

Woolfolk and Moran's Psychometric Properties of Teachers' Sense of Efficacy Scale in the Algerian Environment

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Abstract: The current study aims to measure the psychometric characteristics of the Teacher's Sense of Efficacy measure of Woolfolk and Tschannen-Moran (2001) on the Algerian environment in its lengthy Arabic version; Using the descriptive curriculum and applying it to a sample of primary education professors of 195 They work in Algerian schools in the city of Ouargla, which have been selected in the form of random cluster surveys; Honesty calculated Discriminatory for items and sincerity of internal consistency, half-split stability as well as internal consistency stability through calculation Cronbach's alpha; The results of this have resulted in the scale enjoying good honesty indicators, and high reliability indicators, from which we have concluded The measure of Teachers' Sense of Efficacy, as expressed in the Algerian environment, has psychometric characteristics consistent with Good scale specifications.

Keywords: Teachers' Sense of Efficacy; professor of primary education; psychometric characteristics; honesty; reliability.

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1 - Introduction

The teacher is an important factor in the education process, as the impact of the competent teacher lasts for many generations and continues effectively to register services for humanity - which he himself may not imagine - is highly influential, extending beyond geographical boundaries Contemporary Life (Boussada, 2017), All those who have worked for the development of education over the past decades have realized that school reform cannot be achieved by ignoring the teacher, and that success in any aspect of education reform depends primarily on teachers their competence, and nothing else can replace their knowledge and skills they need to manage and meet rows.

The diverse needs of students of different ages, so the teacher should be at the forefront of human capabilities to adapt to today's innovations, so that it can keep pace with scientific progress and can contribute to its development.

Based on the active role of the teacher in any educational system, and believing in the effectiveness of the teacher's influence Qualification in the quality and level of education, States with different philosophies, objectives and social and economic systems assume the profession of education and the promotion of the teacher has all its attention and care. The availability of a competent teacher and the upgrading of the educational profession It will increase the effectiveness of the educational system and contribute to determining the quality of generations' future. (Touat and Belbekai, 2016)

The teacher's competence is linked to his or her own effectiveness, which indicates his or her knowledge of his or her ability to fulfill his or her functions; Which he knew Pandora is the individual's belief that he or she will perform a conduct that he or she is required to successfully obtain a result (Ben Farouj and Boufatah, 2021); This helps him to visualize himself and increase confidence in his ability to solve educational problems and overcome difficulties confronting it, reflecting the subjective effectiveness of its provisions and expectations of its conduct in stressful or ambiguous situations results, these expectations are reflected in an individual's choice of activities involved in performance, effort, perseverance and confrontation Difficulties in fulfilling behavior. (Pajares, 1996)

Doing a job well increases his expectation of success (relative to the difficulty and importance of the job to him). For example, if he doesn't do this, he will be less successful at delivering difficult lessons that build self-confidence than if the current lesson is easy. (Bandura, 1997).

Bandura (1986) wrote in the book "Social foundations of thought and action" that the concept of self-esteem is derived from the concept of social intelligence, on which he laid the foundation and emphasized that human behavior can be through interpersonal Interaction to explain unusual behavior. Information, people, and environment; environmental factors and internal factors (mental, emotional, and physical) all work together to produce similar behaviors.

Woolfolk (2001) found that teachers' self-esteem is very important to teachers' effectiveness, and their self-esteem is an important part of teachers' thoughts, emotions, beliefs and beliefs, leading to their construction of good educational values. He has conducted many studies on teacher effectiveness, which means teachers believe in their ability to help students learn and help them achieve better results. Therefore, self-efficacy theory predicts that teachers with high self-efficacy will work harder and last longer, even when teaching is challenging.

Research shows that teachers' skills grow as they become more successful in teaching, and that knowledge or training helps teachers be more successful in their daily teaching. (Woolfolk, 2012).

Self-efficacy beliefs help determine a person's ability to act, how long they can persist in adversity, and their ability to recover from adversity; meaning the growth of strength, energy, endurance, and courage. (Bjorklund et al., 2020)

It therefore identifies the characteristics most relevant to teacher success, thereby providing a way to determine the number of teachers;

This measure has been introduced and adapted to the Jordanian context where it is reliable the performance depends on the opinions of critics and the continued use of Cronbach's alpha coefficient. (Al-Khalileh, 2011).

Based on the importance of positivity as a necessary change in teachers' work, this study aims to test the validity of this measure in the Algerian context, using customary and other factual means. and stability.

1.1 - Research question:

Is Woolfolk and Tschannen-Moran's Sense of Efficacy Measure (2001) consistent with its extended version, a valid psychometric measure consistent with a good interpretation?

