

Students' Readiness for Self Directed Learning and its Relation to their Perception of Learning Context in Alexandria and Damanhour Nursing Faculties

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Abstract

*Self-directed learning (SDL) has become a focus for nursing education in the past few decades due to the complexity and changes in nursing profession development. **Objective:** The aim of the present study was to assess community health nursing students' readiness for self-directed learning and identify its relation to their perception of the learning context in Alexandria and Damanhour Nursing Faculties. **Setting:** The study was conducted at two Faculties of Nursing, Alexandria & Damanhour. **Subjects:** Using the equal allocation method, a convenient sample of 100 undergraduate nursing students registered at the Community Health Nursing Course during the second semester of the academic year 2013-2014 were selected from each of the previously mentioned settings(n=200). **Tools:** Three tools were used for data collection. The first tool was students' basic data structured questionnaire to identify the students' personal and academic data. The second was Self-directed Learning Readiness Scale (SDLRS) for nurses to assess the students' readiness for self-directed learning. However, the third tool was Course Experience Questionnaire (CEQ) to assess the students' perception of the learning context. **Results:** Readiness for self-directed learning among students in Alexandria Faculty of Nursing was significantly higher than those in Damanhour Nursing Faculty and that students' readiness for self-directed learning is significantly affected by their perception of the learning context in both Faculties. **Conclusion:** Students' readiness for self-direction in learning was significantly affected by their academic performance and studying hours in both faculties. Students' perception of the learning context had a significant positive correlation with their self-directed learning abilities. **Recommendations:** Assessing nursing students' readiness for self-directed learning and incorporating independent learning strategies in the nursing curricula.*

Keywords: self-directed learning, learning context, readiness, nursing students.

Introduction

Nursing graduates today are likely to work in multifaceted healthcare settings where they constantly face challenges stemming from the ongoing social and scientific changes inherent in the healthcare field. Medical science in general and therapeutics in particular, changes rapidly, the life span of useful information is short and there is an information explosion.

Moreover, nurses are prepared as generalists at the undergraduate level; upon employment, they often find themselves feeling like novices in facing the challenges of providing safe and quality care. The responsibility of nursing education is preparing and supporting nurses so that they can successfully adjust and respond to these challenges^(1, 2).

A key element believed to be important for university graduates to engage

in continuous learning is their abilities to be self-directed in learning. These self-directed learning abilities are thought to encourage individuals to continue using their personal competencies and outside resources to educate themselves⁽²⁾. Possessing self-directed learning qualities is important to the growth and success of the nursing profession, beginning with the education of

nursing students. Lifelong SDL skills are now, more than ever, a necessity for survival especially in the health sciences⁽³⁾.

Self-directed learning (SDL) is an educational concept that has received increasing attention in recent years particularly in the context of higher education. It has become a focus for nursing education in the past few decades due to the complexity and changes in nursing profession development. Self-directed learning can be defined in terms of the amount of responsibility the learner accepts for his or her own learning. The self-directed learner takes control and accepts the freedom to learn what they view as important for themselves. The degree of control the learner is willing to take over their own learning will depend on their attitude, abilities and personality characteristics⁽⁴⁾.

According to Malcolm Knowles Self-directed learning is "a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes⁽⁵⁾."

Garrison expanded upon Knowles' definition by presenting a comprehensive model of self-directed learning that includes the dimensions of self-management, self-monitoring, and motivation. In this context, self-management describes a learner setting goals and managing available resources and support. Self-monitoring encompasses

cognitive and metacognitive processes required to construct individual meaning of new concepts by adding to or modifying existing knowledge. Last, motivation refers to the influence of internal and external factors on the believed value to and success of the learner in a learning experience. This final dimension is important at the time the decision is made to enter into a learning activity and to continue in that activity⁽⁶⁾.

