

**Vol. 3, Issue Number 3, May 2014**

- [01] **Anecdotal Records as Tools for Assessing Learners' Progress in the Universal Basic Schools in Ekiti and Oyo States, Nigeria**

Views **244** since Jun. 14, 2014 Downloads **13** since Sep. 24, 2014

Samuel Oye Bandele, Matthew Femi Omodara, James Ayodele Oluwatayo

Pages: 122-127 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.edu.20140303.11

- [02] **The Application of Network Automated Essay Scoring System in College English Writing Course**

Views **156** since Jun. 14, 2014 Downloads **10** since Sep. 24, 2014

Zhang Qiang

Pages: 128-132 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.edu.20140303.12

- [03] **SW-HP Model for Formulating Environmental Education Strategies for Environmental Experts of Tehran Municipality**

Views **165** since Jun. 14, 2014 Downloads **12** since Sep. 24, 2014

Shahro Karami, Seyed Mohammad Shobeiri, Vafa Ghaemmaghami

Pages: 133-139 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.edu.20140303.13

- [04] **Educational Universalization in the Brazil**

Views **337** since Jun. 14, 2014 Downloads **13** since Sep. 24, 2014

Wellington Amâncio da Silva

Pages: 140-145 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.edu.20140303.14

- [05] **Emerging Issues on Child Abuse: Voices of Student Teachers**

Views **133** since Jun. 14, 2014 Downloads **8** since Sep. 24, 2014

Ephias Gudyanga

Pages: 146-152 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.edu.20140303.15

- [06] **Academic Self-Efficacy in First Year Students College of Health Sciences**

Views **147** since Jun. 14, 2014 Downloads **9** since Sep. 24, 2014

Yunuen Socorro Rangel, Humberto Blanco, José René Blanco, Jeanette Lopez-Walle, Martín Alonso González, Gerónimo Mendoza

Pages: 153-158 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.edu.20140303.16

- [07] **Convolutd Path, Invisible Force and Girls' Education in Ghana**

Views **172** since Jun. 14, 2014 Downloads **8** since Sep. 24, 2014

Emmanuel Wedam, Irene Akobour Debrah, Joseph Yaw Dwamena Quansah

Pages: 159-169 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.edu.20140303.17

- [08] **Deep Swimming and Murky Waters: Phenomenological Interviewing - Reflections from the Field**

Views **129** since Jun. 14, 2014 Downloads **10** since Sep. 24, 2014

David King

Pages: 170-178 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.edu.20140303.18

- [09] **Concept Images of Trapezoid: Some Cases from Turkey**  
Views **138** since Jun. 14, 2014 Downloads **14** since Sep. 24, 2014  
Elif Türnüklü  
Pages: 179-185 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)  
DOI: 10.11648/j.edu.20140303.19
- [10] **An Alternative Learning through Open Course Ware (OCW) in Indonesia**  
Views **162** since Jun. 14, 2014 Downloads **12** since Sep. 24, 2014  
Safitri Yosita Ratri  
Pages: 186-189 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)  
DOI: 10.11648/j.edu.20140303.20
- [11] **Comparison of Teacher Licensing between the United States of America and Malaysia: Implementation and Practical Implication**  
Views **146** since Jun. 14, 2014 Downloads **11** since Sep. 24, 2014  
Kahrol Mohd Salleh, Nor Lisa Sulaiman, Heidi Frederiksen  
Pages: 190-194 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)  
DOI: 10.11648/j.edu.20140303.21
- [12] **The Concept of Pedagogical Innovation in Higher Education**  
Views **197** since Jun. 14, 2014 Downloads **17** since Sep. 24, 2014  
Anne Mai Walder  
Pages: 195-202 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)  
DOI: 10.11648/j.edu.20140303.22

## Abstracting and Indexing

### WorldCat

WorldCat is the world's largest network of library content and services. WorldCat libraries are dedicated to providing access to their resources on the Web, where most people start their search for information.

### Academickeys

AcademicKeys.com is the premier source for academic employment. Academickeys' 17 discipline-focused sites offer comprehensive information about faculty, educational resources, research interests, and professional activities pertinent to institutions of higher education. More than 89% of the top 120 universities (as ranked by US News and World Report) are posting their available higher ed jobs with AcademicKeys.com.

### Researchbib

ResearchBib, which is providing a global and local service for researcher, is a free academic resource publishing system that is flexible, easy to use.