1.2 - Purpose of the study:

1.2.1- The scale of Teacher's Sense of Efficacy of Woolfolk and Tschannen-Moran (2001) is characterized by indicators of exactness in accordance to the specifications of the good scale applied to a sample of primary school teachers in Algeria.

1.2.2- The scale of Teacher's Sense of Efficacy of Woolfolk and Tschannen-Moran (2001) is characterized by acceptable Reliability indicators, which conforms to the specifications of the good scale after applying it to a sample of primary school teachers Algeria (Ouargla city as a case study).

1.3- Objectives of this study:

This study aimed to achieve the following objectives:

Change teachers' perceptions of Woolfolk and Tschannen-Moran (2001), its long form and Light and Movement in the Jordanian Environment (201).), using a sample of primary school teachers working in Algerian schools in Ouargra, using his credibility as evidence, and his life as evidence).

1.4- The importance of this course:

Derived from the importance of the course. Improve the education system.

1.4.1- Supports psychological and educational programs by providing teachers in the field of education with well-designed scales and timely measures to measure the performance of primary school teachers, especially in the Algerian region and many Arab countries.

1.4.2- The nature of the target sample is important. Primary school teachers are one of the most important inputs. The curriculum of education is also related to the attitude of education because primary school teachers have a great responsibility for developing educational methods and classroom management; it guides, teaches, motivates and helps students develop their intellectual skills and improve their skills, especially at the beginning of education.

1.5- Limitations of the study:

The limitations of the study are:

1.5.1- Limitations of the district: A random sample of Vargra primary schools was selected.

1.5.2- Social Standards: Elementary teachers and staff in designated elementary schools.

1.5.3- Limited time: Study materials for use in January 2022.

2. Operational definition of the study:

2.1- Teachers' Sense of Efficacy:

An elementary teacher believes he can help his students learn from the most difficult situations they face and achieve the best through excellence. The use of teaching methods and their efficacy in managing the classroom and student success in academic studies are measured by the scores given by primary school professors in Teachers' Sense of Efficacy scale (Woolfolk and Tschannen-Moran) and as explained by Al-Khalaileh (2011).

3. User Knowledge: Descriptive research for this study is considered to be the best method to answer the research questions, which is necessary to show us the correct information about teachers' psychology on the scale of Woolfolk and Tschannen-Moran (2001) in their long and lucid report on the Jordanian context, and Al-Khalaileh (2011) in talking to a sample of primary school teachers in Ouargla.

3.1- Study sample: Since the study community is large and distributed among (102) schools, the inspection has been approved in the random way of cluster considering school as cluster, and through the random selection of schools (42) schools, there is (195) teachers if this study is applied.

3.2- Tools used in the study:

3.2.1- Teachers' Sense of Efficacy Scale: (Scale of Woolfolk and Tschannen, 2001) It includes dimensions and indicators expressed in items that reflect the conditions surrounding the teacher and that require a Sense of sensitivity. High effectiveness to confront these difficulties His prolonged version, translated into Arabic Huda Al-Khalaileh (2011) and applied on the Jordanian environment, several studies have also measured its psychometric properties such as: Bin Khairani & bin Abd Razak (2012), Monteiro & Forlin (2023), bin Khairani & Makara (2020).

3.2.2- Description of the scale: Whilst the Teachers' Sense of Efficacy Scale for Woolfolk and Tschannen – Moran contains 24 items for the version original (lengthy) spread over three dimensions:

3.2.2.1- Efficacy for Student Engagement: Primary school teachers believe in engaging students in learning to achieve good results even in the most difficult circumstances; This dimension measures eight items: (1, 2, 4, 6, 9, 12, 14, 22).

3.2.2.2- Efficacy for Instructional Strategies: The primary school teacher believes that he can use appropriate teaching methods to achieve good results even in the most difficult situations; Measured by eight items: (7, 10, 11, 17, 18, 20, 23, 24).

3.2.2.3- Efficacy for Classroom Management: The primary school teacher's belief is that he has the ability to manage the classroom to achieve good results, even in the most difficult situations; It is measured by eight items: (3, 5, 8, 13, 15, 16, 19, 21).

3.2.3- Scale correction: Primary education professor answers scale questions by selecting an alternative to Sal M. Mc Con's five degrees: (Nothing – Very Little –Some

Influence–Quite a Bit--A Great Deal) which take the following grades respectively: (.) 1 - 2 - 3 - 4 – 5.

4. The findings of the study:

4.1- Findings of the first hypothesis: which stipulates the scale of Teacher's Sense of Efficacy of Woolfolk and Tschannen-Moran (2001) is characterized by indicators of exactness in accordance to the specifications of the good scale applied to a sample of primary school teachers in Algeria.

