

PERCEIVED TEACHING SELF-EFFICACY FOR TRAINING-TEACHERS IN BIOLOGICAL DEPARTMENTS AND ITS RELATIONSHIP WITH THEIR ACHIEVEMENT

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كفاية التدريس الذاتية المُدرّكة للمدرّسين المتدربين في أقسام علوم الحياة وعلاقتها بتحصيلهم الأكاديمي

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المخلص

هدفت الدراسة الحالية الى الكشف عن كفاية التدريس الذاتية المُدرّكة لدى المدرّسين المتدربين (طلبة كليات التربية/ المرحلة الرابعة) في أقسام علوم الحياة في كليات التربية، وعلاقتها بتحصيلهم الأكاديمي. بلغت عينة البحث (٣٧٠) مُدرّساً متدرباً من أقسام علوم الحياة لكليات التربية في جامعات: القادسية، وذي قار، والبصرة، وكربلاء. وقد قام الباحث ببناء اداة البحث والتي تكونت بصورتها النهائية من (٤٢) فقرة، وقد أخضعها لمواصفات الصدق والثبات المُعتمدة في بناء المقاييس والاختبارات. وبيّنت الدراسة أن المدرّسين المُتدربين يتمتعون بكفاية تدريس ذاتية مُدرّكة وبشكل دال احصائياً، وكذلك فقد كان هناك اختلافات ذات دلالة احصائية في كفاية التدريس الذاتية المُدرّكة حسب أيضاً اظهرت النتائج وجود علاقة ارتباطية معنوية موجبة بين كفاية التدريس الذاتية المُدرّكة والتحصيل الاكاديمي للمدرّسين المتدربين (طلبة كليات التربية/ المرحلة الرابعة). وقد قدمت الدراسة عدداً من التوصيات والمقترحات.

الكلمات المفتاحية: كفاية التدريس الذاتية المُدرّكة، المدرّسون المتدربون، التحصيل

Abstract

The present study aims to recognize perceived self-efficacy teaching for Training – teachers at Departments of Biology in Colleges of Education, and its relation to their achievements. The sample of the study included (370) Training–teachers at Departments of Biology in Colleges of Education for Pure Sciences in Al-Qadisiyah, Thi-Qaar, Basrah and Karbalaa Universities. The researcher designed the instrument of the research that represented the scale of perceived self-efficacy teaching that finally comprised (42) articles after testing it with the qualities of invariability and validity.

This study showed the existence of perceived self-efficacy teaching for Training – teachers at Departments of Biology. Also, there is a difference in the statistical significance in perceived self-efficacy teaching belonging to the social type and in favor of males, furthermore there is a positive relation of statistical significance between perceived self-efficacy teaching and achievements in the training-teachers. This study presented a number of suggestions and recommendations.

Key Words: Perceived Teaching Self-Efficacy, Training – Teachers, Achievement.

Theoretical Background:

(Bandura, 1977) suggested the concept of self-efficacy, which is closely connected with the human achievement in the various fields of life. It is considered an important component of the social cognitive theory, which confirms that the individual has the ability to restrain his behavior due to his personal beliefs. The individuals have a system of personal beliefs that enable them to control their emotions and thoughts (Bandura, 1977). Self-Efficacy is considered as an indicator for the individual's ability to control his personal actions, the individual who has high sensation in self-efficacy can act more effectively, is more qualified than others to face his environment challenges (Bandura, 1977).

Hence, how the individual thinks, believes and feels, affects on how he behaves. These beliefs constitute the main key for the forces that motivate the individual's behavior, it explains the individual achievements depending on the abilities he has, causing that he does his best to achieve success (Bandura, 1993). The impact of perceived self-efficacy is made clear through identifying the level of effort the individual makes in a particular activity and how much he perseveres in facing the difficulties as well as how strong he is in difficult situations. The more sensation in efficacy, the more effort, perseverance and strength we get. The individuals with high self-efficacy face the problems and difficulties with more sensation in calmness and equanimity (Bandura and Schunk, 1981).

Perceived teaching self-efficacy is considered one that the teacher of sciences should have, thus it constituted the base of the study for training-teachers in departments of Biology at the universities of the middle Euphrates in Iraq. The problem of the current research is identified by answering the following two questions: What is perceived self-efficacy for training-teachers in departments of Biology? , and what is its relation with their achievements?

