Effects of Cooperative Teaching Strategy ON Improving Teaching Skills AND Anxiety of Student Teachers IN FACULTY OF PHYSICAL EDUCATION TANTA UNIVERSITY

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Abstract

The current researcher aims at identifying the effects of using cooperative teaching on improving the teaching skills and the state of anxiety for female student teachers at the faculty of physical education – Tanta University. The researcher used the quasi-experimental approach (two-group design) with pre- and post- measurements. Research community includes female students of the faculty of physical education – Tanta University for the academic year 2011-2012. Sample (n=40) was purposefully chosen from the field training student teachers of the fourth grade (n=100) (40% of the community). They were divided into tow groups (experimental n=20 and control n=20). The researcher concludes that the cooperative teaching strategy is effective in improving teaching competencies and decreasing teaching anxiety of female student teachers. Cooperative teaching is more effective than the traditional methods in increasing teaching competencies and decreasing teaching anxiety of female student teachers.

Background and Problem:

The teacher is the core of any educational system and the more effective the teacher is, the more effective the educational process is. With the absence of an efficient teacher all other physical capabilities and curricula are meaningless. Physical education teacher is the key player in the educational process as he/she has more opportunities that may not be available for other teachers. Therefore, we should carefully prepare physical education teachers to bear all their responsibilities towards educating our siblings for the future (24).

Working as physical education teachers requires high quality teachers with good deal of knowledge and understanding of teaching skills. The responsibility of providing those student teachers with these skills lies upon the faculties of physical education to produce well-qualified teachers who can work through a modern teaching framework based on scientific bases and professional skills. Those student teachers should be provided with plenty of opportunities to practice and master teaching skills to guarantee their future career progress (13).

Teaching is a complicated process, even for expert teachers who are faced with doubled difficulty in achieving two goals; teaching a group of students at the same time he/she needs to learn how to teach. Sharaf (2000) indicated that the teaching process can never be effective unless there is a well-prepared teacher who knows well all events and developments of the process itself (8).

The future success of a student teacher in his/her career depends on his/her pre-service preparation. In third millennium, the mission of a physical education teacher is not limited to explain and do model movements using traditional ways of teaching. Instead, the prime mission depends on planning the lesson strategically through using modern methods of teaching and educational aids to achieve the required goals (9).

Cooperative teaching is an approach where target social skills are integrated with the content. It works on improving carious teaching skills of trainees. The idea of cooperative teaching is based on the concept that what a teacher does during teaching is a unit with limited results, while team work provides more profound results. The student teacher can be a source of information, motivation and encouragement for teaching his/her peers. This helps providing other student teachers with alternative perspectives aided by information to improve their teaching skills (27, 11, 26).

As the subject matter gets more difficult and the number of learners increases, this requires working in small groups as learners cooperate to achieve mutual goals. Learners contribute effectively in the learning process through discussion and dialogue in small groups that should be organized accurately to encourage cooperation and learning in the group as a whole (7, 9).

Teaching skills contributes in preparing student teachers and training them on the abilities and skills needed for various educational situations. The trainee who acquires teaching competencies can achieve the desired educational goals through preparing, planning and executing the educational situation. Therefore, competencies trend becomes more important for educational institutions all over the world. This indicates that this trend is the best solution for realistic preparation of student teachers (19).

As long as humans face problems that are difficult to solve during achieving their goals, their lives are rarely anxiety- free. Anxiety is a complex feeling of internal tension, fear and expecting danger and evil. Anxiety plays an important role in learning as it may have a positive driving force, and in this case it is called "facilitating anxiety", that affects the learner's performance and leads him/her to do more and increases his/her self-confidence. On the other hand, it could have negative driving force, and in this case it is called "restraining anxiety", that may hinder learners from doing well and decrease their self-confidence (4).

Anxiety can have positive effects on the educational process as it affects student teachers' attitudes towards teaching and creating a teacher who love his/her subject matter and teaches it effectively. During field training, the female student teacher in faculties of physical education is exposed to various problems like the lack of capabilities, the increase of students' number in class and the duration and content of each lesson. In addition, she is overloaded with administrative supervision activities. Therefore, it is natural that all this may affect her efforts on improving her own teaching skills and may lead her to a continuous state of anxiety that affects her performance negatively.

This leads the researcher to perform the current study to identify the effects of using cooperative teaching on improving the teaching skills and the state of anxiety for female student teachers at the faculty of physical education – Tanta University.

