Efficacy of Self Directed Learning Program to Improve Technical Institute of Nursing Students Management Competencies

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Abstract: The technical nursing students courses contents give opportunity to apply nursing theory and skills in clinical settings, except nursing administrations course have no clinical application, so they required improving their management competencies. Dimensions of management competencies include four core competencies namely leadership, communication, critical thinking and professionalism. Self-directed learning is the amount of responsibility a student accepts for their own learning. The self-directed learner takes control and accepts the freedom to learn what they consider important for themselves. Readiness for self directed learning is the degree to which the student possesses the attitudes, abilities and personal characteristics necessary for self directed learning. **Objective:** the aim was to study efficacy of self directed learning program to improve technical institute nursing students management competencies. **Setting:** The study was conducted at Technical Institute of Nursing at Tanta University. **Subject:** The study subject (130) technical nursing students include second year students in academic year at 2015-2016. **Tool:** three tools used including self rating scale of self direct learning readiness, management competencies skills scale and knowledge test on self directed learning. **Result:** Preprogram about half of nursing students had high level of self directed learning readiness, no one or few of technical nursing students have good levels of all dimensions of management competencies, and all technical nursing student had weak level on domains of self directed learning. Compared to immediate and post 3months the majority of technical nursing students had high level of total self-directed learning readiness and good skill level of management skill competencies. except communication dimension (66.9%) were at good level with significant improvement at p 0.05. **Conclusion:** technical nursing students at Tanta University Faculty of Nursing showed unsatisfied level of skill for all management competencies dimension, they have great need to attend educational training program about self directed learning to improve their management competencies. Recommendation: conduction pre-employment orientation and periodic educational training program and workshop about management competencies and to use self directed learning.

Key words: technical nursing students, management competencies, self directed learning, self directed learning readiness.

I. INTRODUCTION

Nurses work in a multifaceted healthcare setting, where they constantly face challenges stemming from the ongoing social and scientific changes inherent in the healthcare field. The responsibility of nursing education is preparing and supporting nurses so that they can successfully adjust and respond to these challenges. Nursing students are expected to be able to fulfil the demands and needs of the community[1]. Technical institute of nursing is a two-year program prepares technical nursing students for a defined technical scope of practice[2].

Technical nursing students required to improve their management competencies. Because competency-based education is crucial for safe and efficient nursing services. Nursing student management competency has been defined as the knowledge, skills, ability, and behaviors a student possess to perform tasks correctly and skillfully[3]. Lazarte Accreditation management competencies dimensions include four core competencies namely leadership, communication, critical thinking and professionalism. Leadership is vital for all nurses to engage in their roles whether they are involved in direct patient care, work in a consultant position, or serve in positions of formal authority[4].

Interpersonal communication competence is one of the skills that must be cultivated by nursing students for effective achievement of nursing goal in complicated nursing situation, and interaction [5].Critical thinking is the process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information to reach an answer or conclusion. Critical thinking skills are essential to function in today's complex health care environment and to ensure continuing competence for the future[6].

Professionalism is the ability to align personal and organizational conduct with ethical and professional standards that include a responsibility to the patient and community, a service orientation, and a commitment to lifelong learning and improvement[7].

Self-directed learning is the amount of responsibility a student accepts for their own learning. Self directed learning readiness is the degree to which the student possesses the attitudes, abilities and personal characteristics necessary for self directed learning[8]. Self directed learning program for technical nursing students management skill competencies and self directed information have tendency to promote their knowledge acquisition and

encourage lifelong learning as well as enables them to improve their management skills competencies and function in their management role safely and proficiently[9].

II. AIM OF THE STUDY

To study efficacy of self directed learning program to improve technical institute nursing students management competencies.

III. RESEARCH HYPOTHESIS

Technical nursing students readiness to self directed learning and their required management competencies expected to be improved after the self directed learning program.

IV. SUBJECTS AND METHOD

Study design: Quasi experimental design was used to achieve the aim of study.

Setting: The study was conducted at Technical Institute of Nursing at Tanta University.