Social Cognitive Theory suggests that there is a strong relationship between the individual's behavior, factors environment and persona. Figure (1) shows this relationship.

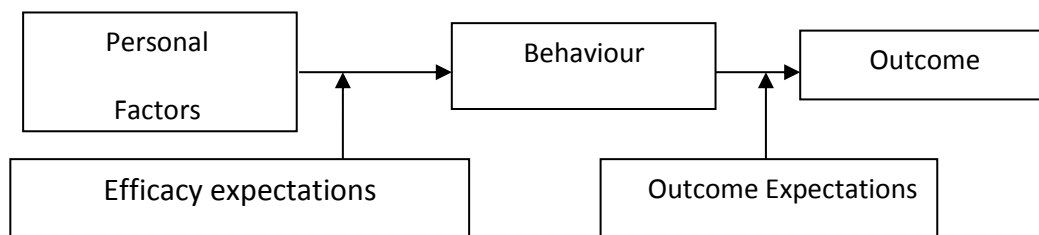


Figure 1 Diagrammatic representation of the difference between efficacy expectations and outcome expectations. (Bandura, 1977)

Perceived self-efficacy affects directly on the thinking and behaviour according to the nature of these beliefs. Where they could be either spontaneous supporters or spontaneous impediments, the individuals with high sensation in self-efficacy focus their mind on analyzing their problems, and they try to find the appropriate solutions to these problems in order to affect their behavior positively whereas the individuals who doubt their self-efficacy transform their thinking into inside, and overwhelmed by a lot of concern when they encounter the various problems of life, so they focus on their inability and the lack of self-efficacy. This type of negative thinking causes tension and incapability of controlling the behavior, as well as restricting the active use of the cognitive abilities through changing the attention from how to do the requirements to arousing the concern about the personal inability and the probability of failure (Bandura and Wood, 1989).

The concept of perceived teaching self-efficacy is very important to the teachers because the attempt to make the training-teachers able to see themselves positively and in a high self-efficacy, participates in boosting their abilities in various fields of life. It is clear that the high teaching self-efficacy leads to more efficiency in dealing with many tasks of life such as the profession of teaching, and that motivated the psychologists to pay attention to this concept because it participates in enhancing the behavior and indicates to self-expectations about the individual's ability to overcome the different problems successfully (Weiten and Lloyd, 1997).

Teacher self-efficacy is an evidence of teachers' awareness of their professional efficiency and readiness to encounter the challenges of their classrooms, and research sees that it is also a defensive element against job pressure in the school (Schwarzer and Hallum, 2008). Although many researches show that students' achievement are definitely associated with teacher self-efficacy, limited number of studies have investigated self-efficacy as a dependent variable (Hoy and Woolfolk, 1993).

A number of studies have dealt with the topic of self-efficacy from different aspects, (Zimmerman et al. 1992) regarded it as Self-motivation for attainment: the role of self-efficacy beliefs

and personal goal setting. (Capara et al. 2006) regarded it as indicators of professional satisfaction for teachers and their students, thus it is a difference from the current study because it dealt with teachers existed in schools whereas the current study deals with training-teachers before graduation.

(Mojavezi and Tamiz, 2012) dealt with the impact of the self-Efficacy of the teacher on the students' motivation and achievement, so it is different from the current study because it dealt with teachers during the duration of study.

The closest study to the current one is (Pajares, 1996) which was concerned with the beliefs of the self-efficacy in pre- academic studies, but it did not identify the category of teachers clearly, and that makes the current study unique in its purpose .

The training-teachers in departments of biology constitute the main pivot for the educators who will lead the learning process for biology in Iraqi schools, so perceived self-efficacy for teaching is very important to the education system because it provides a good opportunity to the educators to identify it early in order to boost and develop it. Hence, the problem of the current paper arises to answer the following question: what is perceived self-efficacy for the training -teachers in departments of biology?

Identifying Terminologies:

Because there is no definition for the teaching perceived self-efficacy, the researcher divided the term into two parts: the first is the self-efficacy and the second is the teaching perceived self-efficacy.

