Nursing Teaching Staff and students'Readiness about Using Electronic Portfolio and its Relation to Students' Academic Motivation

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Abstract

Background: Electronic Portfolio is a learning support tool that emphasizes learning process, experience and professional development to present the achievement. Motivation to use electronic portfolio is needed to energize the desire to learn. **Aim:** the present study aimed to assess nursing teaching staff and students' readiness about using electronic portfolio and its relation to students' academic motivation. **Research design:** A descriptive correlational design was utilized. **Setting:** This study was conducted at the Faculty of Nursing, Benha University. **Subjects:** All available of nursing teaching staff ١١٢ and stratified random sample consisted of ١٠٨٤ of nursing students. **Tools of data collection:** Two tools were used to collect data; I) Electronic Portfolio readiness questionnaire, II) Nursing students academic motivation questionnaire. **Results:** showed that more than three fifths of nursing teaching staff had high readiness level about using electronic portfolio, also, showed that nearly two thirds of nursing students had high level of readiness about using electronic portfolio. And, the majority of nursing students had high academic motivation level. **Conclusion:** there was a statistical significant correlation between total nursing teaching staff readiness toward using electronic portfolio and total academic motivation among nursing students. **Recommendations:** conducting workshops for nursing teaching staff & nursing students about how to apply electronic portfolio and using electronic portfolio as a method for assessment.

Keywords: Academic motivation, Electronic portfolio, Nursing students, Nursing teaching staff.

Introduction

Electronic portfolio received a great deal of attention in the educational filed and associated with the individualization of the learning process. Unlike traditional forms of examination, such as tests, exams or essays, E-Portfolios seeks innovative teaching- learning–assessment methods, which promote students' competency and autonomy as managers of their virtual learning environment. E- Portfolio is a type of learning and assessment tool that contains students' activities and information about their progress over time **(Todeschini & Sollberger, ٢٠٢٣)**.

E-portfolio is a digitalized collection of artifacts including demonstrations, resources, and accomplishments that represent an individual, group, or institution. Also, e-Portfolio is a collection and exhibition of a student's experiences, work, efforts, progress and achievements over a period of time and includes digital artifacts, written reflections on both formal and informal learning experiences, collaborative assignments, community engagement, research activities and learning achievements **(Boholano et al., ٢٠٢٣)**.

Electronic portfolio used to boost students' ability to become lifelong students by stimulating and monitoring their professional competence and development. Also, e-portfolio is used to stimulate reflection among students to identify the strengths and weaknesses of their work by reflecting on their learning. And, e-portfolios allow students to keep track of their skills, accomplishments, experience, professional development, and lifelong learning **(Deneen et al., ٢٠٢٣).**

Electronic portfolio readiness can be achieved through some factors that can categorized into five dimensions, environmental readiness to technology accessibility, online skills and relationship, internet discussion, motivation to use electronic portfolio, importance to achieve success. the first dimension is technology accessibility that related to the need of

students and teaching staff to access to computers with adequate software, the second dimension is online skills and relationship means students need to have a basic competency in online skill to help them manage the resources such as basic skills in operating a computer, basic skills in information searching (**Roco & Barberà, ٢٠٢٣**).

Furthermore, the third dimension is internet discussion means the ability to make conversations and meeting through the internet, also, the fourth dimension is importance to achieve success dimension that means the ability to use electronic portfolio to achieve their goals. Finally, motivation to use electronic portfolio means having the desire to dealing with new technologies and the development of e-Portfolio should focus on the intrinsic and extrinsic motivation (**Wijayaratne et al., ٢٠٢٣**).

Academic motivation is an internal force or desire that leads one's behavior toward learning and progress. Also, academic motivation is refers to the generator of energy needed for educational achievement that directs studying behavior and affects educational performance. And, academic motivation is represented as a facilitator of learning and educational achievement (**Ariff et al., ٢٠٢٣**). Academic motivation can help direct our attention toward tasks that need to be done, allow to do these tasks in shorter periods of time as well as maintain attention during a longer time, minimize distractions and resist them better, affect how much information we retain and store, influence the perception of how easy or difficult tasks can appear (**Malinauskas & Pozeriene, ٢٠٢٣**).