Subject: The study subject included second year students in academic year at 2015-2016. The sample size N= 130 technical nursing students based on 80% power analysis and 95% confidence level of the study (total subject are 385).

Tools: To achieve the aim of the study, three tools were used.

Tool I: Self Rating Scale of Self Direct Learning Readiness: Part (1) this part was involve characteristics of the technical

institute nursing students such as age, previous graduation school and training in private hospital.

Part (2) consisted of five broad areas of self-directed learning:

❖ **Awareness (personal characteristics)**

❖ **Learning strategies (attitude**

❖ **Learning activities (abilities)**

❖ **Evaluation.**

❖ **Interpersonal skills**

❖ **Scoring system**

Assess self directed learning readiness measured on five points (1-5) Likert Scale ranging from 1= never to 5= always .Total scores calculated and represent varying levels of readiness as follows:-High readiness (>75%) =225 scores, Medium readiness (60% - 75%) = 180- 225, Poor readiness (<60%) =180 scores

Tool II: Management Competencies Skills Scale

The scale included management skills competencies skills situations for its four dimensions as follows:

1. Leadership dimension
2. Critical thinking dimension
3. Communication dimension
4. Professionalism dimension

Management competencies skills measured on three points Likert Scale ranging from 0 = not done, 1= partial done and 2 = complete done. Total scores

calculated and represent varying levels of competency ranging from:Good competent skill >75%82 =score,Fair competent skill 60%-75% 82-66 = score,Week competent skill < 60%=66 score.

Tool III: knowledge Test on Self Directed Learning included questions about the followings:

   a) Self directed learning

   b) Competencies and skills to carry out learning plan

   c) Managing time related to learning activities

Each question of the test was measured on a score of "1" if the answer is "correct" and a score of "zero" if the answer is "wrong". Scores represent varying levels of knowledge as follow: Good knowledge = (>75%)=225 scores, Fair knowledge = (60% - 75%)= 180- 225score , Week knowledge = (<60%)=180 score.

Methods:

- Official permission to carry out the study was obtained from responsible authorities

- Nursing students conformed consent to participate in the study to obtained (technical nursing students was informed about the privacy of information obtained from them, nature of the study, their rights to withdraw).

- Tools were presented to a jury of 7 experts in nursing administration to check content validity of its items.

- The suitable statistical tests were used for testing tools reliability.

- A pilot study was conducted on10% of the total sample to test clarity and applicability of tools and correction was done if necessary.

Research in this study classified into

- **Assessment:** The self rating scale of self direct learning tool (I), nursing management competencies skills scale (II) and' knowledge test on self directed learning tool (III) were used pre, immediate and after three month for knowledge retest post implementation of the program.

- **Plan:**Self directed learning program was design and implemented to technical nursing student by researcher based on the assessment data and literature review.

- **Objective of the program :** At the end of the self directed learning program implementation the technical nursing students will have better readiness to self directed learning as well as their management competencies will be improved.

- **Content:** The program include ten sessions under ten topics as follows:-

Session (1) Factors affecting management competencies improvement.

Session (2) Dimensions of management competencies.

Session (3) Instructional methods to improve self directed learning readiness.

Session (4) Self direction in learning.

Session (5) Competencies and skills to carry out learning plan.

Session (6) Managing time related to learning activities.

Session (7,8,9,10) Examples of clinical situation to train technical nursing students how to implement self directed learning process on leadership, communication, critical thinking, and professionalism respectively.

- **Implementation of the program:**Technical nursing student divided into ten groups. The program (10) sessions every session 2 hours for every group. The program (20 hours) conducted for technical nursing student, at their technical nursing institute.

- **Evaluation of the program:** Pre, immediate and after three month post implementation of the program. Evaluation done on technical nursing students self directed learning knowledge, nursing management competencies as well as their self directed learning readiness.

- **Learning strategies:** Appropriate learning strategies used as power point, assignment, group discussion, situation, slides, videos, role-plays…....etc.