- **Perceived teaching self-efficacy:** Self-efficacy of teachers can be defined as teachers' abilities to perceive their potentials to have impact on their students' outcomes. It is a significant aspect, which is associated with many positive variables like academic achievement, motivation, and on-task behavior in students. (Kelm and McIntosh, 2012). The researcher defines it as the judgment that the student-teacher makes about his teaching performance in planning, execution and rectification that could be measured by the total score that he obtains through the scale of perceived self-efficacy used in this study.
- **Training-teachers:** Students of biology departments in colleges of education / fourth stage which represents the final stage of their academic study before graduation.
- **Achievement:** "Oxford dictionary 1998 defines it as the acquired result for achieving or learning something skillfully and successfully". (Oxford, 1998; Bottia et al., 2016)

While the researcher defines it as the average of the final scores for training-teachers that he obtains and registers in the official records of biology departments for the four academic stages.

Aims of the Study:

The study aims to:

- Discover the perceived teaching self-efficacy for training -teachers in biology departments.
- Discover the differences and significance of differences in the perceived teaching self-efficacy for training-teachers in biology departments according to social gender (males – females).
- Discover the associative relation between the perceived teaching self-efficacy for training-teachers in biology departments and their achievement.
- Find out the significance of the associative relation between the perceived teaching self-efficacy for training-teachers in biology departments and their achievement.

Limitations of the Study:

The research is restricted to training-teachers in biology departments / colleges of educations at Al-qadisiyah, Thi Qaar, Al-Basrah and Karbalaa universities in 2014 – 2015.

Procedures:

1 - Methodology

The current study followed the descriptive method to be more appropriate to achieve the objectives of the research. (Knupfer and Mclellan, 1995)

2 - The Population and Sample

The population of the research includes the training-teachers in biology departments at a number of colleges of education such as College of Education for Pure Sciences/ University of Al-Basrah, College of Education for Pure Sciences/ University of Thi Qaar, College of Education for Pure Sciences /University of Karbalaa and College of Education/ University of Al-Qadissiyah that have been selected randomly among all the other Iraqi colleges of education after excluding the following colleges:

- The colleges of Kurdistan region because of the different methods of teaching and the language.
- Colleges of education that do not contain scientific departments like the College of Education / University of Al-Muthana.
- Colleges of education that do not have the variable gender such as the College of Education / University of Al-Kufa which contains females only.
- Colleges of education with evening studies because of the differences of the nature of training-teachers in age and cultural background.

Hence, these four colleges of education were the community of the research and the numbers of training-teachers of biology departments at these colleges have been confirmed.

The sample of the research included all the members of the community of the research training - teachers in the fourth stage at departments of biology / colleges of education. So, the sample of the research comprised (370) training-teachers of the fourth stage at the fourth colleges of education that represented the community of research as (183) male training -teachers, (187) female training - teachers. Table (1) indicates this.

a. Table (1)

Numbers of the 4th stage students in Biology Dep./ Education Colleges

No.	College	4 th Student		Total
		Male	female	
1	College of Education / Qadssiay Unv.	41	52	93
2	College of Education for Pure Sciences / Thi Qaar Unv.	49	50	99
3	College of Education for Pure Sciences / Al-Basrah Unv.	41	51	92
4	College of Education for Pure Sciences/ Kabala Unv.	42	44	86
Total		183	187	370

3 - The two Instruments:

First: the scale of the teaching perceived self-efficacy for training-teachers:

The researcher made the instrument of the research which is the scale of the teaching perceived self-efficacy in biology departments depending on the educational norms and the former studies that dealt with this variable, where its items initially amounted to (45), and it is tested by the qualities of validity, invariability and psychometric qualities as follows:

Face Validity: It is the validity of the used instrument to achieve what it is made for, it is considered a personal judgment of the experts on the efficiency of the instrument making (Drost, 2011)

Hence, the scale was initially shown to a number of experts in methods of teaching biology, (20) experts to make sure of the validity of its items for measuring the teaching perceived self-efficacy for training-teachers in departments of biology.