Self-directed learning readiness is the degree the individual possesses the attitudes, abilities and personality characteristics necessary for self-directed learning. Inherent in this definition are several assumptions about SDL readiness. Firstly, adults are inherently self-directing, i.e. readiness for SDL exists along a continuum and is present in individuals to an extent. Secondly, competencies required for self-direction can be developed to some extent and the best way to learn autonomous behavior is to behave autonomously. Finally, the ability to learn independently in one situation or context can be generalized to other settings^(7,8,9).

Students' self-direction in learning may be influenced by a range of factors, current researches on the development of SDL had focused both on the internal characteristics of the learners as well as the broader context the learners are situated within. Research evidence indicated that certain learning contexts are more effective at promoting self-directed learning and the characteristics used to describe the learning organization are necessary ingredients for SDL to flourish^(9,10).

Education programs and experiences which prepare nurses for practice have a vital role to play in ensuring that graduates are self-directed in learning. SDL writers have argued that the development of students' self-direction in learning can be seen as a product of interaction between the learners and their educational experiences^(11,12). Many authors noted that students' readiness for being self-directed can be facilitated by introducing appropriate

learning activities, various teaching approaches and programs such as the learning contract and problem based learning. Additionally, some self-directed writers argued that many elements in the learning context other than the mere implementation of learning activities may be encouraging or discouraging for students' self-direction in learning such as the learning climate which provide opportunities to choose learning topics, the availability of facilitating methods and resources, the use of multifaceted assessment method which focus on the students' participation in questioning and discussion and learning situations where students take control over the task^(13,14).

Nursing educators should encourage the development of independent learning skills and enabling nursing students to continue learning independently throughout their professional careers. They play a key role in helping students make a smooth transition from teacher-directed to self-directed learning. In order to facilitate students' self-directed learning, it is critical to assess their readiness^(12,15,16). Teachers must assess the students' readiness for the self-directed learning and methods used to enhance their readiness, establish the boundaries of the students' decisions about their learning and teach about the methodology. Once the students are using the method, the teacher assists them through teaching behaviors that are similar to traditional teaching methods, but that vest more responsibility in the students^(1,17,18).

Aims of the Study

1. Assess community health nursing students' readiness for self-directed learning in Alexandria and Damanhour Nursing Faculties.
2. Identify the relation between nursing students' readiness for self-directed learning and their perception of the learning context.

Research Questions:

1. Is there a difference between community health nursing students in Alexandria and Damanhour Nursing Faculties in relation to their readiness for self-directed learning?
2. Is there a relation between community health nursing students' readiness for self-directed learning and their perception of learning context?

Materials and Method

Materials

Design: Comparative descriptive design was adopted.

Setting: The study was carried out at Faculty of Nursing Alexandria and Damanhour Universities.

Subjects: Using the equal allocation method a convenient sample of 100 undergraduate nursing students registered in the Community Health Nursing Course during the second semester, academic year 2013-2014 from each of the previously mentioned setting. The total sample size was 200 students.

Tools: In order to fulfill the objective of the study three tools were used:

Tool I: Students' Basic Data Structured Questionnaire

It was developed by the researcher in order to identify the students' personal and academic data such as age, gender, studying hours, students' academic grades and work experience.

Tool II: Self-directed Learning Readiness Scale (SDLRS) for Nurses⁽¹⁹⁾

- The Self-directed learning readiness scale (SDLRS) for nurses is a self-report questionnaire developed by Fisher and coworkers at 2001 to determine the extent

to which individuals perceive themselves as possessing the skills and attitudes which are associated with SDL. It includes 40 items divided into three subscales: self-management (13 items), desire for learning (12 items) and self-control (15 items). The scale is scored on a 5-points likert scale (1= strongly disagree, 2= disagree, 3= unsure, 4= agree and 5= strongly agree).

- Total scores greater than 150 indicate readiness for SDL.