V. RESULTS

Table (1) Shows characteristics of the technical nursing students. The age of technical nursing student were ranged from 19-29 years with mean age 20.02±1.403. High percent (92.3%) of technical nursing student were in the age group ≤ 20 years and the rest 7.7% were in the age group > 20 years. Majority (96.9%) of technical nursing student graduated from General secondary school, while minority (3.1%) graduated from Secondary technical school. Technical nursing student 73.1% did not have any previous training and 26.9% had previous training with training mean period 6.83±12.906 month.

Figure (1) Show nursing students' level of total self directed learning readiness. Pre program about half of nursing students had high level of self directed learning readiness compared to immediate and post 3months the majority had high level of total self directed learning readiness.

Table (2) Represents technical nursing students levels and means of self directed learning readiness domains. The table shows statistical significant difference

between nursing students levels and means for all self rating domains at P = 0.00. Preprogram range 5.4% - 3.1% had poor level while 53.8 - 69.2% had high level regarding awareness, learning strategies, evaluation, interpersonal skills domains of self rating. All technical nursing students had high levels of interpersonal skills domains of self rating immediate and post 3 months of program.While majority of technical nursing students range 99.2%-96.9% had high level of learning strategies, evaluation, awareness and learning activities domains of self rating respectively immediate and post 3 months of program. Pre program mean score was 48.25±5.187, 48.88±5.361, 44.74±6.021, 49.24±5.756 and 50.25±5.096 improved at both immediate and post 3months to be 56.78±2.942, 55.58±3.647, 55.58±3.647, 57.63±2.989 and 58.11±2.051 respectively regarding awareness, learning strategies, learning activities, evaluation, and interpersonal skills domains of self rating.

Table (3) Represents total score of self-directed learning readiness domains pre and post program according to student characteristics. The table illustrates statistical significant correlation between total learning activities of self directed learning readiness general and technical previous graduation schools preprogram

implementation at P < 0.01. Moreover statistical significant correlation found between total score of self-rating and previous graduation school preprogram implementation at P < 0.05.

Figure (2) Represent technical nursing students level of total management competencies skills pre, immediate and 3month post program. No one of technical nursing students have good level of management competencies skills pre program, changed to be all of them have good level of management competencies skills immediate and 3 months post program.

Table (4) Represent technical nursing students levels and mean of management competencies skills dimensions pre, post and 3month post program. Statistical significant difference found between students levels and means of management competencies skills dimensions pre, immediate, post 3months program implementation at P < 0.05. Preprogram no one or few of technical nursing students have good levels of all dimensions of management competencies. But immediate and 3months post program all technical nursing students were at good level except communication dimension was (66.9%). Preprogram students mean

scores were 4.92±1.29, 1.89±1.05 while immediate, and post 3months significantly improved to reach 11.00±0.00, 4.00±0.00 regarding leadership and critical thinking dimensions respectively.

Table (5) Technical nursing students total score of management competencies skills dimension pre and post program according to their characteristics .The table illustrates statistical significant correlation between students total management competencies skills, communication, and professionalism with their age post program at P < 0.05.

Figure (3) Represent technical nursing students total level of knowledge on self directed learning throughout pre, post, 3month post program. Preprogram implementation all technical nursing students had weak level of knowledge on self directed learning while immediate post program all students had good level, slightly decreased 3months post program to be majority had good level.

Table (6) Represents technical nursing students levels of knowledge on domains of self directed learning pre, immediate, 3month post program. Statistical significant improvement found between level and mean of total knowledge of domains for self directed learning pre,

immediate, post 3months program at P <0.05. Preprogram all technical nursing student had weak level on all domains of self directed learning and changed to be good level immediate and post 3month of program. Also preprogram technical nursing students mean scores of knowledge was 7.87±0.438, 12.06±0.878, 4.85±0.590 while immediate, post 3months program were significantly improved to reach 20.00±0.00, 27.00±0.00,13.00±0.00 regarding to self directed learning, competencies and skills to carry out learning plan, and managing time to learning activities domains respectively.