### Directory of Research Journals Indexing

The Directory of Research Journal Indexing (DRJI) is to increase the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increased usage and impact. DRJI supply champion has access to global-renowned content in all discipline areas including magazine and journal articles.

### JournalSeek

Genamics JournalSeek is the largest completely categorized database of freely available journal information available on the internet. The database presently contains 100101 titles. Journal information includes the description (aims and scope), journal abbreviation, journal homepage link, subject category and ISSN. Searching this information allows the rapid identification of potential journals to publish your research in, as well as allow you to find new journals of interest to your field.

### Polish Scholarly Bibliography

Polish Scholarly Bibliography (PBN) is a portal of the Polish Ministry of Science and Higher Education, collecting information on publications of Polish scientists and Polish and foreign scholarly journals. PBN is a part of POL-on - The System of Information on Higher Education.

### Electronic Journals Library

The Elektronische Zeitschriftenbibliothek EZB (Electronic Journals Library) offers an effective use of both scientific and academic journals publishing full text articles in the internet.

This service has been developed at the Universitätsbibliothek Regensburg (University Library of Regensburg) in cooperation with the Universitätsbibliothek der Technischen Universität München (University Library of the Technical University of Munich).

### **Zeitschriftendatenbank**

The ZDB is the world's largest specialized database for serial titles (journals, annuals, newspapers etc., incl. e-journals). The ZDB-network is managed by the Staatsbibliothek zu Berlin; the database is held on a server of the Deutsche Nationalbibliothek.

The ZDB actually contains more than 1.6 million bibliographic records of serials from the 16th century onwards, from all countries, in all languages, held in 4.300 German and Austrian libraries, with 11.5 million holdings information. It does not contain contents, i. e. journal articles.

### **EZB**

The Electronic Journals Library was founded in 1997 by the University Library of Regensburg in co-operation with the Technische Universität München University Library within the framework of a project. The aim of this project was to present e-journals to the library users in a clearly arranged user-interface and to create for the EZB member libraries an efficient administration tool for e-journal licences.

### **Wissenschaftszentrum Berlin**

The WZB Berlin Social Research Center conducts basic research with a focus on problems of modern societies in a globalized world. The research is theory-based, problem-oriented, often long-term and mostly based on international comparisons.

# Academic self-efficacy in first year students college of health sciences

Yunuen Socorro Rangel<sup>1</sup>, Humberto Blanco<sup>1</sup>, José René Blanco<sup>1</sup>, Jeanette Lopez-Walle<sup>2</sup>,  
Martín Alonso González<sup>1,\*</sup>, Gerónimo Mendoza<sup>3</sup>

<sup>1</sup>Faculty of Physical Culture Sciences, Autonomous University of Chihuahua, México

<sup>2</sup>Faculty of Sport Organization, Autonomous University of Nuevo León, México

<sup>3</sup>Faculty of Philosophy and Letters, Autonomous University of Chihuahua, México

## Email address:

[mgonzalez@uach.mx](mailto:mgonzalez@uach.mx) (M. A. González)

## To cite this article:

Yunuen Socorro Rangel, Humberto Blanco, José René Blanco, Jeanette Lopez-Walle, Martín Alonso González, Gerónimo Mendoza.

Academic Self-Efficacy in First Year Students College of Health Sciences. *Education Journal*. Vol. 3, No. 3, 2014, pp. 153-158.

doi: 10.11648/j.edu.20140303.16

---

**Abstract:** Self-efficacy learning is an important component of learning for college. Academic self-efficacy refers to the degree of confidence that health sciences students could successfully complete on college-task. The purpose of this research lies on the specific characteristics of health sciences students according to their academic self-efficacy by comparing their profiles with students that chose a different discipline. The Academic self-efficacy sample was done to 2089 subjects: 902 women and 1187 men, all of them freshmen students from the different careers at the Autonomous University of Chihuahua who responded to a survey questionnaire, with an average age of 18.23 years (SD = 0.74). This is a quantitative approach with a descriptive survey design type. The results obtained by comparing students of health sciences, with students from other disciplines show that perceived self-efficacy in academic behaviors is very similar each other.

**Keywords:** Student's Beliefs, College, Academic Performance, Student's Characteristics, Academic Self-Efficacy

---

## 1. Introduction

Self-efficacy is traditionally understood as referring to a domain or a specific task. However, some researchers have given a general meaning of self-efficacy refers to the confidence that students could successfully do on a given college related task, as a personal competence on how effective can be the person to confront a variety of stressful situations [1-3]. Self-efficacy can be defined as each individual's judgments about their own abilities which will organize and execute their actions until accomplishing the desired performance [4,5], in the same way [6] states, person's beliefs that has about their abilities to organize and execute routes for an action required in unexpected situations or based on performance levels, or [7] defined it as the belief of a person has on their abilities to learn or perform behaviors at pre-defined levels.