Tool III: Course Experience Questionnaire (CEQ)⁽²⁰⁾

Course Experience Questionnaire (CEQ) developed by Ramsden at 1991 to assess the students' perception of the learning context in higher education institutions. The scale composed of 40 items with 7 subscales measuring key aspects of learning context: clear goal and standards (5items), good teaching (7items), emphasis on independence (9 items), generic skill development (6items), appropriate workload (4items), appropriate assessment (5items) and appropriate resources (4 items). The scale is scored on a 5-points likert scale (1= strongly disagree, 2= disagree, 3= unsure, 4= agree and 5= strongly agree).

Method

1- Administrative process:

Approval of responsible authorities was obtained through official letters from the nursing faculties and after explanation of the purpose of the study.

2- Study tools:

- Tool (I) was developed by the researcher.
- Tools II& III were tested for reliability using Cronbach's Alpha Coefficient ($r = 0.88$ for tool II and 0.85 for tool III).

3- Pilot study:

Pilot study was carried out on 20 students not included in the study sample in order to ensure the clarity of the tools and its comprehension by the target population.

4- Data collection:

Data were collected through self-administered questionnaires (tool I, II and III) that were distributed among the undergraduate community health nursing students in Alexandria and Damanshour Nursing Faculties during the second semester, academic year 2013- 2014.

Ethical considerations:

A written informed consent to participate in the study was obtained from the students. The questionnaire was accompanied with a letter explaining the purpose of research. Anonymity and confidentiality were considered.

Statistical Analysis

- The collected data were coded and analyzed using PC with the Statistical Package for Social Sciences (SPSS version 20).
- The level of significance selected for this study was $P \leq 0.05$. It was used as the cut off value for statistical significance.
- Score for each dimension was calculated by summing the scores of each item of the dimensions.

The variables were analyzed using the following statistical measures:

a- Descriptive statistics:

- Range (**Minimum, Maximum**), **Arithmetic mean (\bar{X})**, **Standard deviation (SD)** were used as measures of central tendency and dispersion respectively for normally distributed quantitative data.
- **Count and percentage** were used for describing and summarizing the data.

b- Analytical statistics:

- Independent samples t-test and One Way ANOVA were used for

comparing means among the study groups.

Results

Table (1) reveals that the highest percent of students were females (75% in Alexandria & 61% in Damanhour). The majority (80% and 73%) of the students in Damanhour and Alexandria Nursing Faculties aged 22 years respectively. Regarding the students' previous academic year performance, nearly half (45% & 47%) of students in both faculties were good performers. The table also reveals that less than half (48%) of students in Alexandria Nursing Faculty spent less than 3 hours/day in studying and doing academic activities and 35% of them spent from 3-5 hours daily while in Damanhour Faculty of Nursing the majority of the students spent 3-5 hours per day in studying. Lastly, the table shows that more than one third (36%) of the students in Alexandria and more than half (52%) in Damanhour Nursing Faculty had work experiences.

Table (2) Shows that the total CEQ score of students in Alexandria Nursing Faculty was higher than that of Damanhour as it ranged from 119-171 with a mean of 145.5 ± 9.6 in Alexandria compared to 89-121 with a mean of 105.5 ± 6.7 in Damanhour. The table also portrayed that the students' scores were higher among students in Alexandria Nursing Faculty than that of Damanhour in all CEQ domains except appropriate work load since the mean of their scores in such domain were approximately the same (14 ± 2.3 and 14 ± 2.1 in Damanhour and Alexandria respectively). Statistical significant differences were found between the students' scores in the two faculties regarding all dimensions except with the appropriate work load.

Table (3) Reveals that the total SDL score of the students in Damanhour Nursing Faculty ranged from 83-122 with a mean of 103.7 ± 8.3 compared to 101-184 with a mean of 143.4 ± 19.2 among students in Alexandria Faculty of Nursing. Concerning

the score of the students in Damanhour Nursing Faculty regarding the different SDL dimensions it could be observed that their score ranged from 21-39 with a mean of 30.7 ± 3.2 in self-management, 22-43 with a mean of 31.2 ± 4.1 in desire for learning and 30-50 with a mean of 41.8 ± 4.5 in self-control while in Alexandria the students' scores were higher in all dimensions since they ranged from 32-61 with a mean of 46.2 ± 6.2 in self-management dimension, 26-54 with a mean of 42.7 ± 6.5 in desire for learning and 30-50 with a mean of 54.6 ± 8.0 in self-control dimension. Statistically significant differences were observed between students' scores in Damanhour and Alexandria University regarding the total SDL score and all the SDL subscales.