Table (7) Represent correlation between the all domains of self-rating scale, management competencies skills and knowledge on self directed learning among the studied technical nursing students pre and post program. Regarding management competencies skill, this table shows significant correlations between leadership and, learning activities and interpersonal skills at P<0.05pre program. In addition, positive correlation were observed regarding communication and learning activities and interpersonal skills where at P<0.05pre program. On the other hand, a negative and significant correlation was observed in relation to professionalism and

interpersonal skills for r= -0.202 and P= 0.021. In relation to knowledge on self directed learning domain, this table reported positive and significant correlations between self-directed learning, learning strategies and interpersonal skills at P<0.05 pre program. Also, positive correlations were found between competencies and skills to carry out learning plan and awareness, learning strategies preprogram at P<0.05. Also, positive correlations were observed pre and post program between competencies and interpersonal skills at P<0.05.On the other hand, negative and significant correlations were observed between managing time related to learning activities, awareness and interpersonal skills at P<0.05 and r=-0.253 and -0.178 respectively.

Table (1): Characteristics of the technical nursing students.

| Characteristics	Technical nursing students (n=130)	
	N	**%**
Age (in years) - ≤ 20 years - > 20 years	120 10	92.3 7.7
Range **Mean ± SD**	**(19-29)** **20.02±1.403**	
Previous graduation school - General secondary school - Secondary technical school	126 4	96.9 3.1
Previous training in private hospital - No - Yes	95 35	73.1 26.9
Period of that training (in months) Range Mean ± SD	(1-72) 6.83±12.906	
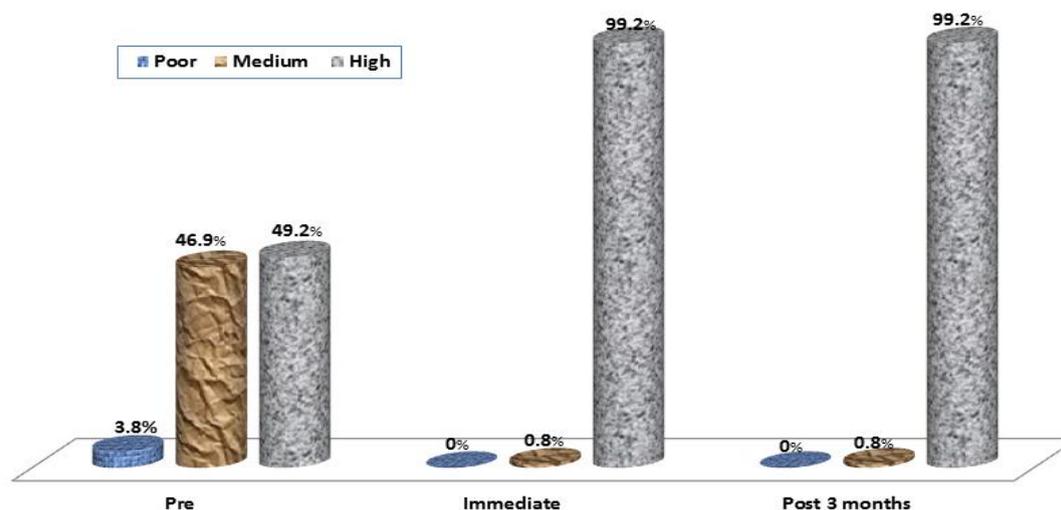
Figure (1): Nursing students level of total self directed learning readiness pre, immediate, 3month post program.

Table (2): Technical nursing students levels and means of self directed learning readiness domains.