The social-cognitive theory proposed by Bandura [8] emphasizes the role of self-reference by which the human beings are capable of acting in their environment and consequently to transform it, people create and develop self-perceptions about their ability, the self-perceptions

become the means by which they pursue their goals and make their decisions [9,10]. That is, the way people act is part of the intervention product of their beliefs about what they are qualified.

Within educational contexts have been interesting to understand the cognitive and behavioral factors that help or hinder student's performance in their academic work and how the academic tasks are related to their overall development. In the educational psychology area, the self-efficacy has received special attention and has generated significant research advances that have contributed to the improvement of pedagogy experiences and teaching [11,12]. Empirical research has amply demonstrated that self-efficacy is to be more predictive of academic performance than other cognitive variables [13], also it is able to predict later success [4,14] and it is an important cognitive mediator of competence and performance as favoring cognitive processes [15].

Therefore the belief self-efficacy can be developed and to increase the people's opportunity to get a better performance. It consolidates the idea of improving the perception of being able to learn is a valuable educational objective. The

empowerment will serve as a carrier for improving other outcomes such academic achievement and self-esteem.

This research is basically a descriptive study that attempts to characterize students opting for a degree in health sciences, as to the perceived effectiveness of their academic performance, to compare their profile with those students who choose another career.

## 2. Method

### 2.1. Participants

A sample of 2,089 university students, 902 women and 1,187 men, aged 17-20 years ( $M = 18.23$ ;  $SD = .74$ ) participated in the present study. The sample was constituted by all the first year university students from each degree offered of the Autonomous University of Chihuahua (January-June 2012). A convenience sampling was used in order to try covering the representative of all the degrees.

### 2.2. Instrument

The self-efficacy in academic behaviors was measured by the *Self-efficacy Academic Behaviors Scale* [16]. This questionnaire consists of a 13-item scale with three subscales: communication (4 items), attention (5 items) and excellence (4 items). According to previous studies [17,18], in the Mexican academic context students are commonly assessment by a scale from 0 to 10, in the present study a Likert-type scale from 0 to 10 was chosen. For each domain (item) participants are asked about how capable they feel, how much interest they have, and if they would make an effort to change how they will be capable. Therefore, all the participants responded to each of the 13 items of the questionnaire in the three different scenarios: (a) *Scenario of perceived ability*, responding into the context “how capable I feel to... to manage in each of the domains of the competences above mentioned”; (b) *Scenario of interest in being able*, responding into the context “how much interest I have in being able to... to manage in each of the domains of the competences above mentioned”; and (c) *Scenario of change to be able to*, responding into the context “if I would make an effort to change, how much capable I will be able to... to manage in each of the domains of the competences above mentioned”.

When calculating the scores for the three subscales (communication, attention and excellence) five different scores or indexes were calculated: (1) *Perceived self-efficacy*, obtained from the average scores in the scenario of perceived ability; (2) *Desired self-efficacy*, calculated from the average scores in the scenario of interest of being able; (3) *Reachable self-efficacy*, obtained from the mean scores in the scenario of being able; (4) *Dissatisfaction or dissonance in self-efficacy*, calculated from the mean difference between desired self-efficacy and perceived self-efficacy; and (5) *Possibility of improvement in the perceived self-efficacy*, calculated from the mean difference between reachable self-efficacy and perceived self-efficacy. A higher score

indicates greater self-efficacy, whereas a lower score represents lesser self-determination. The *Self-efficacy Academic Behaviors Scale* demonstrated adequate psychometric properties (GFI = .936; RMSEA = .063; Cronbach coefficient alphas = .836, .800 and .740 for attention, excellence and communication, respectively) [11].

### 2.3. Design

Regarding the design of the study, a quantitative approach with a descriptive and transversal survey design was used [19]. The independent variable was discipline (Education and Humanities, Health Sciences, Physical Education, Agricultural Sciences, Political Sciences, Social and Administrative Sciences, Engineering and Technology) and the dependent variables were the mean scores on the five Self-efficacy indexes of the subscales communication, attention and excellence.