Aims:

The current researcher aims at identifying the effects of using cooperative teaching on:

1) *Improving the teaching skills for female student teachers at the faculty of physical education – Tanta University.*
2) *The state of anxiety for female student teachers at the faculty of physical education – Tanta University.*

Hypotheses:

1. *There are statistically significant differences between the post-measurements of the control and experimental groups on improving the teaching skills, in favor of the experimental group.*
2. *There are statistically significant differences between the post-*

measurements of the control and experimental groups on the state of anxiety, in favor of the experimental group.

Methods:

Approach:

The researcher used the quasi-experimental approach (two-group design) with pre- and post- measurements.

Subjects:

Research community includes female students of the faculty of physical education – Tanta University for the academic year 2011-2012. Sample (n=40) was purposefully chosen from the field training student teachers of the fourth grade (n=100) (40% of the community). They were divided into tow groups (experimental n=20 and control n=20).

Data collection tools and equipments:

1. Electric sets (video camera – video set – TV set).
2. Evaluation Form for Student teacher's Teaching Skills:

The researcher reviewed the related literature (12, 10, 20, 5, 9, 1, 18, 22, 15, 2, 8, 21, 24, 25, 31, 33) and identified (10) teaching skills as follows:

- ✓ Lesson planning and preparation.
- ✓ Forming educational and behavioral goals.
- ✓ Lesson Presentation.
- ✓ Variation of stimuli and motivating learning.
- ✓ Classroom management.
- ✓ Preparing lesson place.
- ✓ Using teaching aids.
- ✓ Lesson continuity.
- ✓ Evaluation.
- ✓ Principles and Methods of Teaching.

The researcher presented these skills to (9) experts of methodology and curricula of physical education who agreed on their importance to student teacher's preparation (agreement with 100%). The form included (10) items for each skill (total of 100 items) that student teachers respond to them on a five-point Lickert scale.

Experts' opinions indicated the content validity of the form. To calculate the form reliability, the researcher video-recorded the performance of pilot sample (n=3) from the same research community and outside the main sample and presented these videos to experts to notice the presence of the specified teaching skills using the form. After three days the same videos were re-presented to experts and they were asked to evaluate the teaching skills again. This test/ re-test procedure indicated the reliability of the form.

3. Teaching Anxiety Scale:

The researcher reviewed the related literature (11, 13, 22, 16, 20, 8,

28) to identify the sources of teaching anxiety for student teachers. In addition, (9) experts of methodology and curricula of physical education expressed their opinions and (40) student teachers from the same research community and outside the main sample answered an open-ended question about the sources of teaching anxiety. All these sources indicated that the most important sources are: mastering the content – time allocation – lack of capabilities – feeling nervous and confused – the supervisor's evaluation and criticism – classroom control – the relation between the student teacher and physical education office at school.

The researcher prepared the first draft of the scale (35 items) and presented it to (13) experts of methodology and curricula who omitted (5) items and the final draft included only (30) items. The minimum point of the scale is (30) while the max point is (150). The researcher calculated the correlations among each item and the total scale. This indicated the internal consistency validity of the scale. To calculate the scale reliability, the researcher used test/re-test procedure on (10) student teachers from the same research community and outside the main sample. This indicated the scale reliability.

Study Protocol:

The researcher performed the study according to the following protocol:

- ✓ Video-tapping a full lesson with all its parts (warm-up – physical preparation – educational activity - cool-down) for 45 minutes for each student in both groups and applied the teaching anxiety scale. This was considered the pre-measurement.
- ✓ The experimental group (n=20) was sub-divided into four sub-groups (n=5) and each sub-group work on preparing and delivering one lesson.
- ✓ Each sub-group member only delivers one part of the lesson. Sub-group member take turns until the end of the lesson. This procedure takes one week and roles change every week.
- ✓ Student teachers are not allowed to move into the next role until they master the previous one completely.
- ✓ At the end of each session the researcher holds a meeting with sub-group members to practice self-evaluation and discussion of each one's weaknesses and strengths.
- ✓ Experimental sub-groups are provided with videos for ideal lessons as required.
- ✓ After mastering each part of the lesson, each student teacher prepares and delivers a whole lesson on her own.
- ✓ The control group members (n=20) preformed their lessons following regular teaching procedures.

Pre-measurement:

The researcher applied the evaluation for of student teachers' teaching skills and the teaching anxiety scale to both groups (experimental – control) during the period 12 – 15 / 2 / 2012.

Main application:

The researcher applied the experiment on both groups from 16/2/2012 to 30/4/2012.

Post- measurement:

Post-measurements were taken from 30/4/2012 to 3/5/2012, following the same protocol mentioned before.