Table (4) shows that none of the nursing students' in Damanhour scored above 150 which mean that none of them had readiness for self-direction in learning compared to 48% of the students in Alexandria.

Table (5) indicates that statistically significant relation was found between CEQ score and each of students' academic performance during the previous year ($t=10.5$, $p=0.001$) and working experience ($t=4.2$, $p=0.001$) in Alexandria University however, in Damanhour University the significant relation existed between CEQ scores and students' academic performance ($t=7.9$, $p=0.027$).

Table (6): The table shows the relation between the students' socio-demographic characteristics and their SDL readiness scores. A statistically significant relation was observed between students' SDL scores and each of academic performance and studying hours in both Alexandria and Damanhour Nursing Faculties. Also working experience had a significant impact on the students' SDL readiness scores in Alexandria Faculty of Nursing.

Table (7) demonstrates that all dimensions for CEQ and SDL were significantly positively correlated with correlation coefficient ranged from 0.14 to

0.86 except for appropriate work load and desire for learning.

Discussion

In a constantly changing environment, self-directed learning is essential for enabling nursing students to develop independent learning skills, and creating a sense of accountability, responsibility and assertiveness that are essential attributes to the nurse's career^(20,21). The practice of nursing demands that its practitioners are self-directed, life-long learners. Some scholars have found that better SDL readiness is related to better academic performance. Hence, there is a reason to believe that SDLR might affect nursing competency^(22,23).

Students' self-direction in learning is considered as an outcome of education. Nursing education has a vital role to play in ensuring that graduates can adopt and respond to this need for continuous learning in their professional careers^(24,25).

The aims of the study were to assess community health nursing students' readiness for self-directed learning in Alexandria and Damanhour Nursing Faculties and to identify the relationship between nursing students' readiness for self-directed learning and their perception of the learning context.

Subjects of the study were 200 baccalaureate community health nursing students (100 from Alexandria Faculty of Nursing and 100 from Damanhour Nursing Faculty) completed the questionnaire. Most of the students aged 22 years in both faculties and the majority of them were females. Results will help in providing practical implications that nurse educators may adopt to enhance students' self-directed learning abilities, additionally, they will help in the understanding of the teaching and learning practices and the learning environment which is appropriate for undergraduate nursing students to develop better self-direction in learning.

Results of the current study revealed that there was no significant difference in the mean self-directed learning readiness scores of males and females. Additionally, the students' age had no significant impact on their SDL abilities. This agrees with Chen et al. at 2006 in Taiwan and Roberson and Merriam at 2005 in USA, who found that gender and age were not correlated with self-directed learning. Conversely, McCollinat 2000 in USA reported that gender and age are factors that affect students' self-direction in learning^(26,27,28).

Only few studies showed a positive correlation between SDL readiness scores and the students' academic grades, the results of the current study revealed that SDL scores were higher among the excellent achievers in both Alexandria and Damanhour Nursing Faculties. The same was mentioned by Shaikh R. at 2013 who studied the readiness for self-directed learning in students experiencing two different curricula in one medical school⁽²⁹⁾.

According to Fisher and coworkers, the developers of the self-directed learning scale, total scores greater than 150 indicate readiness for SDL⁽¹⁹⁾. Surprisingly none of the students in Damanhour Faculty of Nursing scored more than 150 compared to 48% of students in Alexandria Nursing Faculty whose score ranged from 101-184. These results could be attributed to the fact that students in most cases prefer the teacher centered methods resulting in resistance to participate in self-directed activities. These percentages were dramatically lower than that reported by El-Gilany et al. at 2012 who studied the self-directed learning readiness and learning styles among Saudi undergraduate and found that 72.7% scored more than 150 and so, they could be considered as ready for self-directed learning. Additionally, the results contradict those of Abu-Moghli et al. at 2005 and Safavi et al. at 2010 who stated that the majority of Jordanian and Iranian nursing students had high level of SDLR and perceived themselves as independent

learner. However, these results come in line with that of Lestari and Widjajakusumah at 2009 in Indonesia who indicated that 50% of the students had low scores for self-directed learning readiness and that of Shokar et al. at 2002 in USA, who reported that only 11% of students obtained self-directed learning readiness scores below the American standard score^(30,31,32,33,34).