After the judges gave their opinions on the items of the scale in its initial standard, the supports and the refusals depended on the one sample Kolmogorov Smirnov test to approve of the items. This test is also used for testing the same assumptions tested by (Chi-square Tests) with one sample, it is preferred to use the one sample Kolmogorov Smirnov test because:

1. It is better to be used when the sample individuals are few, not more than (30), the result will be more precise than (Chi-square Tests), while the experts are (20) so it is better to use it rather than (Chi-square Tests).
2. It is easier in conducting the statistical processes. As the following steps:

- Calculating the noticed accumulating repetition.
- Calculating the expected accumulating repetition.
- Calculating the accumulated ratio for the noticed one
- Calculating the accumulated ratio for the expected one
- Subtracting the noticed ratios from the expected ones by subtracting the smaller from the bigger one in order to avoid the negative mark.
- Calculating KS value through the biggest value of the difference between the ratios.
- Comparing the calculated value (KS) with chart value at a particular significance level at degree (n) not at (n-1) and it is $20 - 1 = 19$ (Conover, 1999) And some of the modifications have been adopted.

b. Construction Validity:

The construction validity was calculated through calculating the relation of the score of each item with the total score for the scale of expectations of the teaching perceived self-efficacy for training-teachers in biology departments using pearson's coefficient of correlation, then the calculated value is compared to the critical chart value at significant level (0.05) and free degree (368) which is amounted to (0.099) and all the items which amounted to 45 function items. Table (2) indicates this.

c. Table (2)

The relationship between the item's degree and the total degree of the scale

No.	relationship between the item's degree and the total degree	No.	relationship between the item's degree and the total degree	No.	relationship between the item's degree and the total degree	No.	relationship between the item's degree and the total degree
1	0.395	13	0.359	25	0.204	37	0.348
2	0.352	14	0.340	26	0.371	38	0.400
3	0.400	15	0.507	27	0.497	39	0.419
4	0.409	16	0.234	28	0.289	40	0.540
5	0.355	17	0.384	29	0.204	41	0.433
6	0.316	18	0.424	30	0.280	42	0.455
7	0.255	19	0.244	31	0.377	43	0.522
8	0.014 ^{1*}	20	0.328	32	0.334	44	0.398
9	0.395	21	0.416	33	0.451	45	0.216
10	0.380	22	0.347	34	0.234		
11	0.238	23	0.454	35	0.406		
12	0.410	24	0.478	36	0.371		

d. Item discrimination

The discriminating power is the capacity to discriminate between the strong individual and the weak one under the measured aspect of the item efficacy in achieving the principle of individual differences which the psychological measurement is based on (Lzard, 2005), it is usually used in different scales through comparing the two extreme groups (upper group and lower group) on the scale (office educational assessment, 2005).

The training-teachers' marks are arranged descendingly from the highest mark to the lowest one for calculating the discriminating power of the scale items, (27%) rate is taken from the top and the base of the marks to identify the number of the individuals of the upper and lower two groups, the number of each group amounted to (100) individuals. Independent t-test is used to ensure the significant differences among the averages of the marks of the two groups (upper group and lower group) training-teachers. The results showed that the differences indicate to all the items at the significance level (0.05) and free degree (198) and amounted to (1.96) except item (8) was not discriminated, consequently it is omitted and the scale remaine consisting of (43) items. Table (3) indicates this.

* The item's degree's relation to the scale's total degree is not statistically significant, so it has been deleted.

e. Table (3)

Item Discrimination for the items of the scale measuring perceived teaching self-efficacy for training-teachers

Field	Items	Higher group		Lower group		t value
		Mean	Std. dev.	Mean	Std. dev.	
The impact scope on decision making	1	3.46	0.74	3.09	0.97	2.94
	2	3.18	0.98	2.23	0.93	6.85
	3	3.66	0.63	3.01	0.94	5.63
	4	3.25	0.74	2.56	0.90	5.82
	5	2.72	0.97	2.32	1.02	2.76
	6	2.85	0.92	2.17	0.87	5.26
	7	3.08	0.99	2.12	1.03	6.62
The scope of impact on the school resources	8	2.67	1.00	2.55	1.15	0.77*
	9	2.77	1.15	2.42	1.16	2.07
	10	3.04	0.80	2.36	0.97	5.32
	11	3.00	0.92	2.23	0.93	5.72
	12	2.63	1.08	2.17	1.02	3.04
	13	3.57	0.68	2.92	0.91	5.62
	14	3.57	0.81	2.77	1.07	5.83
	15	3.05	1.13	2.13	1.17	5.54
Employment satisfaction	16	3.02	0.80	1.85	0.91	9.40
	17	2.11	0.82	2.84	0.85	0.17*
	18	3.61	0.62	2.83	0.99	6.51
	19	3.84	0.37	3.02	0.95	7.89
	20	3.16	0.91	2.55	1.03	4.32
	21	2.94	0.88	2.26	0.90	5.20
	22	3.53	0.74	2.78	0.99	5.88
	23	2.84	1.02	2.08	0.95	5.28
Selecting activities	24	3.48	0.78	2.39	0.98	8.49
	25	3.41	0.91	2.92	0.85	3.89
	26	2.84	0.84	1.85	0.90	7.83
	27	3.55	0.68	3.21	0.86	2.99
	28	3.02	1.04	2.19	1.02	5.55
	29	3.42	0.65	2.47	0.82	8.83
	30	3.52	0.73	3.03	0.95	3.94
Efforts exerted	31	3.80	0.52	3.56	0.74	2.61
	32	2.77	1.00	2.09	0.95	4.76
	33	2.87	0.90	2.11	0.86	6.02
	34	2.79	1.00	2.01	0.94	5.54
	35	3.28	0.82	2.46	0.82	6.89
	36	2.56	1.05	2.01	0.91	3.85
	37	3.74	0.57	2.99	0.91	6.81
Perseverance of accomplishing tasks	38	3.15	0.96	2.23	0.89	6.82
	39	3.68	0.72	2.97	1.03	5.57
	40	3.75	0.68	2.63	1.10	8.39
	41	3.72	0.63	2.94	0.99	6.48
	42	3.66	0.65	2.74	0.90	8.14
	43	3.63	0.60	2.83	0.93	7.04
	44	2.69	0.97	1.69	0.88	7.46