### 2.4. Procedure

All the freshmen university students from each degree offered by the Autonomous University of Chihuahua in the semester January-June of 2012 were invited to participate in the present study. These university students were fully informed about all the features of the project. Then, all the students that agree to participate were asked to sign a written informed consent. After the student's approvals were obtained, participants completed the above mentioned questionnaire by means of the instrument module administrator of the *Scales Editor Version 2.0* [20].

Participants completed the questionnaire in the computer centers of their faculties during a session. At the beginning of the session the researchers gave a general introduction about the importance of the research and how to access the questionnaire through the software. When the participants were into the editor, the instructions about how to fill out the questionnaire correctly appeared before the instrument. Additionally, the participants were advised to ask for help if confused concerning either the instructions or the clarity of a particular item. Completion of the entire questionnaire took approximately 30 minutes. At the end of the session their participation was welcomed. Afterward, when all the participants completed the questionnaire, the data were collected by means of the results generator module of the *Scales Editor Version 2.0* [20].

### 2.5. Data Analysis

Descriptive statistics for all the variables were calculated. Subsequently, after verifying that the data fulfill the assumptions of parametric statistical analyses, a one-way univariate analysis of variance (ANOVA) followed by the Scheffé test, were used to examine the differences between health sciences and the other disciplines on the reported self-efficacy in communication, attention and excellence scores. All statistical analyses were performed using the SPSS version 20.0 for Windows (IBM® SPSS® Statistics 20). The statistical significance level was set at  $p < .05$ .

### 3. Results

It's important to explain that, for possible comparisons between the different disciplines. We are only interested in those which compare the perception of the health sciences students with other disciplines students' on each of the 5 items previously defined.

#### 3.1. Subscale Communication

According to the results there are significant differences in the first four indexes studied (Table 1). Students from health sciences are perceived with a higher level of self-efficacy wanted on the Communication factor than students from other disciplines, as well as a higher self-efficacy wanted on engineering and technology students, no other differences found correspond to comparisons related to health sciences students (Table 2).

#### 3.2. Attention Subscale

According to the results there are significant differences in all indexes studied (Table 3). In the attention factor, students of health sciences are perceived with higher efficacy and less chance to improve their self-efficacy than political sciences students, who wish a higher level of efficacy than students from other disciplines, and with a greater possibility to be more self-efficacious than agricultural sciences students. Other differences found do not correspond to the comparisons related to health sciences students (Table 4).

#### 3.3. Excellence Subscale

In according to the results there are significant differences in all indexes studied (Table 5). In the excellence factor, health sciences students are perceived with higher efficacy and less chance to improve their self-efficacy than physical education, education and humanities, political sciences, agricultural sciences, engineering and technology students. The health sciences students are perceived with a higher level of wished self-efficacy than students from other disciplines. They are most likely to be more self-efficacious than agricultural sciences, engineering and technology students. Finally, the health sciences students with a lower level of dissatisfaction or disagreement with their perceived self-efficacy than education and humanities, engineering and technology students. Other differences found do not correspond to students related to comparisons health sciences students (Table 6).

### 4. Discussion and Conclusions

Below to provide a summary of the main findings in our study, always trying to determine the differences and similarities between the freshmen students of health sciences and other disciplines of the Autonomous University of Chihuahua in their perceived self-efficacy in different academic behaviors.

#### 4.1. Self-Efficacy Perception

Regarding the studied academic behaviors, self-efficacy perceived for students in health sciences is similar to that of students in other disciplines, because of the 18 possible comparisons only six of them were found with significant differences: in attention factor, the health sciences students perceived with most self-efficacy that of political science students, and the excellence factor, with higher self-efficacy than students in other disciplines; except for social and administrative sciences students, than no difference. This means that in relation to indicators of communication factor: expressing ideas clearly, make comments and relevant inputs, in case of disagreement to be able to of engage in dialogue with teachers, feeling good about their performance when speaking in front of a class or group of people; the indicators of attention factor are: to listen carefully when the teacher explains a question clarifies any doubt to a partner, or listening to questions and contributions from colleagues, to pay attention when teachers or peers give the class and listen carefully to the questions and comments from my teachers, students of health sciences are perceived as self-efficacy as students from other disciplines.

#### 4.2. Desired Self-Efficacy

The desired self-efficacy profile by the health sciences students in academic behaviors studied, it is always higher than that of students in other disciplines, because of the 18 possible comparisons only one of them resulted in no significant differences.

#### 4.3. Reachable Self-Efficacy

The profile of the students in health sciences in self-efficacy level in the future academic behaviors studied is very similar to that of students in other disciplines, as only four of the possible comparisons resulted in significant differences.