Results of the current study revealed that the students' mean score of readiness for self - direction was higher among Alexandria Faculty students than those of Damanhour Nursing Faculty since the mean scores of self-management, desire for learning and self-control subscales among Damanhour University students were 30.7 ± 3.2 , 31.2 ± 4.1 and 41.8 ± 4.5 ; respectively compared to 46.2 ± 6.2 for self-management, 42.7 ± 6.5 for desire for learning and 54.6 ± 8 for self-control among Alexandria University students. The mean total score of SDLR was 103.7 ± 8.3 among Damanhour University students compared to 143.4 ± 19.2 among Alexandria University students.

This considerable variation between the students in the two universities could be attributed to many factors. First, the credit hours system in Alexandria University which enables the students for making independent choices and decide their own studied subjects through providing a range of elective courses. Secondly, students in Alexandria University may be more involved in learning due to the availability of a range of interactive learning strategies and resources like internet, E-library, E-Learning Courses, students' learning contract. Thirdly, methods like the students' portfolio, log book and learning guide help the teacher in guiding the students and providing timely and constructive feedback. fourthly, the academic advice system in Alexandria University make the teacher more approachable and allow for more positive student - teacher interaction which in return improve the students' learning experience and enhance the students'

confidence in managing their tasks. Lastly, the utilization of certain evaluation strategies like peer evaluation and self-evaluation methods. These mean scores are lower than those reported from previous studies in other countries. Yuan et al. at 2012 reported that the mean subscales of self-management, desire for learning and self-control were 46.45, 48.84 and 59.43; respectively among Chinese baccalaureate nursing students, while the mean total score of SDLR was 154.72. Additionally, Fisher et al., at 2010 found that the mean subscales of self-management, desire for learning and self-control among Australian undergraduate nursing students were 44.26, 47.31 and 58.98; respectively and the mean total score of SDLR was 150.55^(8,35).

Although self-directed learning which is a prerequisite for life-long learning can flourish in certain learning environments, many learning environments for adults are still designed around the listen to the teacher-memorize and regurgitate model^(36,37,38). Findings drawn from the present study indicated that students' perception of learning context items like good teaching, generic skill development, clear goal and standards, appropriate assessment, emphasis on independence and resource availability had a significant positive effect with a correlation coefficient ranged from 0.14-0.86 on the students' self-directed learning abilities including all the subscales of self-management, desire for learning and self-control. These findings supported by that of nursing studies which revealed that students who perceive their learning environment to consist of good teaching, adequate resources, appropriate assessment and workload report themselves as more likely to adopt self-directed based learning strategies^(13,14,37,39).

Conclusion

Based on the results of the present study it could be concluded that readiness for self-directed learning among Alexandria

Faculty of Nursing students was higher than those in Damanhur Nursing Faculty and the difference was statistically significant. Students' readiness for self-direction in learning was significantly affected by their academic performance and studying hours in both faculties. Additionally, the work experience significantly affects the students' readiness for self-directed learning in Alexandria University. Students' perception of learning context items was significantly positive correlate with their self-directed learning abilities including all the subscales of self-management, desire for learning and self-control.

Recommendations

In the light of the findings, the following recommendations are suggested:

- Studying factors influencing self-directed learning readiness among undergraduate nursing students is a mandatory.