Levels of self rating scale domains	Technical nursing students (n=130)						χ^2 P
	Pre		Immediate		Post 3 Months		
	N	%	N	%	N	%	
Total awareness							
- Poor	7	5.4	0	0.0	0	0.0	**118.80**
- Medium	53	40.8	3	2.3	3	2.3	**0.00***
- High	70	53.8	127	97.7	127	97.7	
Range **Mean ± SD**	(30-60) 48.25±5.187		(45-60) 56.78±2.942		(45-60) 56.74±2.932		F=212.90 P=0.00*
Total learning strategies							
- Poor	10	7.7	0	0.0	0	0.0	**139.16**
- Medium	52	40.0	1	0.8	1	0.8	**0.00***
- High	68	52.3	129	99.2	129	99.2	
Range **Mean ± SD**	(35-60) 48.88±5.361		(47-60) 57.25±2.774		(47-60) 57.25±2.774		F=206.70 P=0.00*
Total learning activities							
- Poor	31	23.8	0	0.0	0	0.0	**219.71**
- Medium	64	49.2	4	3.1	4	3.1	**0.00***
- High	35	26.9	126	96.9	126	96.9	
Range **Mean ± SD**	(30-60) 44.74±6.021		(42-60) 55.58±3.647		(42-60) 55.58±3.647		F=243.31 P=0.00*
Total evaluation							
- Poor	8	6.2	0	0.0	0	0.0	**133.56**
- Medium	52	40.0	1	0.8	1	0.8	**0.00***
- High	70	53.8	129	99.2	129	99.2	
Range **Mean ± SD**	(30-60) 49.24±5.756		(42-60) 57.63±2.989		(42-60) 57.63±2.989		F=179.55 P=0.00*
Total interpersonal skills							
- Poor	4	3.1	0	0.0	0	0.0	**89.14**
- Medium	36	27.7	0	0.0	0	0.0	**0.00***
- High	90	69.2	130	100.0	130	100.0	
Range **Mean ± SD**	(32-60) 50.25±5.096		(49-60) 58.11±2.051		(49-60) 58.11±2.051		F=233.69 P=0.00*

* Significant at P < 0.05

Table (3): Total score of self-directed learning readiness domains pre and post program according to student characteristics.

Self-directed learning readiness domains		Sociodemographic data of the studied technical nursing students							
		Age (in years)		previous training (in months)		Previous graduation school			
						General secondary school		Secondary Technical School	
		R	P	R	P	R	P	R	P
-Total awareness score	Pre	-0.063	0.480	0.048	0.584	0.068	0.443	-0.068	0.443
	Post	-0.069	0.434	0.088	0.317	0.134	0.128	-0.134	0.128
-Total learning strategies score	Pre	-0.085	0.335	0.014	0.872	0.049	0.582	-0.049	0.582
	Post	-0.003	0.977	-0.019	0.830	0.088	0.319	-0.088	0.319
-Total learning activities score	Pre	0.103	0.246	0.025	0.775	**0.231**	**0.008****	**-0.231**	**0.008****
	Post	0.051	0.561	-0.017	0.850	0.139	0.114	-0.139	0.114
-Total evaluation score	Pre	-0.112	0.205	-0.021	0.812	0.166	0.059	-0.166	0.059
	Post	0.023	0.796	0.063	0.473	0.090	0.307	-0.090	0.307
-Total interpersonal skills score	Pre	-0.024	0.789	0.064	0.468	0.113	0.200	-0.113	0.200
	Post	0.023	0.793	0.119	0.178	0.030	0.734	-0.030	0.734
Total score of Self-rating Scale	Pre	-0.033	0.705	0.021	0.811	**0.177**	**0.044***	**-0.177**	**0.044***
	Post	0.004	0.962	0.052	0.561	0.136	0.123	-0.136	0.123

* Significant at $P < 0.05$ ** Highly significant at $P < 0.01$

Table (4): Technical nursing students levels and mean of management competencies skills dimensions.

