

Designing Standards for Safe Teaching Environment at Health Technical Institute

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Abstract

Background: Teaching environment can influence student attainment and learning. **Aim:** This study aims to design standards for safe teaching environment at Health Technical Institute. **Design:** A descriptive, methodological design was utilized. **Setting:** The study was conducted at the Health Technical Institute, which affiliated to Ministry of Health at Sharkea Governorate. **Subjects:** Three groups of subjects namely; jury group, educators group, and nurse students group. **Data collection:** Three tools were used; opinionnaire, questionnaire, and an observation checklist sheet. **Results:** The findings revealed that a majority of educators and nurse students' agreed upon the importance of all proposed standards and its criteria, their agreement ranged between (87.5% to 90.62%) and (90.00% to 92.00%) respectively, there was no statistically significant difference between the two groups of educators and nurse students. Finally, the findings of the present study demonstrated that the applicability of all proposed standards and its criteria ranged between (66.67% to 80.00%). **Conclusion:** A majority of jury group agreed upon the general form (face and content validity) of the proposed standards. Furthermore, a majority of educators and nurse students agreed upon the importance of all proposed standards and its criteria, there was no statistically significant difference between the two group of educators and nurse students. **Recommendations:** Future studies on the safe learning environment should be conducted in all educational institutions.

Keywords: Designing Standards, Health Technical Institute, Safe Teaching Environment

Introduction

It is important to foster a teaching-learning environment in which students feel safe, relaxed, and willing to take risks, especially for learners who may have negative experiences in traditional classroom environment. Students often describe supportive learning environments as expanding their sense of family and enhancing their self-esteem, which, when combined with increased literacy skills, help students take more chances in pursuing their goals (Zins et al., 2014). Providing a safe and supportive teaching-learning environment is a key to help students develop essential skills and knowledge necessary for college and career readiness. A wide range of services and supports are needed to establish and maintain these teaching-learning environments (Katelyn, 2015).

A safe, supportive, and healthy environment conducive to learning is

fundamental for all students. There are short- and long-term consequences of an unsafe institute environment. The short-term consequences include; an increase in absenteeism and reduced student learning, self-efficacy, behavioral and attitudinal investment in institutes (lack of connectedness), time doing homework, participation in institute activities (Neiman, 2011).

The long-term consequences include; Psychological and physical health problems, disrupted educational and occupational attainment, which will result in lower lifetime earnings. In addition to a safe environment, teachers must ensure an environment where learning expectations are met with ample academic support. Further, the instructional productivity of a classroom also dependson the effectiveness of supplemental academic and social supports (Neiman, 2011).

Significance of the Study:

Institute safety is essential to an effective institute as it promotes higher achievement for students and a more productive teaching and learning atmosphere. Institute safety is everyone's job; students, teachers, administrators, parents, and community members. There is a direct link between success in institute and the institute environment in which student learning takes place. Students are more motivated to do well and achieve their full potential in institutes that have a positive culture and one in which they feel safe and supported. Therefore, it is important to pay continuous and specific attention to safety problems in this environment. Therefore, this study had been carried out as an attempt to enhance a safe learning environment in Health Technical Institute.

Aim of study**This study aimed at:**

- 1- Designing standards based on literature review.
- 2- Examining the proposed standards validity according to experts' opinion.
- 3- Assessing the opinions of educators in the proposed standards.
- 4- Assessing the opinions of nurse students in the proposed standards.
- 5- Assessing the applicability of the proposed standards.

Research Question:

Are the proposed standards applicable in the teaching environment?

Subjects and methods:

The methodology followed in carrying out the present study was described under technical, operational, administrative, and statistical designs.

Technical design:

The technical design for this study included the research design, setting, subjects, and tools for data collection.

Research design:

A descriptive, methodological design was used in carrying out this study.

Setting:

The present study was conducted at health technical institute affiliated to Ministry of Health at Sharkea Governorate. There are 12 health technical institutes affiliated to Ministry of Health in Egypt. Only one institute in Sharkea Governorate, in which this study conducted on.

Subjects: Convenience sample.

Three groups of subjects were included in this study namely; jury group, educators group, and nurse students group.

1- Jury group: Experts from nursing faculties staff members in different specialties. This group was recruited for assessing the face and content validity of the proposed standards for safe teaching environment. The total number of jury group was 30 faculty members.

2- Educators group: The available educators who are working in health technical institute at the time of data collection. This group was recruited for assessing the importance of the proposed standards for safe teaching environment from their points of view. The total number of educators included in the present study was 32 educators.