To test the hypotheses, the following two types of reliability were used: cross-reliability and internal consistency reliability compared with the results.

4.1.1- The discriminatory veracity of the measure of Sense of Efficacy of the Professor of Primary Education:

To calculate this kind of honesty we divide the reconnaissance sample into two group groups with lower college grades and group with higher grades. By ranking their response scores on a scale teachers' Sense of Efficacy used in the study, extraction of (% 33%) above and (33%) of the total number the number of individuals (195) Professor of Primary Education; That is, 65 degrees below and 65 degrees below, we obtain, based on we got the results as stated in the following table:

Table (1): Shows the results of discriminatory truthfulness of the efficacy gauge items used in the study:

Group	N	M	S.D	"T"	F.d	α
L category	65	89.323	5.181	22.297	128	000
U category	65	109.415	5.092			

Table (1) shows the value of "T" T (22.297), which is the value of the scaling function shown ($\alpha = 0.01$). Differences between two groups in response to each part of the scale between the two groups is calculated above and below; conducting a "T" test on the two different groups, we get the results shown in the following table:

Table (2): shows the results of discriminatory honesty of the efficacy gauge paragraphs used in the study:

Items	Groups	M	S.D	T	α
01	Lower	3.723	0.760	4.682	0.01
	Upper	4.307	0.659		
02	L	3.276	0.649	3.569	0.01
	U	3.738	0.815		
03	L	4.030	0.728	5.524	0.01
	U	4.630	0.486		
04	L	3.907	0.722	7.018	0.01
	U	4.661	0.476		
05	L	3.892	0.503	10.444	0.01
	U	4.615	0.434		

06	L	3.584	0.583	10.361	0.01
	U	4.615	0.550		
07	L	3.861	0.634	8.118	0.01
	U	4.676	0.503		
08	L	3.646	0.503	7.943	0.01
	U	4.707	0.458		
19	L	3.907	0.578	5.265	0.01
	U	4.446	0.584		
10	L	3.784	0.649	8.966	0.01
	U	4.676	0.471		
11	L	3.584	0.634	5.931	0.01
	U	4.292	0.722		
12	L	3.615	0.722	9.548	0.01
	U	4.661	0.508		
13	L	3.369	0.782	8.588	0.01
	U	4.030	0.728		
14	L	3.984	0.544	9.360	0.01
	U	4.815	3.400		
15	L	3.400	0.702	9.774	0.01
	U	4.446	0.500		
16	L	3.461	0.751	9.374	0.01
	U	4.569	0.585		
17	L	3.953	0.925	4.708	0.01
	U	3.646	0.697		
18	L	4.584	0.672	5.384	0.01
	U	3.384	0.604		
19	L	3.615	0.578	7.383	0.01
	U	4.400	0.632		
20	L	3.738	0.471	10.06	0.01
	U	4.738	0.508		
21	L	3.938	0.768	7.878	0.01
	U	4.815	0.464		
22	L	3.553	0.658	8.934	0.01
	U	4.553	0.587		
23	L	3.876	0.545	7.508	0.01
	U	4.676	0.663		
24	L	3.830	0.471	8.321	0.01
	U	4.753	0.531		

It is noticed from the results of table (02) that the highest mean group of items group with lower grades was (4.03), Standard deviation is (0.728) and the lowest mean items group with lower grades is (3.276), Standard deviation is (0.649). The items group with higher grades averaged the highest arithmetic average for items (4.815), Standard deviation is (0.464) the minimum arithmetic mean for items was (3.738) and Standard deviation is (0.815).

It is clear that value the T test ranged from (10.44) to (3.569), all of which are indicative values at the indicative level (0,01), This means that there are statistically significant differences between the mean lower grades and the mean grades.

-The top of each paragraph of the scale, from which all the test items are honest and distinguish between individuals, and based on scheduled results

-In both table (01) and table (02), the scale has a high capacity of discriminatory honesty in measuring the Sense of Efficacy of Professor of Primary Education.