- Nursing educators should assess and determine the students' readiness for self-directed learning as not all learners are equally skilled in and/or willing to make decisions about what to learn, and to what depth and breadth.
- Incorporate more independent learning activities and reduce the lecture centered and teacher based strategies.
- Preparing the learning environment to be appropriate for students to develop better self-directed learning abilities and proper preparation for the nursing educators and the students about independent learning strategies that facilitate this type of learning.
- Encourage and assist students who require additional assistance to access strategies to develop skills of self-management, desire for learning and self-control for use in an educational setting.

Table (1): Distribution of the Students according to their demographic characteristics.

Characteristics	Place			
	Damanhour (N=100)		Alexandria (N=100)	
	No	%	No	%
Gender				
▪ Female	61	61.0	75	75.0
▪ Male	39	39.0	25	25.0
Age (in years)				
▪ 20	3	3.0	2	2.0
▪ 21	3	3.0	10	10.0
▪ 22	80	80.0	73	73.0
▪ 23+	14	14.0	15	15.0
Students' previous academic year performance				
▪ Excellent	4	4.0	15	15.0
▪ Very Good	43	43.0	17	17.0
▪ Good	45	45.0	47	47.0
▪ Satisfactory/Failed	8	8.0	21	21.0
Studying hours				
▪ < 3hrs	13	13.0	48	48.0
▪ 3-<5	85	85.0	35	35.0
▪ 5 hrs or more	2	2.0	17	17.0
Work experience				
▪ No	48	48.0	64	64.0
▪ Yes	52	52.0	36	36.0

Table (2): Distribution of the students according to Course Experience Questionnaire (CEQ) Domains mean scores.

CEQ domains	Mean scores				t-test (p value)
	Damanhour (N=100)		Alexandria (N=100)		
	Min-Max	Mean± SD	Min-Max	Mean± SD	
Good teaching	15-28	20.4±2.7	17-33	25.8±3.4	4.2 (0.001)*
Generic skill development	12-22	16.8±2.2	14-27	21±2.4	3.9 (0.001)*
Clear goal & standards	9-17	13±1.7	13-24	18.8±2.3	4.0 (0.001)*
Appropriate work load	10-19	14±2.3	8-18	14±2.1	0.74 (0.923)
Appropriate assessment	9-17	12.4±2.0	13-22	17.4±2.1	4.6 (0.001)*
Emphasis on independence	16-27	21.9±2.5	24-41	32.9±3.4	6.9 (0.001)*
Resources availability	4-12	7.0±1.5	10-19	15.7±1.6	5.4 (0.001)*
CEQ total	89-121	105.5±6.7	119-171	145.5±9.6	7.5 (0.001)*

P: independent samples t-test

* P < 0.05 (significant)

Table (3): Distribution of the students according to their self-directed learning readiness dimensions mean scores.

SDL domains	Mean scores				t-test (p value)
	Damanhour (N=100)		Alexandria (N=100)		
	Min-Max	Mean± SD	Min-Max	Mean± SD	
Self-management	21-39	30.7±3.2	32-61	46.2±6.2	5.1 (0.001)*
Desire for learning	22-43	31.2±4.1	26-54	42.7±6.5	7.8 (0.001)*
Self-control	30-50	41.8±4.5	39-70	54.6±8.0	7.6 (0.001)*
SDL total	83-122	103.7±8.3	101-184	143.4±19.2	8.1 (0.001)*

P: independent samples t-test

* P < 0.05 (significant)

Table (4): Distribution of the Students According to their Self-Directed Learning Readiness Level.

The Nursing Faculty	Self-Directed Learning Readiness Level				x ² P
	Low (<150)		High (>150)		
	No	%	No	%	
▪ Damanhour	100	100.0	0	0.0	0.001*
▪ Alexandria	52	52.0	48	48.0	

Table (5): Relation between students' socio-demographic characteristics their perception of learning context mean scores in Alexandria and Damanhour Nursing Faculties.

