**Table 2 - Effect of self-efficacy on anxiety (N=120)**

| Variables | B | SE B | B | T | Sig. (p) |
|---|---|---|---|---|---|
| General Self-Efficacy | -.007 | .002 | -.436 | -4.692 | .000 |
| Social Self-Efficacy | .006 | .005 | .121 | 1.303 | .195 |
| $R^2$ | | .163 | | | |

In Standardized Coefficient, general self-efficacy's beta coefficient is -.436 while social self-efficacy's is .121. Therefore, it can be said that general self-efficacy has significant effects on anxiety whereas social self-efficacy has no effect on anxiety. In conclusion, it is proven that there is a negative effect between general self-efficacy and anxiety whereas there is no effect between social self-efficacy and anxiety.

## 5. Discussion

This study found out that the increased self-efficacy predicted lower anxiety among public and private university/college students. The first hypothesis predicting a negative relationship between general self-efficacy affecting anxiety is therefore supported. Thus, this means that university students think that success characterised by low anxiety depends on a particular person's own skills. According to [1] general self-efficacy is the belief that a person is capable of arranging and performing the actions required to monitor and problem solve to achieve success. In contrast, the hypothesis of the negative effect between social self-efficacy and anxiety among university students is not accepted in this study.

In short, university students think that success depends on the individual themselves and not based on social factors. [19] also conducted similar research with a sample of 249 participants on the general self-efficacy, gender and social self-efficacy test on anxiety of students in Nigeria. The result of Onyeizugbo's study is that general self-efficacy correlated negatively with anxiety whereas social self-efficacy did not correlate with anxiety.

## 6. Limitation and Future Research

There are some limitations in this research which is the use of online surveys which may make it difficult to determine the reliability of the responses. Identities of the participants may be difficult to verify. Additionally, responses may not necessarily be collected organically; essentially they may change their answers after taking a break for several hours midway through the questionnaire. It would be useful to do a longitudinal study or time-series study to determine the changes in the individual's answers and to see if there are stable effects of their self-efficacy levels on anxiety levels. This can also lend into better test-retest reliability measures on distributing these questionnaires online.
The next limitation is the demographic details. There is a lack of demographic detail structures that may be needed for generating further analysis such as age, education level and race. Therefore, future research may involve these demographic details to provide an analysis of the area. The demographic information may be analysed to show that the major changes in the population of a norm can influence the relationship between self-efficacy level and anxiety level.

Furthermore, the data collected from both private and public universities were not contrasted to see their effects on the results. This is a confounding variable as the different sample populations may have an influence on the different constructs measured. It would be useful to explore this in further studies to see the interaction of this variable with self-efficacy levels. It would likely be possible to do a 2-way ANOVA by dividing the self-efficacy levels to high and low sum scorers. Thus it would be possible to examine the effect of private versus public universities on anxiety levels experienced, while also exploring any possible interaction effects with self-efficacy.

Moreover, future research can test the relationship between the self-efficacy and anxiety among university students with a wider sample size by collecting data from university students that are from different states. In addition, the future study can test on the relationship between the self-efficacy and anxiety among university students with different target of population such as high school students from public or private schools.

In conclusion, the study explored here was found to be useful in understanding the predictive effects of general self-efficacy on anxiety levels. It was also shown that social factors in self-efficacy do not influence anxiety levels. Thus, it is important to emphasise that confidence in one's own abilities in general is more important than the perception of abilities in relation to others.

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## References

[1]    Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4, pp. 71 81). New York: Academic Press. (Reprinted in Friedman [Ed.], Encyclopedia of mental health. San Diego: Academic Press, 1998).

[2]    Vitasari, P., Wahab, M. N. A., Othman, A., Herawan, T., & Sinnadurai, S. K. (2010). The Relationship between Study Anxiety and Academic Performance among Engineering  Students. Procedia - Social and Behavioral Sciences, 8, 490–497.

[3]    Akhtar, M. (2008). What is self-efficacy? Bandura's four sources of efficacy beliefs. Positive  Psychology UK.

[4]    Graham S, Weiner B. Theories and principles of motivation. In: Berliner DC, Calfee RC, editors, editors. Handbook of educational psychology. London, UK: Routledge; 1996. 63–84.

[5]    Smith, H.M., Betz, N.E. (2000). Development and validation of a scale of perceived social self-efficacy. J Career Assess, Vol.8, 283–301.

[6]    Maddux, J. E., & Stanley, M. A. (1986). Self-Efficacy Theory in Contemporary Psychology: An  Overview. Journal of Social and Clinical Psychology, Vol. 4, 249-255.doi:10.1521/jscp.1986.4.3.249.

[7]    Bandura, A. (2010). Self-Efficacy. The Corsini Encyclopedia of Psychology. doi:10.1002/9780470479216.

[8]    Muris, P. (2002). Relationships between self-efficacy and symptoms of anxiety disorders and depression in a normal adolescent sample. Personality and Individual Differences,32, 337-348.doi:10.1016/S0191-8869(01)00027-7.

[9]    Mills, N., Pajares, F., & Herron, C. (2006). A Reevaluation of the Role of Anxiety: Self-Efficacy, Anxiety, and Their Relation to Reading and Listening Proficiency. Foreign Language Annals, 39, 276–295. doi:10.1111/j.1944-9720.2006.

[10]   Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first year college student performance and adjustment. Journal of Educational Psychology, 93, 55-64. doi:10.1037/0022-0663.93.1.55 Goodwin, C. J. (2002). Research in Psychology: Methods and Design. United State of America: John Wiley and Sons, Inc.

[11]   Pajares, F., & Miller, M. D. (1994). Role of self-efficacy and self-concept beliefs in mathematical  problem solving: A path analysis. Journal of Educational Psychology, 86,193–203. doi:10.1037/00220663.86.2.193.

[12]   Owens, M., Stevenson, J., Hadwin, J. A., & Norgate, R. (2012). Anxiety and depression in  academic performance: An exploration of the mediating factors of worry and working memory. School Psychology International, 33(4), 433–449. doi: 10.11 77/01 4303 43 11427433.

[13]   Martin, J. J., & Gill, D. L. (1991). The relationships among competitive orientation, sport-confidence, self-efficacy, anxiety, and performance. Journal of Sport & Exercise Psychology, 13, 149-159. doi:10.1123/jsep.13.2.149.

[14]   Razavi, S., Shahrabi, A., & Siamian, H. (2007). The Relationship Between Research Anxiety  and Self-Efficacy. Materia Socio Medica, 29, 247. doi:10.5455/msm.2017.29.247-250.

[15]   Bandura, A. (1988). Self-efficacy conception of anxiety. Anxiety Research, 1, 77-98. doi:10.1080/10615808808248222.

[16]   Hackrtt, G. (1995). Self-efficacy and career choice and development. In: Bandura A, editor. Self-efficacy in changing societies. Cambridge, UK: Cambridge University  Press; 1995. pp. 1–45. LaMorte, W. W. (2016). The social cognitive theory. Boston University School of Public Health.

[17]   Ahmad, Z.R., Yasien, S. & Ahmad, R. (2004) Relationship between perceived social self-efficacy and depression in adolescents. Iran J Psychiatry Behav Sci, Vol. 8, 65-74.

[18]   Goodwin, C. J. (2002). Research in Psychology: Methods and Design. United State of America: John Wiley and Sons, Inc.

[19]   Onyeizugbo, E. U. (2010). General Self-Efficacy, Gender and Social Self-Efficacy as Moderators of Test Anxiety. Electronic Journal of Research in Educational Psychology, Vol. 8, 299–312.