4.1.2- Calculate the Validity of internal consistency:

In order to verify the sincerity of Teacher's Sense of Efficacy scale, the connotations of the Validity of the construction have been extracted. It shows us the significance of the items, by calculating the Pearson's correlation Coefficient between each item and the overall score of the scale as a whole, between each item and the overall degree of the dimension to which it belongs, between the overall degree of each dimension and the overall degree of the scale as a whole, the following table shows all the results:

Table (3): shows the connections of the scale itmes to its dimensions and to its overall grade:

Dimensions of scale	N of item	Average of correlation of the item with: Dimension	The total degrees of scale
Dimension one:	1	0.540**	0.435 **
Efficacy for Student	2	0.428**	0.370**
Engagement	4	0.595**	0.508 **
	6	0.611**	0.654**
	9	0.539**	0.401**
	12	0.656**	0.638**
	14	0.624**	0.596**
	22	0.607**	0.596**
	Degree of correlation of the first dimension with the scale		0.877**
Dimension two: Efficacy	7	0.491**	0.518
for Instructional	10	0.578**	0.559**
Strategies	11	0.547**	0.446**
	17	0.382**	0.382**
	18	0.421**	0.421**
	20	0.566**	0.592**

	23	0.737**	0.484**
	20	0.729**	0.991**
	Degree of correlation of the second dimension with the scale		0.912**
Dimension three:	3	0.595**	0.429**
Efficacy for Classroom	5	0.433**	0.577**
Management	8	0.523**	0.547**
	13	0.580**	0.599**
	15	0.624**	0.459**
	16	0.663**	0.631**
	19	0.584**	0.478**
	21	0.548**	0.478**
	The degree of correlation of the third dimension with the scale		0.863**

** Connectedness at the level of indication ($\alpha = 0.01$), * indication of association at the level of indication ($\alpha = 0.05$)

Table (03) shows that the correlation coefficients between the items and the total scale ranged from (0.654 -0.370) All results were positive and statistically relevant at the indicative level ($\alpha = 0.01$), this indicates that there is a strong relationship between items and scale as a whole.

The correlation coefficients between dimensions and the overall scale score as a whole ranged from (0.912 - 0.863). All transactions were positive and statistically relevant at the indicative level ($\alpha = 0,01$), indicating a strong correlation between dimensions and the scale.

According to Woolfolk and Tschannen-Moran (2001), a measure of Teacher's Sense of Efficacy was developed using sincerity indicators that are consistent with good scale specifications and were applied to a sample of Professor of Primary Education in the Algerian Environment. As a result, the measure of Professor of Primary Education's effectiveness exhibits a high degree of sincerity and internal consistency.

4.2- The findings of the second hypothesis: which states that The scale of Teacher's Sense of Efficacy of Woolfolk and Tschannen-Moran's (2001) is characterized by acceptable Reliability indicators, which conforms to the specifications of the good scale after applying it to a sample of primary school teachers Algeria.

To evaluate the hypothesis, we employ the halving method of the scale, and the Cronbach's alpha coefficient.

4.2.1- The meter fastness factor is used in the halfway segmentation method:

To verify the reliability coefficient, this was calculated using the adjusted half-split method of Spearman-Brown, the subsequent table displays all the results:

Table (4) Reliability coefficient in a half-split method of the scale:

N of individuals	N of items	C. of correlation before correction	C. of coefficient by Spearman - Brown	C. of Gutman
195	Part1: 12 items Part2: 12 items	0.812	8.896	0.895

Note from Table (4) that the pre-correction coefficient value is (0.839) and has been valued after the correction of the Spearman-Brown equation is (0.913) and is a high value that indicates the reliability of the scale.

4.2.2- Scale Reliability's coefficient in Internal Consistency:

To verify the coefficient of Reliability was calculated in the way of internal consistency expressed by the coefficient of Cronbach's alpha, the following illustrates this:

Table (5) the coefficient of the Cronbach's alpha reliability:

N of individuals	N of items	C. Cronbach's alpha
195	24	0.883

From table (5), the results show that the constant factor in the internal consistency of the responses of the sample personnel on the measure of effectiveness of the professor of primary education expressed by Cronbach's alpha (0.883) labs high and acceptable to judge the scale's consistency according to accepted standards.

3- Results and Discussion:

The following hypotheses were confirmed:

1: The gauge of teachers' sense of efficacy for Woolfolk and Tschannen-Moran (2001) in its lengthy credit indicators conforms to the specifications of the good scale after its application on a sample of the Professor of Primary Education in Algeria's Environment.

2: The gauge of teachers' sense of efficacy for Woolfolk and Tschannen-Moran (2001), in its lengthy acceptable reliability, conforms to good scale specifications after application to a sample of a professor of primary education in Algeria's environment.

6- Conclusion

It is concluded that the measure of teacher's sense of efficacy of a primary education professor has a high degree of honesty and fortitude to measure this characteristic in the category of teachers employed in primary schools in Ouargla.

It is suggested that it can be applicable to middle and secondary trainee professors' classes.

References and Referrals

bin Khairani, A. Z., & Makara, K. A. (2020). Examining the Factor Structure of the Teachers' Sense of Efficacy Scale with Malaysian Samples of In-service and Pre-service Teachers. , *Pertanika J. Social Sciences & Humanities*, 20(01), 309-323.