#### 4.4. Dissatisfaction or Dissonance in Self-Efficacy

The profile of students in health sciences in relation to the dissatisfaction or dissonance in their perceived self-efficacy in academic behaviors studied is practically equal to that of students in other disciplines, as only two of the possible comparisons were with differences significant.

#### 4.5. Possibility of Improvement in the Perceived Self-Efficacy

The possibility of improvement in the perceived self-efficacy profile of students in health sciences in academic behavior is similar to that of students in other disciplines, because of the 18 possible comparisons were only six of them with significant differences: in attention factor, are less likely to perceive improvement in their self-efficacy for students of Political Sciences, and the excellence factor, with no chance of improvement in self-efficacy than students in five of the six disciplines that was compared.

In summary, the results obtained when comparing the efficacy profiles of students in health sciences freshman, with new students from other disciplines show that self-efficacy in academic behaviors, except for self-efficacy desired is concerned, is very similar between each other, which is a very encouraging result as it does see that the idea that students come to certain degrees of " lower quality " than other degrees, it's just a prejudice.

**Table 1.** Results of ANOVA for the discipline variable on the five self-efficacy indexes. Communication subscale.

| Source  | SS      | df   | MS   | F       |
|---|---------|------|------|---------|
| Perceived self-efficacy                                   |         |      |      |         |
| Discipline  | 49.79   | 6    | 8.30 | 3.51**  |
| Error   | 4920.38 | 2082 | 2.36 |         |
| Desired self-efficacy                                     |         |      |      |         |
| Discipline  | 53.65   | 6    | 8.94 | 10.13** |
| Error   | 1837.56 | 2082 | 0.88 |         |
| Reachable self-efficacy                                   |         |      |      |         |
| Discipline  | 25.23   | 6    | 4.21 | 5.69**  |
| Error   | 1539.05 | 2082 | 0.74 |         |
| Dissatisfaction or dissonance in self-efficacy            |         |      |      |         |
| Discipline  | 19.66   | 6    | 3.28 | 2.17*   |
| Error   | 3150.45 | 2082 | 1.51 |         |
| Possibility of improvement in the perceived self-efficacy |         |      |      |         |
| Discipline  | 12.89   | 6    | 2.15 | 1.57    |
| Error   | 2850.14 | 2082 | 1.37 |         |

\* p < .05 \*\* p < .01

**Table 2.** Mean of the self-efficacy indexes. Communication subscale.

| Self-efficacy index                                       | Discipline       |                  |     |     |                  |                  |                  |
|---|------------------|------------------|-----|-----|------------------|------------------|------------------|
|   | PE               | HS               | EH  | SAS | PS               | ET               | AS               |
| Perceived self-efficacy                                   | 7.5              | 7.6              | 7.5 | 7.8 | 7.5              | 7.4              | 7.4              |
| Desired self-efficacy                                     | 9.0 <sub>a</sub> | 9.4 <sub>a</sub> | 9.2 | 9.4 | 9.1 <sub>a</sub> | 9.1 <sub>a</sub> | 9.0 <sub>a</sub> |
| Reachable self-efficacy                                   | 9.3              | 9.3 <sub>a</sub> | 9.2 | 9.4 | 9.3              | 9.1 <sub>a</sub> | 9.1              |
| Dissatisfaction or dissonance in self-efficacy            | 1.5              | 1.8              | 1.7 | 1.6 | 1.6              | 1.7              | 1.6              |
| Possibility of improvement in the perceived self-efficacy | 1.8              | 1.7              | 1.7 | 1.6 | 1.9              | 1.7              | 1.7              |

Note. PE=Physical Education; HS=Health Sciences; EH=Education and Humanities; SAS=Social and Administrative Sciences; PS=Political Sciences; ET=Engineering and Technology; AS= Agricultural Sciences. Means in the same row with the subscript "a" differ at a level of at least p = .05 with the mean of the discipline of health sciences. Means with the subscript "a" that are in the same row differ at a level of at least p = .05 with the mean of the discipline of health sciences (HS).