Levels of Management Competencies Skills Scale dimensions	Technical nursing students (N=130)						χ^2 P
	Pre		Immediate		Post 3 months		
	N	%	N	%	N	%	
A. Total Leadership							
▪ Weak	113	86.9	0	0.0	0	0.0	*390.00*
▪ Fair	17	13.1	0	0.0	0	0.0	*0.00**
▪ Good	0	0.0	130	100.0	130	100.0	
Range **Mean ± SD**	**(2-8)** **4.92±1.29**		**(11-11)** **11.00±0.00**		**(11-11)** **11.00±0.00**		**F=2873.47** **P=0.00***
B. Total critical thinking							
▪ Weak	93	71.5	0	0.0	0	0.0	*359.33*
▪ Fair	30	23.1	0	0.0	0	0.0	*0.00**
▪ Good	7	5.4	130	100.0	130	100.0	
Range **Mean ± SD**	**(0-4)** **1.89±1.05**		**(4-4)** **4.00±0.00**		**(4-4)** **4.00±0.00**		*F=522.83* *P=0.00**
C. Total Communication							
▪ Weak	128	98.5	0	0.0	7	5.4	*416.09*
▪ Fair	2	1.5	0	0.0	36	27.7	*0.00**
▪ Good	0	0.0	130	100.0	87	66.9	
Range **Mean ± SD**	**(0-4)** **1.50±0.93**		**(5-5)** **5.00±0.00**		**(3-5)** **4.62±0.59**		*F=1178.48* *P=0.00**
D. Total professionalism							
▪ Weak	129	99.2	0	0.0	3	2.3	*372.48*
▪ Fair	1	0.8	130	100.0	127	97.7	*0.00**
Range **Mean ± SD**	**(0-5)** **1.69±0.97**		**(6-6)** **6.00±0.00**		**(4-6)** **5.75±0.49**		*F=1929.75* *P=0.00**

Table (5): Technical students total management competencies skills dimension, pre and post program according to their characteristics

Total scores of management competencies skills dimension		Sociodemographic data of technical nursing students							
		Age (in years)		Private training (in months)		Previous graduation school			
						General secondary school		Secondary Technical School	
		R	P	r	P	R	P	R	P
1. Total leadership	Pre	0.135	0.127	-0.003	0.975	-0.029	0.741	0.029	0.741
	Post	-	-	-	-	-	-	-	-
2. Total communication	Pre	0.132	0.135	-0.149	0.092	0.098	0.266	-0.098	0.266
	Post	**0.174**	**0.048***	-0.093	0.293	-0.124	0.160	0.124	0.160
3. Total critical thinking	Pre	0.043	0.625	0.066	0.454	-0.066	0.454	0.066	0.454
	Post	-	-	-	-	-	-	-	-
4. Total professionalism	Pre	0.027	0.764	-0.016	0.858	0.035	0.692	-0.035	0.692
	Post	**0.185**	**0.035***	0.112	0.203	-0.097	0.271	0.097	0.271
Total score of management Competencies skills	Pre	**0.173**	**0.049***	-0.090	0.310	0.018	0.838	-0.018	0.838
	Post	**0.233**	**0.008****	0.013	0.882	-0.156	0.077	0.156	0.077

* Significant at P < 0.05   ** Highly significant at P < 0.01
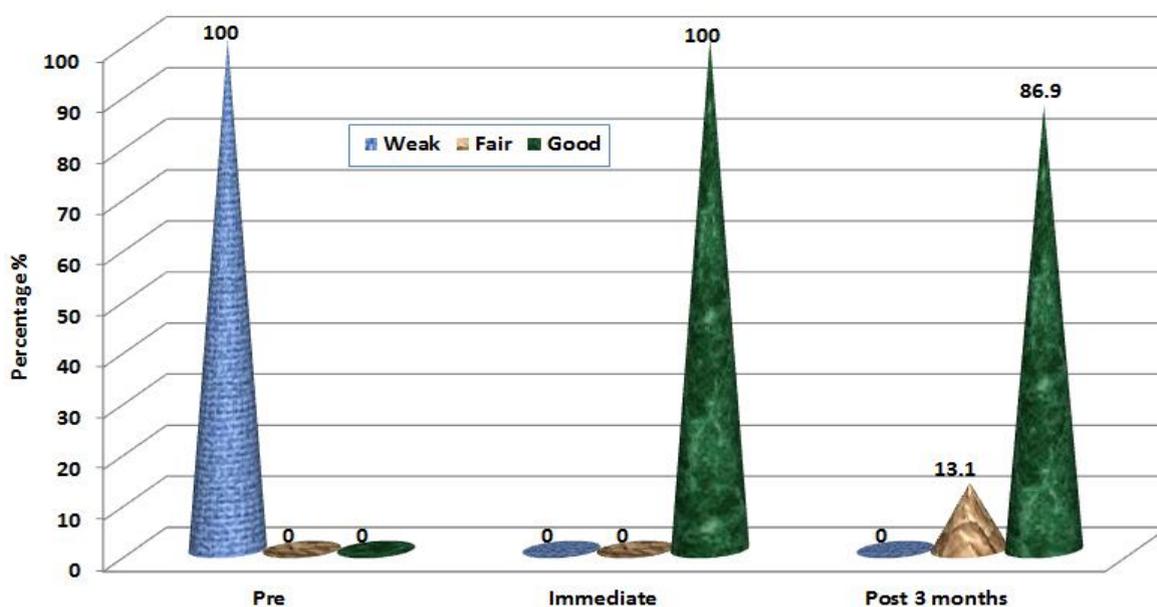
Figure (3) levels of knowledge on self directed learning throughout pre, post, post 3month program.