Academic motivation includes three main dimensions are intrinsic motivation, extrinsic motivation, a motivation. The first aspect of motivation is intrinsic motivation are internal to the student, where one is motivated by a desire to learn or enjoyment of the process of learning. Intrinsically motivated behavior is characterized by curiosity, exploration,

manipulation, spontaneity (Arslantaş, ٢٠٢٣). Otherwise, the second dimension is extrinsic motivation are external to the student, where one may be motivated by the desire to please others, earn high grades, or other external rewards. Finally a motivation which means lack of interest in performing any activity, a sense and lack of accountability of ones actions is more evident in a motivated student action (**Cañabate et al., ٢٠٢٣**).

Electronic portfolio can be a useful tool for motivating students for learning and assessment process. Nursing students may be more motivated to utilize their electronic portfolios for a range of objectives if they are familiar with its various features. A useful way to gauge student motivation is to have them share their work via e-portfolios and provide feedback. Early and positive feedback increases students' motivation. Students can store electronic feedback in their e-portfolios, which they can then use to reflect on their development (**Carter, ٢٠٢٣**).

Significance of the study

Now with rapid changes in health field technologies in the age of communication and information, nurse educators have to prepare experts and skillful graduates for the demands of healthcare and increased complexity. Therefore; it is important to use modern electronic methods such as E-portfolios in nursing education and learning. This will help nursing student's to become up to date, knowledgeable and skillful and this can lead to improvement of health in the society. Moreover, exploring novel approaches in practical nursing education can assist students in navigating the current knowledge explosion in health care, preparing them for careers that will require lifelong learning (**Tóth-Király, et al , ٢٠٢٢**).

E-portfolio is an "alternative" form of assessment which helps learners develop their autonomy and self-confidence through interaction among each other especially when used in combination with an online learning

platform .Undergraduate students' willingness to engage with e-portfolios and online learning platforms is going to be explored as very little research has been conducted to examine their attitudes to date. A key feature of e-portfolios is that learners interact with each other as they create their e-portfolios, provide feedback to each other, and gain considerable benefits **(Meletiadou, ٢٠٢١)**.

Motivation indicators can be influenced by the use of modern digital technologies that increase students' interest and motivation in online learning through their interactive format **(Berestova, et al, ٢٠٢٢)**. So that this study will be conducted to assess nursing teaching staff and student's readiness about using electronic portfolio and its relation to students' academic motivation.

Aim of the study

The study was aimed to assess nursing teaching staff and students' readiness about using electronic portfolio and its relation to students' academic motivation.

Research Questions:

١. What are nursing teaching staff and students' readiness levels regarding the use of electronic portfolio?

٢. What are the levels of academic motivation among nursing students?

٣. Is there a relation between nursing teaching staff and students' readiness regarding the use of electronic portfolio and students' academic motivation?

Subjects and method
Research design:

A descriptive correlational design was utilized to achieve the aim of the present study.

Setting:

The current study was conducted at Faculty of Nursing, Benha University.

Study subjects

Two groups included in the present study namely.

١. **Nursing Teaching Staff Group:** All available nursing teaching staff ١١٢ (Lecturers, Assistant professors and Professors) who were working at the previously mentioned setting during the time of data collection

٢.**Nursing Students' Group:** Consisted of ١٠٨٤ nursing students out of ٣٥٤٣ student from the four academic levels at academic year (٢٠٢٢/٢٠٢٣) who were selected using stratified random sampling. The sample size was taken from each stratum according to the following sample size formula:

(Tejada and Punzalan, ٢٠١٢):

$$n = \frac{N}{1 + N(e)^2}$$

Where

n = the required sample size = ٥٣٨ nursing students

(N) = the total number of nursing students

=١٦٩٣

(e) = Error tolerance = (٠.٠٥)

Tools for data collection:

Data of the present study was collected by using two tools namely;

١. **Electronic Portfolio Readiness Questionnaire** (Appendix I)

Two structured questionnaires were developed by the investigator based on literature review (Mohamad etal., ٢٠١٥; Albasbos & Hussian, ٢٠٢٠) it was used to assess nursing teaching staff and students readiness about using electronic portfolio.

a- **Electronic Portfolio Readiness Questionnaire among nursing teaching staff** was consisted of three parts:

Part ١: Personal characteristics: It consisted of personal characteristics about nursing teaching staff; (academic department, age, marital status, residence, academic degree, years of experience).