**Table 3.** Results of ANOVA for the discipline variable on the five self-efficacy indexes. Attention subscale.

| Source   | SS      | df   | MS   | F       |
|--|---------|------|------|---------|
| Perceived self-efficacy                        |         |      |      |         |
| Discipline                                     | 32.87   | 6    | 5.48 | 5.08**  |
| Error  | 2243.69 | 2082 | 1.08 |         |
| Desired self-efficacy                          |         |      |      |         |
| Discipline                                     | 36.51   | 6    | 6.08 | 12.85** |
| Error  | 985.49  | 2082 | 0.47 |         |
| Reachable self-efficacy                        |         |      |      |         |
| Discipline                                     | 6.96    | 6    | 1.16 | 3.59**  |
| Error  | 671.86  | 2082 | 0.32 |         |
| Dissatisfaction or dissonance in self-efficacy |         |      |      |         |
| Discipline                                     | 8.43    | 6    | 1.41 | 2.23*   |
| Error  | 1311.79 | 2082 | 0.63 |         |

| Source  | SS      | df   | MS   | F      |
|---|---------|------|------|--------|
| Possibility of improvement in the perceived self-efficacy |         |      |      |        |
| Discipline  | 21.64   | 6    | 3.61 | 5.43** |
| Error   | 1382.27 | 2082 | 0.66 |        |

\* p < .05 \*\* p < .01

**Table 4.** Means of the self-efficacy indexes. Attention subscale.

| self-efficacy index                                       | Discipline       |                  |                  |                  |                  |                  |                  |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|   | PE               | HS               | EH               | SAS              | PS               | ET               | AS               |
| Perceived self-efficacy                                   | 8.2              | 8.4 <sub>a</sub> | 8.3              | 8.3              | 7.9 <sub>a</sub> | 8.2              | 8.2              |
| Desired self-efficacy                                     | 9.3 <sub>a</sub> | 9.7 <sub>a</sub> | 9.4 <sub>a</sub> | 9.4 <sub>a</sub> | 9.2 <sub>a</sub> | 9.3 <sub>a</sub> | 9.3 <sub>a</sub> |
| Reachable self-efficacy                                   | 9.5              | 9.6 <sub>a</sub> | 9.5              | 9.6              | 9.5              | 9.5              | 9.4 <sub>a</sub> |
| Dissatisfaction or dissonance in self-efficacy            | 1.0              | 1.2              | 1.2              | 1.2              | 1.2              | 1.1              | 1.1              |
| Possibility of improvement in the perceived self-efficacy | 1.3              | 1.2 <sub>a</sub> | 1.3              | 1.3              | 1.6 <sub>a</sub> | 1.3              | 1.2              |

Note. PE=Physical Education; HS=Health Sciences; EH=Education and Humanities; SAS=Social and Administrative Sciences; PS=Political Sciences; ET=Engineering and Technology; AS= Agricultural Sciences. Means in the same row with the subscript "a" differ at a level of at least p = .05 with the mean of the discipline of health sciences. Means with the subscript "a" that are in the same row differ at a level of at least p = .05 with the mean of the discipline of health sciences (HS).

**Table 5.** Results of ANOVA for the discipline variable on the five self-efficacy indexes. Excellence subscale.

| Source  | SS      | df   | MS    | F      |
|---|---------|------|-------|--------|
| Perceived self-efficacy                                   |         |      |       |        |
| Discipline  | 91.79   | 6    | 15.30 | 9.64** |
| Error   | 3304.21 | 2082 | 1.59  |        |
| Desired self-efficacy                                     |         |      |       |        |
| Discipline  | 20.05   | 6    | 3.34  | 9.85** |
| Error   | 706.21  | 2082 | 0.34  |        |
| Reachable self-efficacy                                   |         |      |       |        |
| Discipline  | 6.50    | 6    | 1.08  | 4.25** |
| Error   | 530.49  | 2082 | 0.25  |        |
| Dissatisfaction or dissonance in self-efficacy            |         |      |       |        |
| Discipline  | 40.06   | 6    | 6.68  | 5.51** |
| Error   | 2522.85 | 2082 | 1.21  |        |
| Possibility of improvement in the perceived self-efficacy |         |      |       |        |
| Discipline  | 56.67   | 6    | 9.44  | 8.65** |
| Error   | 2272.06 | 2082 | 1.09  |        |