Statistical treatment:

The researcher used SPSS software to calculate the following:

Mean – median – standard deviation – variance rates – correlation coefficients – squewness – Cronbach's Alpha.

Results:

Table (1):

Difference significance and variance rate between the pre- and post-measurements of the control group on teaching skills and teaching anxiety scale

N	Variables	Pre-		Post-		Mean difference	Difference SD	(t)	Variance rate (%)
		Mean	SD±	Mean	SD±				
1-	Teaching skills								
-	Lesson planning and preparation	3.30	2.27	3.35	2.62	0.05	3.26	0.07	1.52%
-	Goal setting (educational & behavioral)	2.27	1.57	2.43	2.01	0.16	2.03	0.28	7.05%
-	Lesson presentation	1.76	1.63	1.84	1.08	0.08	1.67	0.18	4.55%
-	Variation of stimuli and learners' motivation	1.80	2.38	1.91	1.12	0.11	1.24	0.19	6.11%
-	Classroom management	3.20	2.45	3.27	1.98	0.07	2.31	0.09	2.19%
-	Preparing lesson location	2.70	2.43	2.84	1.99	0.14	3.42	0.19	5.19%
-	Using teaching aids	1.20	2.07	1.34	1.04	0.14	2.92	0.27	11.67%
-	Lesson continuity	1.50	1.35	1.61	1.24	0.11	1.78	0.27	7.33%
-	Evaluation	2.43	1.40	2.71	1.47	0.28	1.94	0.62	11.52%
-	Principles & Methods of teaching	3.30	2.38	3.45	2.04	0.15	4.41	0.21	4.54%
-	Total	23.46	2.04	24.75	4.65	1.29	3.44	1.14	5.49%
2-	Teaching anxiety scale	127.16	6.11	125.03	10.83	2.13	10.56	0.76	1.68%

Significance on 0.05 = 2.10

Table (1) indicates no statistically significant differences between the pre- and post- measurements of the control group on all research variables.

Table (2):

Difference significance and variance rate between the pre- and post- measurements of the experimental group on teaching skills and teaching anxiety scale

N	Variables	Pre-		Post-		Mean difference	Difference SD	(t)	Variance rate (%)
		Mean	SD±	Mean	SD±				
1-	Teaching skills								
-	Lesson planning and preparation	3.20	2.01	7.93	3.26	4.73	3.62	5.52*	147.81%
-	Goal setting (educational & behavioral)	2.63	1.97	9.40	2.19	6.76	3.01	10.27*	257.41%
-	Lesson presentation	2.36	2.17	9.90	0.40	7.53	2.17	15.28*	319.49%
-	Variation of stimuli and learners' motivation	2.57	2.84	9.70	1.46	7.13	3.24	9.98*	277.43%
-	Classroom management	2.43	2.29	9.46	1.91	7.03	2.97	10.54*	289.30%
-	Preparing lesson location	2.93	2.42	10.0	-	7.07	2.42	13.07*	241.29%
-	Using teaching aids	1.10	1.98	9.56	1.65	8.46	2.38	14.67*	769.09%
-	Lesson continuity	1.27	1.36	9.50	1.91	8.23	2.16	15.69*	648.03%
-	Evaluation	2.60	1.81	9.60	1.40	7.0	2.08	13.68*	269.23%
-	Principles & Methods of teaching	2.87	2.23	7.60	3.36	4.73	4.15	5.24*	164.81%
-	Total	23.96	1.89	92.65	2.60	68.69	2.95	95.57*	286.69%
2-	Teaching anxiety scale	125.17	4.25	109.27	9.80	15.90	9.09	6.65*	12.70%

Significance on 0.05 = 2.10

Table (2) indicates statistically significant differences between the pre- and post- measurements on all the researcher variables for the experimental group in favor of the post-measurements.

Table (3):

Difference significance between the post- measurements of the control and experimental groups on teaching skills and teaching anxiety scale