3-Nurse students group: All the available nurse students who are enrolled in first and second year in general nursing branch for the academic year (2015-2016), at health technical institute. This group was enrolled for assessing the importance of the proposed standards for safe teaching environment from their points of view, their total number was 150 nurse students.

Tools of data collection:

Three tools were used for data collection in the different phases of this study, developed by the researcher based on the related literature (**Abd-Elmageed, 2009, and Bert, 2011**).

1- Opinionnaire sheet was designed in such a way that the jury respond to the statements with either agree or disagree in addition to comment column. It consisted of two main parts as the following:

Part I: This part intended to collect data related to demographic characteristics of the jury group members such as age, university name, job position, specialty, and years of experience.

Part II: This part was concerned with validity of proposed standards for safe teaching environment at health technical institute, in which validation of proposed standards was done through two types including face and content validity.

The scoring system: regarding jury group agreement related to face and content validity measurement for the proposed safe teaching environment standards, the scores were (one) given if the member was agree on item and (zero) if he was disagree on item. The item was rejected if percent of expert's agreement less than 80% (**Said, 2009**).

2-Questionnaire sheet aimed at determining the importance of proposed standards criteria from the viewpoint of educators and student

Part I: This part intended to collect data related to demographic characteristics of both educators and students. It was included two demographic sheets; one for educators and the other for students. Demographic characteristics of the educators such as; age, nursing qualification, years of experience, and attending training courses. Demographic characteristics of the students such as; age, gender, marital status, grade, and working.

Part II: This part was intended to assess the importance of the proposed standards from educators' and students' point of view. This part contained 113 questions. They were asked to respond to the statements of the

questionnaire as "important" or "not important", and electing their comments.

The scoring system: Questionnaire for educators and students: (one) mark was given if the subject was made "important" on item and (zero) if the subject was made "not important" on the item. The item was rejected if percent of its importance less than 60% (**Abd-Elmageed, 2009**).

3-Observation checklist was developed by the researcher based on the results of the opinionnaire and the related literature (**Abd-Elmageed, 2009, and Bert, 2011**) for the purpose of assessing the applicability of the proposed standards, as regard to measure if the items of standards are met or unmet. It was divided into two parts:

Part I: This part was intended to collect data related to the date of observation and the period of observation.

Part II: This part contained 113 statements. The items of this section of the checklist were checked as either met or unmet.

The scoring system: Observation checklist: (one) mark was given if the item was applied and (zero) if the item was not applied. The item was rejected if percent of its applicability less than 60% (**Abd-Elmageed, 2009**).

II. Operational Design:

The operational design for this study includes three phases, namely preparatory phase, pilot study, and fieldwork phase.

Preparatory phase:

A review of the literature was done based on the various aspects of the study, using textbooks, articles, magazines, thesis, and different scientific websites. Based on this review, the researcher began to design and construct the proposed standards to be appropriate for application in health technical institute.

Pilot study

A pilot study was conducted on 10% of study subject respondents for filling the opinionnaire sheet (3 respondents were selected from nursing faculty), and (4 respondents educators) and (15 nurse students) selected from health technical institute at Sharkea Governorate. This process was accomplished over a period of three months. The sample of the pilot study was excluded from the main study. Based on the pilot study no modifications were done.

Field work phase:

The fieldwork phase was achieved through four different stages:

First stage: distribution of opinionnaire sheets to examine the validity of the proposed standards.

Second stage: Statistical analysis of opinionnaire sheets to obtain the valid items of the standard, which obtained a percentage of jury group agreement of 80% or more.

Third stage: to assess educators group and nurse students group opinions in the proposed standards.

Fourth stage: The observation checklist was designed based on the results of the opinionnaire sheet. The observation checklist was accomplished by the researcher and another observer to assure the applicability of the proposed standards.

Ethical consideration:

An official permission was obtained before conduction of the study. The aim of the study and procedure were explained to the subjects to obtain their cooperation. Oral

Results

Table (1): presents agreement of jury members upon the general form (face validity) of the proposed standards for safe teaching environment. The table illustrates that the majority of the jury members have

consent was obtained from the educators and nurse students. The researcher maintained an anonymity and confidentiality of subjects. Subjects are allowed to choose to participate or not participate, and they have the right to withdraw from a study any time without penalty. They were reassured that the information collected would be used for scientific research only and would be confidential and they had the choice to put their name on the sheets.