\* p < .05 \*\* p < .01

**Table 6.** Means of the self-efficacy indexes. Excellence subscale.

| self-efficacy index                                       | Discipline       |                  |                  |                  |                  |                  |                  |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|   | PE               | HS               | EH               | SAS              | PS               | ET               | AS               |
| Perceived self-efficacy                                   | 8.3 <sub>a</sub> | 8.8 <sub>a</sub> | 8.0 <sub>a</sub> | 8.5              | 8.2 <sub>a</sub> | 8.1 <sub>a</sub> | 8.2 <sub>a</sub> |
| Desired self-efficacy                                     | 9.5 <sub>a</sub> | 9.9 <sub>a</sub> | 9.6 <sub>a</sub> | 9.7 <sub>a</sub> | 9.5 <sub>a</sub> | 9.6 <sub>a</sub> | 9.6 <sub>a</sub> |
| Reachable self-efficacy                                   | 9.7              | 9.8 <sub>a</sub> | 9.6              | 9.7              | 9.7              | 9.6 <sub>a</sub> | 9.6 <sub>a</sub> |
| Dissatisfaction or dissonance in self-efficacy            | 1.2              | 1.1 <sub>a</sub> | 1.5 <sub>a</sub> | 1.2              | 1.3              | 1.4 <sub>a</sub> | 1.4              |
| Possibility of improvement in the perceived self-efficacy | 1.4 <sub>a</sub> | 1.0 <sub>a</sub> | 1.6 <sub>a</sub> | 1.2              | 1.4 <sub>a</sub> | 1.5 <sub>a</sub> | 1.4 <sub>a</sub> |

Note. PE=Physical Education; HS=Health Sciences; EH=Education and Humanities; SAS=Social and Administrative Sciences; PS=Political Sciences; ET=Engineering and Technology; AS= Agricultural Sciences. Means in the same row with the subscript "a" differ at a level of at least p = .05 with the mean of the discipline of health sciences. Means with the subscript "a" that are in the same row differ at a level of at least p = .05 with the mean of the discipline of health sciences (HS).



## Acknowledgements

This study is part of a project funded by the Mexican Ministry of Education-Department of Higher Education-General Directorate of the University Education in Mexico [Secretaría de Educación Pública-Subsecretaría de Educación Superior-Dirección General de Educación Superior Universitaria de México] (OF-13-6894). Additionally, the second author is supported by a grant from the National Council of Science and Technology of Mexico (Conacyt).