* Item is non-discriminative on (α : 0.05) with df. (198) comparison with t table (1.96), So it has been deleted.

f. Reliability

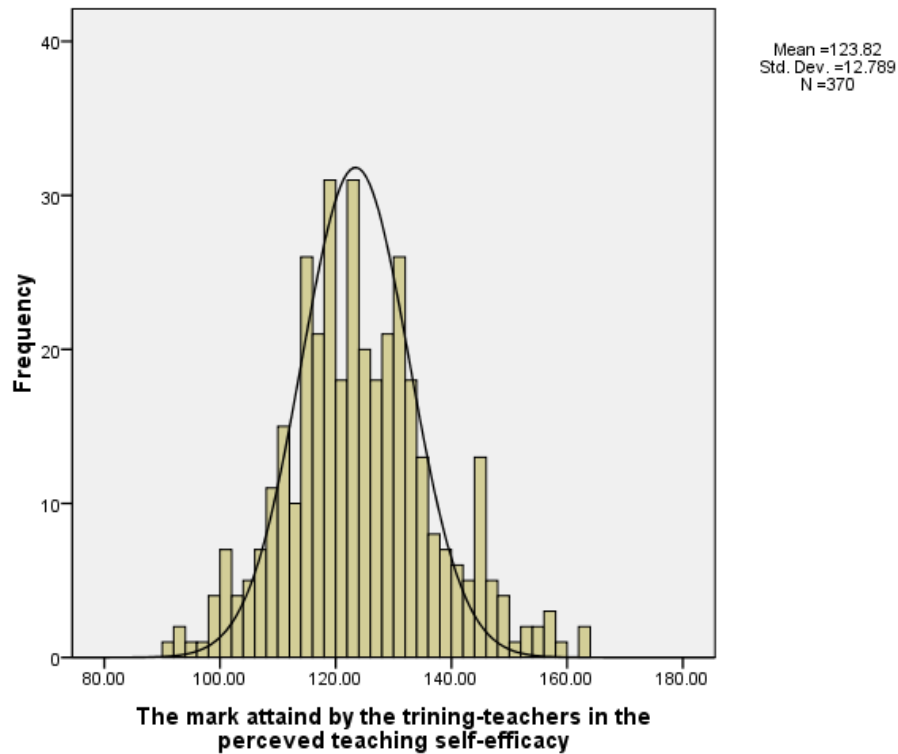
It means the possibility of repeating the measurements by other different persons in different situations and under different conditions to give the same result. In short reliability is the stability of measurement (Bollen, 1989; Mohammed 2007). Reliability was ensured by using Cronbach's Alpha equation which amounted to (0.86) which is a good value of reliability.