Table (6): Technical nursing students levels of knowledge on domains self directed learning pre, immediate, 3month post program.

Levels of knowledge domains on Self Directed Learning	Technical nursing students (N=130)						χ^2 P
	Pre		Immediate		Post 3 months		
	N	%	N	%	N	%	
- **Self directed learning**							
- Weak	130	100.0	0	0.0	0	0.0	**460.91**
- Fair	0	0.0	0	0.0	40	30.8	**0.00***
- Good	0	0.0	130	100.0	90	69.2	
Range **Mean ± SD**	**(5-9)** **7.87±0.438**		**(20-20)** **20.00±0.00**		**(13-19)** **16.25±1.302**		**F=7974.7** **P=0.00***
- **Competencies and skills to carry out learning plan**							
- Weak	130	100.0	0	0.0	0	0.0	**456.76**
- Fair	0	0.0	0	0.0	38	29.2	**0.00***
- Good	0	0.0	130	100.0	92	70.8	
Range **Mean ± SD**	**(9-13)** **12.06±0.878**		**(27-27)** **27.00±0.00**		**(18-26)** **21.42±1.661**		**F=6297.4** **P=0.00***
- **Managing time related to learning activities**							
- Weak	130	100.0	0	0.0	1	0.7	**407.92**
- Fair	0	0.0	0	0.0	14	10.8	**0.00***
- Good	0	0.0	130	100.0	115	88.5	
Range **Mean ± SD**	**(4-6)** **4.85±0.590**		**(13-13)** **13.00±0.00**		**(7-13)** **10.55±0.973**		**F=5267.2** **P=0.00***

* Significant at P < 0.05

Table (7): Correlation between the all domains of self-rating scale, management competencies skills and knowledge on self directed learning among the studied technical nursing students pre and post program.

Domains		Total scores of Self-Rating Scale domains									
		Awareness		Learning Strategies		Learning activities		Evaluation		Interpersonal Skills	
		R	P	R	P	R	P	R	P	R	P
Management Competencies Skills											
A. Leadership	Pre	0.106	0.230	0.156	0.076	**0.212**	**0.015***	0.059	0.505	**0.172**	**0.049***
	Post	-	-	-	-	-	-	-	-	-	-
B. Communication	Pre	-0.082	0.351	-0.101	0.255	-0.052	0.554	-0.058	0.509	-0.103	0.245
	Post	0.170	0.053	0.054	0.545	0.198	**0.024***	0.098	0.266	**0.223**	**0.011***
C. Critical thinking	Pre	-0.073	0.408	-0.070	0.430	-0.073	0.409	-0.011	0.900	0.127	0.151
	Post	-	-	-	-	-	-	-	-	-	-
D. Professionalism	Pre	-0.078	0.376	-0.116	0.189	-0.052	0.555	-0.062	0.486	**-0.202**	**0.021***
	Post	0.085	0.334	0.045	0.608	0.117	0.185	0.158	0.072	0.052	0.555
Knowledge on Self Directed Learning											
1. Self directed learning	Pre	0.155	0.079	**0.181**	**0.039***	0.022	0.802	0.065	0.465	**0.251**	**0.004****
	Post	-0.141	0.110	-0.063	0.476	-0.071	0.424	-0.151	0.086	-0.060	0.500
2. Competencies and skills to carry out learning plan	Pre	**0.250**	**0.004****	**0.186**	**0.034***	0.104	0.238	0.153	0.081	**0.341**	**0.00****
	Post	-0.068	0.443	-0.098	0.270	-0.094	0.289	-0.123	0.164	-0.175	**0.046***
3. Managing time related to learning activities	Pre	**-0.253**	**0.004****	-0.141	0.110	0.021	0.810	-0.051	0.566	**-0.178**	**0.043***
	Post	0.021	0.816	-0.086	0.330	0.021	0.815	-0.090	0.308	-0.018	0.839