III. Administrative Design

Before embarking on the study, official and formal letters were issued from the Faculty of Nursing, Ain-Shams University to the director of the study setting. It explained the aim of the work, and the expected benefits. It ensured confidentiality of the information obtained.

IV. Statistical Design

The collected data were organized, categorized, tabulated and statistically analyzed the statistical software package for social science (SPSS) Version (19). Quality control was done at the stage of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentage (%) for qualitative variables, means (\bar{X}) and standard deviation (SD), for quantitative variables. Qualitative categorical variable were compared using critical ratio (Z) test for difference between proportion and percentage. Quantitative categorical variables were compared using (T) test, According to the computer program SPSS for Windows. Person correlation was used. Statistical significance was considered at $P < 0.05$.

agreed upon all sub items. Their agreement ranged from 83.33% to 96.67%.

Table (2): reveals the total agreement of jury members upon the proposed standards. The table illustrates that jury members agreement ranged from 90.00% to 93.33%. The total agreement of jury members was expressed by 90.0%.

Table (3): reveals the total agreement of educators and nurse students upon the proposed standards. The table illustrates that the total agreement of educators and nurse students was expressed by 87.5% and 91.33% respectively. There was no statistically significant difference between the two group of educators and nurse students.

Table (4): reveals the total applicability of standards as observed between two observers. The applicability

ranged from 66.67% to 100.00%. The total applicability was expressed by 66.67%.

Table (5): describes the correlations between standards (Teaching Institute Environment, Classroom, Technical Institute Laboratory, Manpower, Task Orientation, Personalization, Student Involvement, Academic Support, Relationships, and Satisfaction). The table clarifies that all standards have a positive statistically significant correlation.

Table (1): Face validity of the proposed standards as agreed by jury members (n=30).

Statements	Agree	
	N	%
1 – The design of this format looks like a standard for safe teaching environment.	25	83.33
2 – The design of this format indicates the safe teaching environment for a health technical institute.	25	83.33
3 - The proposed standard is written;		
A – clearly	27	90.00
B – correctly	28	93.33
C – scientifically	26	86.67
D – appropriately	27	90.00
4 – The formulation of words is understandable	28	93.33
5 – The elements of the standard are measurable	29	96.67
6 – The title is appropriate for the standard	29	96.67
7 – The proposed standard covers all relevant aspects	28	93.33
8 – There is a logical sequence between the different sections of the standard	26	86.67
9 – There is a balance between the various sections	27	90.00
10 – The standard is free of any superfluous elements.	25	83.33
11 – The standard is free of any duplication or repetition.	26	86.67
12 - The standard includes assessment of the following components of teaching environment;		
12.1- Structure		
A – location	28	93.33
B – Facilities/ tools	28	93.33
C – manpower	26	86.67
12.2- Process	27	90.00
12.3- Outcomes	26	86.67
13 –The standard reflects the required level of teaching environment.	25	83.33
14 – The standard can be used for the selection the selection of safe teaching environment.	28	93.33
15 – The standard can be used to evaluate teaching environment for both educators and nurse students.	29	96.67

Table (2): Total agreement of jury members upon the proposed standards (n=30).

Standard	Agree	
	No	%
Standards 1. Teaching institute environment	28	93.33
Standards 2. Classroom	27	90.00
Standards 3. Technical institute laboratory	28	93.33
Standards 4. Manpower	27	90.00
Standards 5. Task orientation	27	90.00
Standards 6. Personalization	27	90.00
Standards 7. Student involvement	27	90.00
Standards 8. Academic support	27	90.00
Standards 9. Relationships	28	93.33
Standards 10. Satisfaction	27	90.00
Total agreement	27	90.00

Table (3): Total agreement of educators and nurse students upon the standards.

Standard	IMPORTANCE					
	Educators (n=32)		Students (n=150)		Significant	
	N	%	N	%	Z	P-value
Standards 1.	28	87.5	137	91.333	0.676	>0.05
Standards 2.	29	90.625	138	92.000	0.257	>0.05
Standards 3.	28	87.5	137	91.333	0.676	>0.05
Standards 4.	29	90.625	136	90.667	0.007	>0.05
Standards 5.	29	90.625	135	90.000	-0.108	>0.05
Standards 6.	28	87.5	137	91.333	0.676	>0.05
Standards 7.	28	87.5	137	91.333	0.676	>0.05
Standards 8.	28	87.5	137	91.333	0.676	>0.05
Standards 9.	29	90.625	137	91.333	0.128	>0.05
Standards 10.	28	87.5	138	92.000	0.816	>0.05
Total importance	28	87.5	137	91.333	0.676	>0.05

(*) Statistically significant at $p < 0.05$

Table (4): Total applicability of standards as observed between two observers.