Statistical Indications of the scale in its final version, is shown table (4).

g. **Table (4) | Statistical indicators of the scale for perceived teaching self-efficacy for training-teachers in Biology Departments**

Statistical Indicators	Degree
The mean	123.82
Standard Deviation	12.78
Number of items in the scale	42
Sample	370
The highest mark that could be attained (the optimal expectation of perceived Teaching self-efficacy)	168
The least mark that could be attained (the minimum expectation of perceived Teaching self-efficacy)	42
Hypothetical mean	105
The least mark that is actually attained (minimum)	91
The highest mark that is actually attained (maximum)	162
Range	71
Skewness	0.283
Kurtosis	0.208

Distribution of items in the scale for Expectations of perceived Teaching Self-efficacy for Training-teachers in Biological Departments which approximates the natural distributions. Figure (2) indicates this.



h. **Figure (2) | Distribution of the items of the scale for perceived teaching self-efficacy, it is nearly to Normal Distribution**

So the final version of scale includes 42 items and 6 fields: first (The impact scope on decision making) 7 items: Second, the scope of impact on the school resources 7 items: third, Employment

satisfaction 7 items: Fourth, Selecting activities 7 items, Fifth: Efforts exerted 7 items and Sixth: Perseverance of accomplishing tasks 7 items. Each field has 7 items as shown in appendix no. (1).

The second Scale: The Achievements for The Training-Teachers in Biology Departments:

The marks of the accumulating achievements for training-teachers were taken from the marks records in the scientific departments by taking the average of the marks for each student in the educationally oriental materials such as curriculums and methods of teaching in the third stage and the observation and application in the fourth stage.

4 - The Statistical Tools

To analyze the results of the researcher in social sciences, the researcher used Cronbach's Alpha equation and the t-test for one sample, and used the t-test for two independent samples, Pearson's coefficient of correlation and the equation of assumption connected with difference between Pearson's coefficients of correlation in two communities using two independent samples.

Results:

i. First aim: Discover the perceived teaching self-efficacy for training-teachers in Biology departments:

To achieve this goal, the researcher applied the scale of perceived teaching self-efficacy for training-teachers in biology departments to the main sample of the research which amounted to (370) training-teachers. After using the statistical processes, it was found that the average of the marks of the sample individuals is (123.82) with a standard deviation (12.78), and when compared the average with the hypothetical one (105) using the equation of t-test for one sample, it was found that the calculated t-value is (28.03) which is higher than the chart t-value (1.96) at a significance level (0.05) and free degree (369) to indicate that the sample of the research has a high perceived teaching self-efficacy. Table (5) indicates this.

j. Table (5)

k. The results of t- test for One-Sample in terms of the significance of difference mean and Hypothetical mean for scale perceived teaching self-efficacy

Group	N	Mean	Std. Deviation	Hypothetical mean	t-value	Sig.
Training-teachers in Biological Departments	370	123.82	12.78	105	28.03	Significant

Table no. (5) shows that student-teachers have a high teaching self-efficacy, that means they trust their teaching abilities in the future, in other words the academic preparation for them was so good that it made them anxious for teaching and well qualified for this job. Depending on (Bandura,1993), perceived self-efficacy originates from achievement and former experiences, and the individual's contentment that he can succeed by following the practices of others and by the support that training-teachers receive from their academic preparation (Bandura,1993).

l. Second aim: discover the significance differences in the perceived teaching self-efficacy for the training-teachers in biology departments according to sex (males – females).

To ensure this goal, the independent samples t-test was used, the average for the marks of the males training-teachers was (125.7) with a standard deviation (12.63), whereas the average for the females training-teachers was (121.9) with a standard deviation (12.7), and to compare between these two averages, it was clear that the calculated t-value is (2.61) which is bigger than the chart t-value which is (1.96) at a significance level (0.05) and a free degree (398) so the difference is statistically signified in favour of males. Table (6) indicates this.