Part ٢: It consisted of ٦ questions related to technology experience of nursing teaching staff include (Attend previous training course about using computer, having computer or laptop, type of phone, used Microsoft program, internet experience, training courses about the use of electronic portfolio).

Part (٣): Electronic portfolio readiness questionnaire among nursing teaching staff. It included ٤٨ items grouped under

four dimensions.

Scoring system:
Responses of the nursing teaching staff were measured by using a three point Likert Scale ranged from (١-٣) as; (٣) Always, (٢) Sometimes, and (١) rarely. The score of the items was summed-up and the total divided by the number of the items, giving a mean score. These scores were converted into a percent score. Total scores were ranged from (٤٨-١٤٤). The total nursing teaching staff readiness toward using electronic portfolio level was considered high if the percent score was ٧٥٪ and more equal (١٠٨-١٤٤), moderate level if the percent score was ranged from ٦٠٪- less than٧٥٪ equal (٨٧-١٠٧), while it considered low level if the percent score less than ٦٠٪ equal (٤٨-٨٦).

b- Electronic Portfolio Readiness Questionnaire among Nursing students'
was consisted of three parts:

Part ١: Personal characteristics: It consisted of personal characteristics about nursing students; (age, gender, residence, marital status, academic level).

Part ٢: It consisted of ٤ questions related to technology experience of nursing student include (Attend previous training course about using computer, internet experience, training courses about the use of electronic portfolio, used Microsoft program).

Part ٣: Electronic portfolio readiness questionnaire among nursing students: It included ٤٦ items grouped under five dimension.

Scoring system:
Responses of the nursing students were measured by using a three point likert Scale ranged from (١-٣) as; (٣) Always, (٢) Sometimes, and (١) rarely. The score of the items was summed-up and the total divided by the number of the items, giving a mean score. These scores were converted into a percent score. Total scores were ranged from (٤٦-١٣٨). The total nursing students readiness toward using electronic portfolio
level was considered high if the percent score was ٧٥٪ and more ranged from (١٠٤-١٣٨), moderate level if the percent score was ranged from ٦٠٪- less than٧٥٪ equal (٨٣-١٠٣), while it considered low level if the percent score less than ٦٠٪ equal (٤٦-٨٢).

The second tool: Nursing Students Academic Motivation Questionnaire.
A structured questionnaire developed by the investigator afte reviewing the related literature (Vallerand et al., ١٩٩٣, Flake et al.٢٠١٥., Graham, ٢٠٢٠) to assess the levels of academic motivation nursing students. It included ٢٨ items grouped under three main dimensions include ١) intrinsic motivation (١٢ items), ٢) Extrinsic motivation (١٢ items), ٣) A motivation (٤ items) which subdivided under seven dimensions

Scoring system:
Responses of the nursing students were measured by using a three point Likert Scale ranged from (١-٣) as; (٣) always, (٢) sometimes, and (١) rarely. The scores of the items were summed-up and the total divided by the number of the items, giving a mean score. These scores were converted into a percent score. Total scores were ranged from (٢٨-٨٤). The total nursing students academic motivation level was considered high if the percent score was ٧٥٪ and more equal (٦٣-٨٤), moderate level if the percent score was ranged from ٦٠٪- less than٧٥٪ equal(٥١-٦٢), while it considered low level if the percent score less than ٦٠٪ equal(٢٨-٥٠).