## References

- [1] Choi, N. (2004). Sex role group differences in specific, academic, and general self-efficacy. *The Journal of Psychology*, Vol. 138, Num. 2, Pag. 149-159.
- [2] Luszczynska, A., Gibbons, F., Piko, B., & Tekozel, M. (2004). Self-regulatory cognitions, social comparison, perceived peers' behaviors as predictors of nutrition and physical activity: A comparison among adolescents in Hungary, Poland, Turkey, and USA. *Psychology and Health*, Vol. 19, Num. 5, Pag. 577-593.
- [3] Luszczynska, A., Scholz, U., & Schwarzer, R. (2005). The general self-efficacy scale: Multicultural validation studies. *The Journal of Psychology*, Vol. 139, Num. 5, Pag. 439-457.
- [4] Bandura, A. (1997). *Self-efficacy: The exercise of Control*. New York: Freeman.
- [5] Ornelas, M., Blanco, H., Rodríguez, J. M., & Flores, F. J. (2011). Psychometric analysis of the self-efficacy scale behavior of physical health care in university of first grade. *University Education*, Vol. 4, Num. 6, Pag. 21-34.
- [6] Ornelas, M., Blanco, H., Rodríguez, J. M., & Flores, F. J. (2011). Análisis psicométrico de la escala autoeficacia en conductas de cuidado de la salud física en universitarios de primer ingreso. *Formación Universitaria*, Vol. 4, Num. 6, Pag. 21-34.
- [7] Pajares, F. (2001). Self-efficacy beliefs in academic settings. *Review of Educational Research*, Vol. 66, Num. 4, Pag. 543-578.
- [8] Schunk, D., & Zimmerman, B. (1997). Developing self-efficacious readers and writers: the role of social and self-regulatory processes. En J. T. Guthrie & A. Wigfield (Eds.), *Reading engagement: motivation readers through integrated instruction* (pp. 34-50). Newark, DE: International Reading Association.
- [9] Bandura, A. (1986). *Thought and action. Social foundations*. Madrid: Alianza.
- [10] Bandura, A. (1986). *Pensamiento y acción. Fundamentos sociales*. Madrid: Alianza.
- [11] Asbún, C., & Ferreira, Y. (2004). Professional self-efficacy and gender in high school adolescents in the south of the city of La Paz. *Ajayu Journal*, Vol. 2, Num. 1. <http://www.ucb.edu.bo/Publicaciones/Ajayu/v2n1/v2n1a3.html>
- [12] Asbún, C., & Ferreira, Y. (2004). Autoeficacia profesional y género en adolescentes de cuarto de secundaria de la zona sur de la ciudad de La Paz. *Revista Ajayu*, Vol. 2, Num. 1. <http://www.ucb.edu.bo/Publicaciones/Ajayu/v2n1/v2n1a3.html>
- [13] Gutiérrez, M., Ampara, E., & Carminal, P. (2011). Relationships between empathy, prosocial behavior, aggression, self-efficacy and personal and social responsibility of school. *Psicothema*, Vol. 23, Num. 1, Pag. 13-19.
- [14] Gutiérrez, M., Ampara, E., & Carminal, P. (2011). Relaciones entre empatía, conducta prosocial, agresividad, autoeficacia y responsabilidad personal y social de los escolares. *Psicothema*, Vol. 23, Num. 1, Pag. 13-19.
- [15] Blanco, H., Ornelas, M., Rueda, M. B., & Martínez, M. (2013). Factor structure of the scale of self-efficacy in academic behaviors in college of social sciences. *Mexican Journal of Educational Research*, Vol. 30, Num. 1, Pag. 79-88.
- [16] Blanco, H., Ornelas, M., Rueda, M. B., & Martínez, M. (2013). Composición factorial de la escala de autoeficacia en conductas académicas en universitarios de ciencias sociales. *Revista Mexicana de Investigación Educativa*, Vol. 30, Num. 1, Pag. 79-88.
- [17] Pérez, E., Lescano, C., Heredia, D., Zalazar, P., Furlán, L., & Martínez, M. (2011). Development and psychometric analysis of self-efficacy inventory for multiple intelligences in Argentine children *Psicoperspectivas*, Vol. 10, Num. 1, Pag. 169-189.
- [18] Pérez, E., Lescano, C., Heredia, D., Zalazar, P., Furlán, L., & Martínez, M. (2011). Desarrollo y análisis psicométricos de un inventario de autoeficacia para inteligencias múltiples en niños argentinos *Psicoperspectivas*, Vol. 10, Num. 1, Pag. 169-189.
- [19] Bandura, A. (1982). Self-efficacy mechanism inhuman agency. *American Psychologist*, Vol. 37, Num. 2, 122-147
- [20] Pajares, F., & Schunk, D. (2001). Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement. En R. Riding & S. Rayner (Eds.), *Self Perception* (pp. 239-266). London: Ablex Publishing.
- [21] Pintrich, P., & De Groot, E. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, Vol. 82, Num. 1, Pag. 33-40.
- [22] Blanco, H., Martínez, M., Ornelas, M., Flores, F. J., & Peinado, J. E. (2011). Validation of self-efficacy scales in academic behaviors and health care. Mexico: Publishing Doble Hélice
- [23] Blanco, H., Martínez, M., Ornelas, M., Flores, F. J., & Peinado, J. E. (2011). Validación de las escalas autoeficacia en conductas académicas y cuidado de la salud. México: Doble Hélice Ediciones.
- [24] Blanco, H., Martínez, M., Zueck, M. d. C., & Gastélum, G. (2011). Análisis psicométrico de la escala autoeficacia en conductas académicas en universitarios de primer ingreso. *Actualidades Investigativas en Educación*, Vol. 11, Num. 3, Pag. 1-27.
- [25] Blanco, H., Martínez, M., Zueck, M. d. C., & Gastélum, G. (2011). Psychometric analysis of the self-efficacy scale in academic behaviors in college of first grade. *Investigative News in Education*. Vol. 11, Num. 3, Pag. 1-27.

- [26] Vicianá, J., Cervelló, E. M., & Ramírez, J. (2007). Effects of manipulating positive and negative feedback on goal orientation, perceived motivational climate, satisfaction, task choice, perception of ability, and attitude to physical education lessons. *Perceptual and motor skills*, Vol. 105, Num. 1, Pag. 67-82
- [27] Hernández, R., Fernández, C., & Baptista, P. (2010). *Research Methodology*. México: McGraw- Hill.
- [28] Hernández, R., Fernández, C., & Baptista, P. (2010). *Metodología de la investigación*. México: McGraw- Hill.
- [29] Blanco, H., Ornelas, M., Tristán, J. L., Cocca, A., Mayorga-Vega, D., López-Walle, J., & Vicianá, J. (2013). Editor for creating and applying computerise surveys. *Procedia Social and Behavioral Sciences*, Num.106, Pag. 935-940.