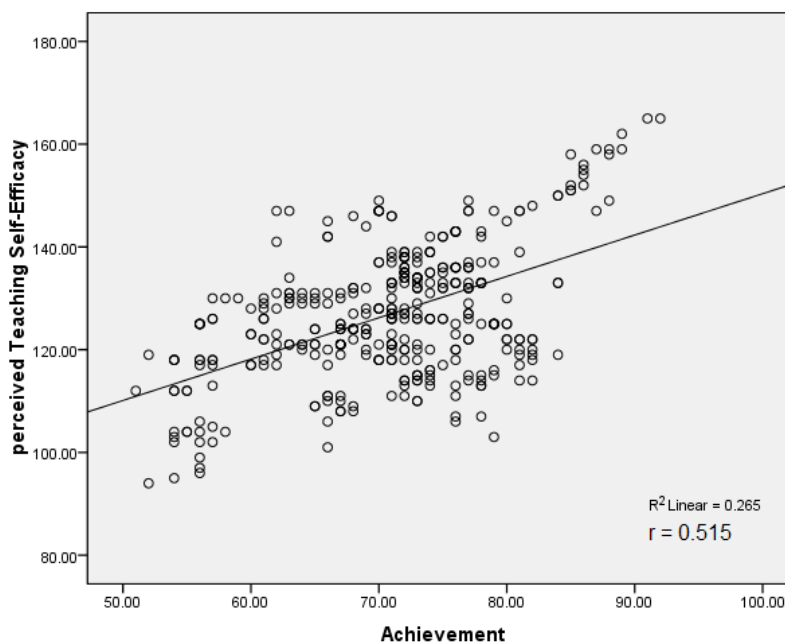
m. Table (6)**n. The independent samples t-test to recognize the individual differences in perceived teaching self-efficacy for training-teachers according to the gender (males – females)**

Gender	N	Mean	Std. Deviation	t	df.	Sig.
Male	183	125.7	12.6	2.61	368	Significant
Females	187	121.9	12.7			

That result could be explained depending on the social cognitive theory that says gender does not affect the motivation, and there are personal and environmental factors that affect it and consequently, they affect perceived self-efficacy, whose development depends on the support that the individual receives from others, so the lower view to the personal abilities is responsible for the female's avoidance of the actions and situations in life and not the weakness of abilities. It is possible to narrow the gap between the two genders by encouragement, support, feedback, the alternative experiences and the good self-evaluation (Pajares, 1996)

o. Third aim: Discovering the correlative relation between perceived teaching self-efficacy for training-teachers in biology departments and their achievements.

For discovering the correlative relation between perceived teaching self-efficacy for training-teachers in biology departments and their achievements, the researcher used Pearson's correlation coefficient between the marks of the training-teachers in the scale of perceived self-efficacy and their marks in achievement represented by the final mark in the educational materials, the calculated correlation coefficient amounted to (0.514) which is a correlation value statistically signified, and by comparing the calculated value with the critical chart value for the correlation coefficient at significance level (0.05) and free degree (368) amounted to (0.106) shows that the correlation statistically signified positively, every time the expectations of the teaching perceived self-efficacy rises, their achievements rise too. This result is different from what is concluded from Green's study (Green, 2000) and its result showed that there is a reversal relation between the self-efficacy and the sample individuals. . Figure (3) showing correlate them.

**p. Figure (3)****q. Correlative Between perceived Teaching Self-Efficacy and Achievement**

r. Fourth aim: Identifying the significance of the correlative relation between perceived teaching self-efficacy for training-teachers in biology departments and their achievement according to the gender (males – females).

To ensure the significance of the relation between the two variables and this relation could be generalized on the original community (community of training-teachers in biology departments), the researcher used the hypothetical test related to the difference between Pearson's correlation coefficients in two communities using two independent samples* (Wuensch et.al. 2002), it has been clear that the calculated (Z_r) value was 1.42 which was less than the chart value and thus, it is not possible to generalize this relation on the community. Table (7) indicates this.

s. Table (7)

t. The results of testing Pearson's coefficient differences in two populations using two independent samples

Variables	Number	Correlation C. T.S.E. and A. A.	Standard mark for the Correlation factor	Zr Value	Z Table	Sig.
Males	183	0.563	0.633	1.42	1.96	Non- significant
Females	187	0.452	0.485			

Conclusions:

1. Perceived teaching self-efficacy for training-teachers in biology department exists and represents a positive sign that confirms the process of good preparation.
2. Perceived teaching self-efficacy is affected by gender (males – females) where it is clear that there are differences of statistical significance in favor of males because of social and cultural factors, our society supports males more than females.
3. There is a positive reverse correlative relation with a statistical significance between perceived teaching self-efficacy and their achievement for training-teachers in biology departments at colleges of education, that means every time the teaching perceived self-efficacy rises, the achievement rises too and vice-versa.
4. The relation between perceived teaching self-efficacy for training-teachers and their achievement could not be generalized on the entire society.