Socio-demographic characteristics	Mean Score			
	Damanhour (N=100)	Test of significance (P value)	Alexandria (N=100)	Test of significance (P value)
	Mean±SD		Mean±SD	
Gender				
▪ Female	105.9±6.5	1.1 (0.477)#	146.6±9.6	1.74 (0.063)#
▪ Male	104.9±7.0		142.4±9.1	
Age (in years)				
▪ 20	107.0±3.0	3.2 (0.068)	146.5±7.8	4.3 (0.368)
▪ 21	99.3±10.5		148.9±6.4	
▪ 22	106.3±6.6		145.4±9.8	
▪ 23+	101.5±4.6		139.4±12.8	
Students' previous academic year performance				
▪ Excellent	106.5±6.6	7.9 (0.027)*	151.4±7.7	10.5 (0.001)*
▪ Very Good	105.9±5.9		140.2±5.0	
▪ Good	98±8.3		142.1±9.9	
▪ Satisfactory/Failed	101.6±8.0		139.2±9.0	
Studying hours				
▪ <3	102.3±5.4	5.9 (0.185)	142.7±8.1	5.4 (0.189)
▪ 3-<5	106.1±6.1		148.3±11.2	
▪ 5+	95.3.0±0.0		142.3±8.2	
Work experience				
▪ No	105.5±5.8	0.84 (0.953)#	148.3±8.8	4.2 (<0.001)*#
▪ Yes	105.6±7.4		140.6±9.2	

P: One Way ANOVA

* P < 0.05 (significant)

#: students' t-test

Table (6): Relation between students' socio-demographic characteristics and their self-directed learning readiness mean scores in Alexandria and Damanhur Nursing Faculties.

Socio demographic characteristics	Mean self-directed learning readiness scores			
	Damanhour	Test of significance (P value)	Alexandria	Test of significance (P value)
	Mean±SD		Mean±SD	
Gender				
▪ Female	104.4±7.7	1.0 (0.313)#	145±20.0	1.4 (0.142)#
▪ Male	102.6±9.1		138.5±16.1	
Age (in years)				
▪ 20	101.3±6.4	6.6 (0.061)	157.5±9.2	3.6 (0.748)
▪ 21	92.3±8.6		138.4±13.0	
▪ 22	104.7±7.7		143.9±20.6	
▪ 23+	100.7±10.0		140.9±17.1	
Students' previous academic year performance				
▪ Excellent	106.1±7.4	12.7 (0.001)*	155.1±13.0	11.8 (0.001)*
▪ Very Good	104.3±6.9		135.7±15.0	
▪ Good	93.5±6.5		133.7±17.9	
▪ Satisfactory/Failed	91.9±8.0		130.5±20.4	
Studying hours				
▪ <3	93.1±5.9	10.1 (0.001)*	136.5±16.6	9.4 (0.005)*
▪ 3-<5	105.2±6.9		150.6±19.4	
▪ 5+	92.0±0.0		129.3±12.7	
Work experience				
▪ No	103.4±7.9	0.57 (0.752)#	150.7±17.1	5.7 (<0.001)*#
▪ Yes	103.9±8.7		130.4±15.7	

P: One Way ANOVA

* P < 0.05 (significant)

#: Students t-test

Table (7): Correlation between Self - Directed Learning Readiness Domains and Students Perception of Learning Context (CEQ) Dimensions.

Items	Self-management	Desire for learning	Self-control	SDL total
Good. Teaching	0.75*	0.64*	0.68*	0.74*
Generic skill development	0.65*	0.57*	0.60*	0.64*
Clear goal & standards	0.83*	0.71*	0.71*	0.80*
Appropriate work load	0.15*	0.07	0.17*	0.14*
Appropriate assessment	0.61*	0.46*	0.47*	0.55*
Emphasis on independence	0.86*	0.77*	0.74*	0.84*
Resources availability	0.79*	0.68*	0.68*	0.76*
CEQ.total	0.89*	0.76*	0.78*	0.86*

* Significant correlation co-efficient

Interpretation of r:

Weak (0.1-0.24)

Intermediate (0.25-0.74)

Strong (0.75-0.99)

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