N	Variables	Control		Experimental		Mean difference	(t)
		Mean	SD±	Mean	SD±		
1-	Teaching skills						
-	Lesson planning and preparation	3.35	2.62	7.93	3.26	4.58	4.89*
-	Goal setting (educational & behavioral)	2.43	2.01	9.40	2.19	6.97	10.48*
-	Lesson presentation	1.84	1.08	9.90	0.40	8.06	31.29*
-	Variation of stimuli and learners' motivation	1.91	1.12	9.70	1.46	7.79	18.93*
-	Classroom management	3.27	1.98	9.46	1.91	6.19	10.06*
-	Preparing lesson location	2.84	1.99	10.0	-	7.16	16.09*
-	Using teaching aids	1.34	1.04	9.56	1.65	8.22	18.84*
-	Lesson continuity	1.61	1.24	9.50	1.91	7.89	15.49*
-	Evaluation	2.71	1.47	9.60	1.40	6.89	15.17*
-	Principles & Methods of teaching	3.45	2.04	7.60	3.36	4.15	4.72*
-	Total	24.75	4.65	92.65	2.60	67.90	56.99*
2-	Teaching anxiety scale	125.03	10.83	109.27	9.80	15.76	4.83*

Significance on 0.05 = 2.10

Table (3) indicates statistically significant differences between the post- measurements of the experimental and control groups on all the researcher variables in favor of the experimental group.

Table (4):

Variance Difference between the post- measurements of the control and experimental groups on teaching skills and teaching anxiety scale

N	Variables	Control	Experimental	Variance differences (%)
1-	Teaching skills			
-	Lesson planning and preparation	1.52%	147.81%	146.30%
-	Goal setting (educational & behavioral)	7.05%	257.41%	250.36%
-	Lesson presentation	4.55%	319.49%	314.94%
-	Variation of stimuli and learners' motivation	6.11%	277.43%	271.32%
-	Classroom management	2.19%	289.30%	287.11%
-	Preparing lesson location	5.19%	241.29%	236.10%
-	Using teaching aids	11.67%	769.09%	757.42%
-	Lesson continuity	7.33%	648.03%	640.70%
-	Evaluation	11.52%	269.23%	257.71%
-	Principles & Methods of teaching	4.54%	164.81%	160.27%
-	Total	5.49%	286.69%	283.20%
2-	Teaching anxiety scale	1.68%	12.70%	11.02%

Table (4) indicates statistically significant differences in variance between the post- measurements of the experimental and control groups on all the researcher variables in favor of the experimental group.

Discussion:

Table (1) indicates no statistically significant differences between the pre- and post- measurements of the control group on all research variables. The researcher thinks that this lack of significance is due to the weakness of the traditional (regular) teaching method used with the control group. This traditional method leads to time waste which in turn is reflected in the lack of teaching skills improvement, compared to the recommended program.

Table (2) indicates statistically significant differences between the pre- and post- measurements on all the researcher variables for the experimental group in favor of the post-measurements. The researcher thinks that this improvement is due to the use of cooperative teaching as it provides student teachers with correct psychological and educational bases that help them use learning resources effectively and prepare the learning environment according to sound bases. Cooperative learning helps student teachers to bear their responsibilities about teaching gradually and systematically and this improves their professional behavior. This is in agreement with Mary Baumberger- Henry (2005), Sarah et al (2007) and Abdullah et al (2011) (30, 31, 24).

Table (3) indicates statistically significant differences between the post- measurements of the experimental and control groups on all the researcher variables in favor of the experimental group. This is due to the use of cooperative learning as it helps student teachers to use human resources effectively and this is in agreement with various studies (30, 25, 26, 27, 28)

The researcher thinks that these results are due to the planning process of the lesson and team delivery of the content that helps improving student teachers' teaching abilities and competencies. This led the experimental group to surpass the control group.

Table (4) indicates statistically significant differences in variance between the post- measurements of the experimental and control groups on all the researcher variables in favor of the experimental group. The researcher thinks that this improvement is due to cooperative teaching used with the experimental group. It helps decreasing teaching anxiety and makes student teachers more familiar with teaching procedures. This improves their competencies as future teachers. This is in agreement with various studies (21, 30, 31, 24, 25, 28).

Conclusions:

According to the research results, the researcher concludes the following:

1. The cooperative teaching strategy is effective in improving teaching competencies of female student teachers.
2. The cooperative teaching strategy is effective in decreasing teaching anxiety of female student teachers.
3. Cooperative teaching is more effective than the traditional methods in increasing teaching competencies and decreasing teaching anxiety of female student teachers.

Recommendations:

The researcher recommends the following:

1. Using cooperative teaching strategy in preparing female student teachers of faculties of physical education.
2. Encouraging cooperative and team work in lesson planning and delivery in physical education.
3. Training female student teachers using modern technologies to improve their teaching competencies.
4. Forming work groups for female student teachers during field training to exchange knowledge and experiences among them.
5. Choosing suitable teaching methods that provide opportunities for effective contribution in lesson activities.
6. Providing student teachers with considerate supervision to help them understand the practical reality through putting a clear strategy to improve their professional development.

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