Statements	Applicable						Significant difference	
	Observer 1 (n=3)		Observer 2 (n=3)		Total (n=6)		Z	P-value
	N	%	N	%	N	%		
Standards 1.	3	100	3	100	6	100	0	>0.05
Standards 2.	2	66.67	2	66.67	4	66.67	0	>0.05
Standards 3.	2	66.67	2	66.67	4	66.67	0	>0.05
Standards 4.	2	66.67	2	66.67	4	66.67	0	>0.05
Standards 5.	2	66.67	2	66.67	4	66.67	0	>0.05
Standards 6.	3	100	3	100	6	100	0	>0.05
Standards 7.	2	66.67	2	66.67	4	66.67	0	>0.05
Standards 8.	2	66.67	2	66.67	4	66.67	0	>0.05
Standards 9.	2	66.67	2	66.67	4	66.67	0	>0.05
Standards 10.	2	66.67	2	66.67	4	66.67	0	>0.05
Total Applicability	2	66.67	2	66.67	4	66.67	0	>0.05

(*) Statistically significant at $p < 0.05$

Table (5): Correlation between standards.

STANDARDS	Standard 1: Health Technical Institute	Standard 2: Classroom	Standard 3: Technical Institute laboratory	Standard 4: Manpower	Standard 5: Task orientation	Standard 6: Personalization	Standard 7: Student involvement	Standard 8: Academic Support	Standard 9: Relationships Student- student relationship are fostered through students	Standard 10: Satisfaction
Standard 1: Teaching Institute Environment	r -	-	-	-	-	-	-	-	-	-
	P- value									
Standard 2: Classroom	r .059	-	-	-	-	-	-	-	-	-
	P- value	.431								
Standard 3: Technical Institute laboratory	r .099	.347**	-	-	-	-	-	-	-	-
	P- value	.183	.000							
Standard 4: Manpower	r .123	.324**	.489**	-	-	-	-	-	-	-
	P- value	.099	.000	.000						
Standard 5: Task orientation	r .130	-.132-	.088	.200**	-	-	-	-	-	-
	P- value	.080	.075	.237	.007					
Standard 6: Personalization	r .253**	.028	.018	.058	.220**	-	-	-	-	-
	P- value	.001	.705	.813	.437	.003				
Standard 7: Student involvement	r .405**	.062	.189*	.008	.025	.545**	-	-	-	-
	P- value	.000	.403	.011	.916	.734	.000			
Standard 8: Academic Support	r .301**	-.100-	.123	.106	.421**	.177*	.263**	-	-	-
	P- value	.000	.180	.097	.154	.000	.000			
Standard 9: Relationships Student- student relationship are fostered through students	r .271**	-.093-	-.117-	-.058-	.208**	.301**	.233**	.422**	-	-
	P- value	.000	.213	.117	.436	.005	.002	.000		
Standard 10: Satisfaction	r .054	.111	-.001-	.009	.087	.671**	.467**	.178*	.387**	-
	P- value	.469	.135	.994	.907	.245	.000	.016	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Discussion

According to the present study findings, the proposed standards were agreed upon their face and content validity by the majority of jury members. Study results were on the same line with a conducted study by **Fathy (2009)**, the validation of any standards should be done by obtaining the academic experts agreement upon its content, in addition to verification of its face validity.

The finding results of this study indicated that the majority of jury members agreed upon the standards criteria face and content validity. This finding supported by **Abd-Elmageed (2009)** who asserted that majority of jury members agreed upon the standards criteria face and content validity.

The finding of present study indicated that the majority of jury members were agreeing upon the teaching institute environment should have cafeteria/kitchen with sufficient space for seating, dining, food preparation, delivery, and storage, and have office space with access to telephones and computers for the educators themselves. This result supported by **Filardo, 2008 & Moore (2008)** who asserted that physical condition of institutes presented an opportunity for growth and providing long-term benefits by building a better teaching-learning environment. There must be immediate spending on public institutes' maintenance and repair. This will help the economy and improve education quality and even health. Educators must be committed to closing the achievement gap, while at the same time having safe, up-to-date, quality facilities. In

this respect, **O'Neill & Oates, (2011)** found statistically significant results for institute buildings with high levels of student achievement and high scores on the building indicators related to the size of academic spacing.