Tools validity and reliability
Validity: Face and content validity of study tools were done by group of juries consisted of ٩ experts, from different Faculty of Nursing (two professors from Tanta University, one professor from Ain-shams University and four assistant professors from Benha University in nursing administration. In addition to the dean of Faculty of Veterinary Medicine and manger of electronic learning center at Benha University, also, the manager of information technology unit at Faculty of Nursing Benha University. The validity of the tools aimed to judge its clarity, comprehensiveness, relevance, simplicity and accuracy. All of their modifications were taken into consideration and some items were omitted that gives the same

meaning and modifying some words to give the right meaning for the item which did not understood clearly. To arrive at the final version of the tools. The tools were regarded as valid from the experts' point of view. It took one month March ٢٠٢٣.

Reliability: The tools were tested by using Cronbach's Alpha coefficient, to estimates the consistency of measurement tools as the following: Electronic portfolio readiness questionnaire among nursing teaching staff (٠.٩٥٢); Electronic portfolio readiness questionnaire among nursing students (٠.٩٨٨) Nursing students Academic motivation questionnaire(٠.٨٦٢).

Ethical considerations:

Prior to the conduction of the study, ethical approval was obtained from the scientific research ethics committee at Faculty of Nursing Benha University. All subjects were informed that participation in the study was voluntary and informal consent was obtained from the participants in the study through their acceptance for filling questionnaires. Confidentiality of data obtained was protected by the allocation of a code number to the questionnaire sheets. Subjects were informed that the content of the study tools will be used for the research purpose only. Participants' right to withdraw from the study at any time was ascertained.

Pilot study:

A pilot study was conducted at April ٢٠٢٣ to test the sequence of items feasibility, practicability and applicability of the study tools, clarity of the language and to estimate the time needed for filling each tool. It was done on ١٠ % of total nursing teaching staff that means ١٢ nursing teaching staff and ١٠٨ nursing students from four academic levels. It has also served in estimating the time needed for filling the questionnaires. It ranged between ١٥-٢٠ minutes for Electronic Portfolio Readiness Questionnaire by nursing teaching staff and students' and between ١٠-١٥ minutes for Nursing Students' Academic Motivation Questionnaire. No modification was needed so this sample was included in the final study subjects.

Field work:

Data collection took about two month in from mid of May ٢٠٢٣-June ٢٠٢٣. The investigator prepared the questionnaires electronically via Google form design and took the permission from heads of academic departments who explained the aim and the nature of the study and the method of filling the electronic questionnaires to the nursing teaching staff and students in their departments and then the links were sent to nursing teaching staff and nursing students through the What's App groups via heads of different academic departments. Teaching staff questionnaire link (https:// forms .gle /٩bdAm١AmvHaBL١G٢) students' questionnaire link: (https:// forms .gle /٩٧tpfYBVQC٨Ki٨). Nursing Teaching staff and students started to open the links and fill the questionnaires.

Administrative design:

An official permission was issued from Dean of the Faculty of Nursing Benha University and the vice dean for learning and students affairs to heads of academic departments to conduct the study, and seek their support for completing the data collection after clarifying the nature of the study

Statistical design:

The collected data organized, tabulated and statistically analyzed using statistical package for social sciences (SPSS version ٢٢.٠) was used. Descriptive statistics were applied in the form of mean and standard deviation for quantitative variables and frequency and percentages for qualitative variables. Chi-square test and Fisher exact test (FET)was used to detect the relation between variables .In addition to, Pearson correlation coefficient (r) was used to estimate the closeness association between two quantitative variables. Statistical significance was considered at P-value <٠.٠٥, considered highly statistically significance at p-value P <٠.٠٠١ and considered not significance at P > ٠.٠٥.