* Significant at P < 0.05   ** Highly significant at P < 0.01

VI. DISCUSSION

Technical nursing students' showed internal motivation and tendency to become self directed in their learning, due to being exposed to a diversity of life experiences. Other important factor is their successful completion of undergraduate studies which suggest a satisfactory sense of self-esteem affect positively their motivation for lifelong achievement. So they have high awareness, learning strategies, learning activities, evaluation and interpersonal skills of self directed learning. Jiano (2015) [10] mentioned that undergraduates demonstrate high level of professionalism, independency in learning and leadership in their chosen field. Additionally Zachariah and Huynh (2011) [11] reported that learners are ready and stimulated to learn when they encounter a gap in their current and desired knowledge indicating a high readiness for self-directed learning among the respondent.

All technical nursing students subjects showed weak levels of management skills competencies pre program this result indicates the importance for those technical nursing students to attend training program on self directed learning and management competencies skills. That educational program can assist them on how to develop management competencies and to have ability in their profession, being good communicator and leader as well as being critical thinker. However the competent nursing practice could be promoted through continuous training and developing experiences, regardless of the past education or the graduation level as asserted by Griot (2016) [12].

Finding of the present study is supported by study of Zakaria (2013) [13] found that educational program helped nurses in keeping up to data with new concept, increasing competencies, modifying their attitudes and developing their abilities to deal with patients and problems. Also Mohamed (2012) [14] supported the results and revealed that internship programs allow for professional growth in specific fields and developing their capabilities.

Present study illustrate that preprogram all technical nursing student had weak level of knowledge regarding self directed learning, competencies and skills to carry out learning plan, and managing time related to learning activities. The fact is that preprogram students find it difficult to conduct self directed learning, because their teacher's experiences still emphasize a teacher-centered approach, which still focuses on summative assessment and memorizing facts. Student's background

and cultural factors also contribute to those students's decrease of motivation to conduct self directed learning. Apparently those students require more case or problem-based studies, clinical orientations, innovative teaching programs group discussions and tutorials in regular teaching. So to improve their self-directed learning, they need to take responsibility to plan, implement and evaluate their own learning and to work independently to achieve their learning goals. But immediate and 3month post program knowledge of those students significantly improved regarding to self directed learning due to providing them with explicit advance information about aspects and strategies of self directed learning. Also they provided with assistance to improve their self-management skills and to take control over their own learning especially in respect to time, resources and learning strategies.

Result of this study reveals that there are positive correlations between technical nursing students managerial skills and self directed learning knowledge pre-post program. These correlations are highly positive in both immediately post program and three months later. which means that they acquires more knowledge about managerial skills and self directed learning

improved their ability to apply these skills in the clinical training area.

Banan et al, (2017) [15] support present study and found statistical significant positive correlation between nursing students knowledge and practice regarding management skills. Also the study done by Ibrahim (2010) [16] supported results of the present study and found positive correlations between nurse interns' knowledge and their practical skills after their management program.

VII. CONCLUSION &RECOMMENDATION

Implementation of self directed learning program had led to improve technical nursing students management skills competencies, and self directed learning knowledge. Self direct learning readiness tool impacted on giving them more confidence to work in their respective practice areas, and made a positive difference in their learning behaviour. Actually pre educational program, majority of technical nursing students had weak level regarding self directed learning knowledge and management skill competencies. Proper design and implementation of self directed learningprogram improved their self directedknowledge and management skill competencies significantly post

educational program with correlation between them.

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