Recommendations

1. It is necessary that the educational materials should have topics that contribute to develop perceived teaching self-efficacy for students of colleges of education.
2. To benefit from the scale of perceived teaching self-efficacy in identifying those with low teaching self-efficacy for reinforce their self-efficacy through making them take part in educational activities.

Suggestions

1. Conducting a similar study to deal with teachers of biology in Iraq who are currently doing their job.
2. Conducting a study to find out the relation between perceived self-efficacy for training-teachers and some other variables (self-achievement , the social attractiveness)

Reference

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$$* Z_r = \frac{r_1' - r_2'}{\sqrt{\frac{1}{n_1 - 3} + \frac{1}{n_2 - 3}}}$$

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Appendix (1)

Scale perceived Teaching Self-Efficacy for Training teachers

First: The impact scope on decision making:

The teacher's realization of his abilities and potentialities that influence the decisions taken to improve the school overall performance and achieve the required results, otherwise, avoid interfering in the school work.

- 1- I can express my attitudes freely in the school important issues.
- 2- I have the ability to overcome the difficulties that encounter me in achieving my teaching goals.
- 3- I can make my students follow the good rules of conduct and respect.
- 4- I have the ability to acquire my colleagues' respect.
- 5- My colleagues consult me to develop their teaching skills.
- 6- I seek to implant team spirit among the teachers to make the school management works actively.
- 7- I can work on upgrading students morale to believe in the purpose of their study.

u. Second: The scope of impact on the school resources:

The teacher's realization in his potentialities to affect positively on organizing schools resources as systems, visual aids and other equipment.

- 1- I try diligently to provide educational supplies and equipment that the school needs.
- 2- I focus my efforts on the students with special difficulties.
- 3- I use new teaching methods that observe the mechanism of information storing in the minds of the students.
- 4- I motivate the students who have weak interest in home work.
- 5- I attempt diligently to overcome the impact of the negative societal conditions on students' learning.
- 6- I can plan accurately to achieve my goals and ambitions.
- 7- My feelings of incompetency leads me to think of the negative sides of the events.

v. Third: Employment satisfaction:

The feeling of the teacher that his/her work is effective and satisfies the school required activities.

- 1- I feel that perform my duties smoothly.
- 2- I'm pleased with the way that educational supervisors treated me.
- 3- I'm able to reinforce students' learning even with the absence of support at their homes.
- 4- I think that the reason of my success is my self- teaching abilities.
- 5- I have the ability to plan accurately to achieve my goals.
- 6- It is easy to implement class activities efficiently in comparison with my colleagues.
- 7- I perform my duties without any supervision.

w. Fourth: Selecting activities:

The teacher's realization in his potentialities to select activities and duties he thinks that he can accomplish them and achieve desirable results or avoid the activities, which he fails to accomplish.

- 1- I'm able to make my students take part in the class activities, even the students with disabilities.
- 2- I urge the students' parents to participate in the school activities.

- 3- I feel that I'm unable to make the school a safe place for learning.
- 4- I attempt to make the students interested in school.
- 5- My colleagues consult me because they trust my views.
- 6- I enjoy performing assignments that require intellectual skills.
- 7- I select the activities that fit for my abilities.

x. Fifth: Efforts exerted:

It is the effort exerted by the individual to accomplish his duties, which based on individual's beliefs about his abilities that can be employed in his duties.

- 1- I overcome any problem that encounters me.
- 2- I think that my efforts to convince others are fruitless
- 3- Failure in solving my problems does not prevent me from exerting more effort to reach my goals.
- 4- I feel embarrassed of initiating new idea.
- 5- I become confused when I'm assigned to accomplish a duty that requires quick achievement.
- 6- I bear the responsibility of my failure and I re-try to succeed.
- 7- I accomplish duties entrusted to me perfectly.

y. Sixth: Perseverance of accomplishing tasks:

The individual's evaluation of his potentialities and abilities to surmount obstacles "difficulties", and diligence of performing duties. Also, The insistence of encountering the hindrances that impede him from accomplishing his goals and success.

- 1- I find myself unable to act in the unexpected situations.
- 2- My attention distracts easily, which makes it difficult to follow my job.
- 3- It is hard to arrange my thoughts when I'm in a quandary.
- 4- I find the appropriate to solve any problem that hampers me from achieving my goals.
- 5- I depend on my self- abilities to implement my future plans.
- 6- I feel that the weakness of my potentialities limit my performance of the required duties.
- 7- I take my decisions without asking others assistance.