The current study findings asserted that the majority of jury members were agreeing upon the health technical institute should be provided with material resources for teaching and learning, it should be clean, tidy, and Promote academic success for all students. In the same line, **Blincoe (2008)** recommended that in order to improve student performance and improve the education process, educators must have adequate facilities that provide an atmosphere and amenities for student success and institute leaders must ensure that buildings are kept clean and neat.

The current study demonstrated that the majority of jury members were agreeing upon the satisfaction standard. The morale of educators and students should be high, and they should enjoy working at the institute to increase their achievements. This finding supported by **Wendy (2008), Mohamed (2011)** who asserted that when satisfaction is not found, the nurse educator becomes less productive and eventually quits or is fired.

Related to the importance of teaching institute environment standard for educators and students, the majority of educators and students have agreed upon its importance, the result showed that there were no statistically significant differences between educators and students agreement on the importance of the teaching institute environment standard. Participants agreed about the importance of institute should be free of bad smell, free of noise, clean, and tidy, and should be provided with material resources for teaching and learning. In this respect, **Bert (2011)** recommended that in order to improve student performance and improve the education process, educators must have adequate facilities that provide an atmosphere and amenities for student

success. He added that buildings are kept clean and neat, which will help in the overall maintenance and aesthetics of the building Furthermore, **Guo (2013)** added that the quality of institute facilities has been found to affect student achievement. On the contrary to other research, **Picus et al., (2015)** asserted that the quality of the institute facilities is not indicative of student achievement. They believe it is because there is a lack of knowledge regarding the quality of institute facilities in the United States.

Regarding the importance of satisfaction standard, the majority of educators and students have agreed upon its importance and there were no statistically significant differences between educators and students' agreement upon the importance, thus the compliance to attend lectures, enjoying coming to institute, and success rates in practical exams or evaluation is important. This result is congruent with **Morales et al., (2012)** who have emphasized the importance of fostering students' motivation through formative evaluation. Furthermore, **(Abd-Elmageed, 2009)** found that there was agreement of educators and students on the importance of satisfaction standards, and training program should assess students responses to training activities, these finding were ascertained with the study conducted by **Bennet et al., (2005)** emphasized this finding on lack of interest in teaching may be related to the culture of the unit and the attitude of nursing leadership towards education.

Regarding the applicability of teaching institute environment standard, the study finding high applicability of standard criteria and there was no statistically significant difference between two observers. All standard criteria were applicable except institute should have playground for nurse students' relaxation. So, this standard considered applicable and institute somewhat considered a good teaching-learning environment. These

findings in congruent with those of **Shelby (2010)** who asserted that findings revealed minor amounts of negative institute environment and a higher percentage of positive institute environment findings than negative findings. In contrast, **Mlozi et al. (2013)** found that the teaching-learning environment in both community and government-built secondary schools were not conducive due to lack of adequate or completely absence of laboratories, libraries, toilets, dormitories and teachers' houses. Also there were no enough classrooms and qualified teachers which together appeared to greatly the academic performance of students.

As regards the applicability of satisfaction standard, the study finding revealed that applicability of standard criteria ranged between 66.67% and 100.00%. There was no statistically significant difference between two observers. Educators and students satisfaction should be increased to increase academic achievements. (**Shelby, 2010**) who found that the quality of institute facilities, level of assistance from institute staff, and institute safety are related to student satisfaction and achievement. In contrast, (**Bert, 2011**) reveals from his study that there was teachers' dissatisfaction with their facilities. One-quarter of all beginning teachers leave teaching within four years.

These findings answer the research question; the proposed standards were applicable in the teaching environment of health technical institute.

Conclusion

Based on the results of the present study, it can be concluded that: A majority of jury group agreed upon the general form (face and content validity) of the proposed standards. Furthermore, a majority of educators and nurse students agreed upon the importance of all proposed standards and its criteria, there was no statistically significant difference between the two

group of educators and nurse students. Finally, the findings of the present study demonstrated that the total applicability was expressed by (73.33%). It is concluded that the importance of developed standards for safe teaching environment at health technical institute.

Recommendations

- The designed standards for safe teaching environment at health technical institute have to be applied under administrative monitoring.
- According to sample's opinion toward standard 1, provide sufficient resources, facilities, equipment, and supplies necessary to implement safe teaching environment standards.
- Additional research should be conducted on safe teaching environment at all educational institutions.

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