Results

Table (١): Shows that more than

one fifth (٢٢.٣٪) of nursing teaching staff were worked in Medical surgical nursing department. While the minority of them (١٢.٥٪) were working of psychiatric nursing and mental health department. In relation to age more than one third (٣٧.٥٪) of nursing teaching staff had age ranged between ٣٠-<٣٥ years old with mean ±SD (٣٨.٤٠±٥.١٢). In relation to their marital status, the majority (٨٩.٣٪) of them were married. Regarding their residence, less than two thirds (٦٤.٣٪) of them living in rural areas. In relation to their academic degree, more than two fifth (٤٣.٧٪) of them were Assistant professor. Regarding to their years of experience, more than one third (٣٨.٤٪) of them had ranged from ١٠-<١٥ years of experience with mean ±SD (١٨.٨٧±٥.٧٤)

Table (٢): Shows that less than two thirds (٦٣.٨٪) of nursing students were aged equal and more than ٢٠ years old with Mean ±SD (١٩.٨٨±١.٢٧) years. As far as their gender, less than three quarters (٧٣.٦٪) of them were females. In relation to their marital status, the majority (٩٨.٧٪) of them were unmarried. Regarding to their residence, more than three quarters (٧٦.٢٪) of them living in rural areas and more than one quarter (٢٧.٨٪) of them were in the

third academic level.

Figure (١): Display that more than three fifths (٦١.٦٪) of nursing teaching staff had high readiness level about using electronic portfolio. And less than one third (٣٠.٤٪) of nursing teaching staff had moderate readiness level about using electronic portfolio.

Figure (٢): Display that nearly two thirds (٦٥.٥٪) of nursing students had high level of readiness about using electronic portfolio. And less than one fifth (١٩.٤٪) of nursing students had low level of readiness about using electronic portfolio.

Figure (٣): Displays that majority (٨٦.٧٪) of nursing students had high academic motivation level, while the minority of nursing students (١١.١٪) had moderate academic motivation level.

Table (٣): Shows that there was a statistical significant correlation between total nursing teaching staff readiness toward using electronic portfolio and total academic motivation among nursing students. Also there was a highly statistical significant correlation between electronic portfolio readiness among nursing students and their total academic motivation.

Table (١): Frequency distribution of nursing teaching staff regarding their Personal characteristics (n=١١٢)

Personal characteristics	No	%
Academic department		
Medical Surgical Nursing	٢٥	٢٢.٣
Community Health Nursing	١٨	١٦.١
Obstetrics and Gynecology Nursing	٢١	١٨.٧
Nursing Administration	١٦	١٤.٣
Pediatric Nursing	١٨	١٦.١
Psychiatric Nursing and Mental Health	١٤	١٢.٥
Age (years)		
<٣٠	٢٦	٢٣.٢
٣٠-<٣٥	٤٢	٣٧.٥
٣٥-<٤٠	٢٥	٢٢.٣

	No	%
٤٠+	١٩	١٧.٠
Range	٣١-٦٢	
Mean ±SD	٣٨.٤٠±5.12	
Marital status		
Married	١٠٠	٨٩.٣
Unmarried	١٢	١٠.٧
Residence		
Urban	٧٢	٦٤.٣
Rural	٤٠	٣٥.٧
Academic degree		
Lecturer	٤٧	٤٢.٠
Assistant professor	٤٩	٤٣.٧
Professor	١٦	١٤.٣
Years of academic experience		
<١٠	١٨	١٦.١
١٠-<١٥	٤٣	٣٨.٤
١٥-<٢٠	٣٠	٢٦.٨
٢٠+	٢١	١٨.٧
Range	٨-٣٥	
Mean ±SD	18.87±5.٧٤	

Table (٢): Frequency distribution of nursing students regarding their personal Characteristics (n=١٠٨٤).

Personal characteristics	No	%
Age (years)		
≤ ٢٠ years	٦٩٢	٦٣.٨
٢٠+ years	٣٩٢	٣٦.٢
Range	١٨-٢٥	
Mean ±SD	19.88±1.2٧	
Gender		
Male	٢٨٦	٢٦.٤
Female	٧٩٨	٧٣.٦
Residence		
Rural	٨٢٦	٧٦.٢
Urban	٢٥٨	٢٣.٨
Marital status		
Married	١٤	١.٣
Unmarried	١٠٧٠	٩٨.٧
Academic level		
First level	٢٤٥	٢٢.٥
Second level	٢٨٧	٢٦.٥
Third level	٣٠١	٢٧.٨
Fourth level	٢٥١	٢٣.٢

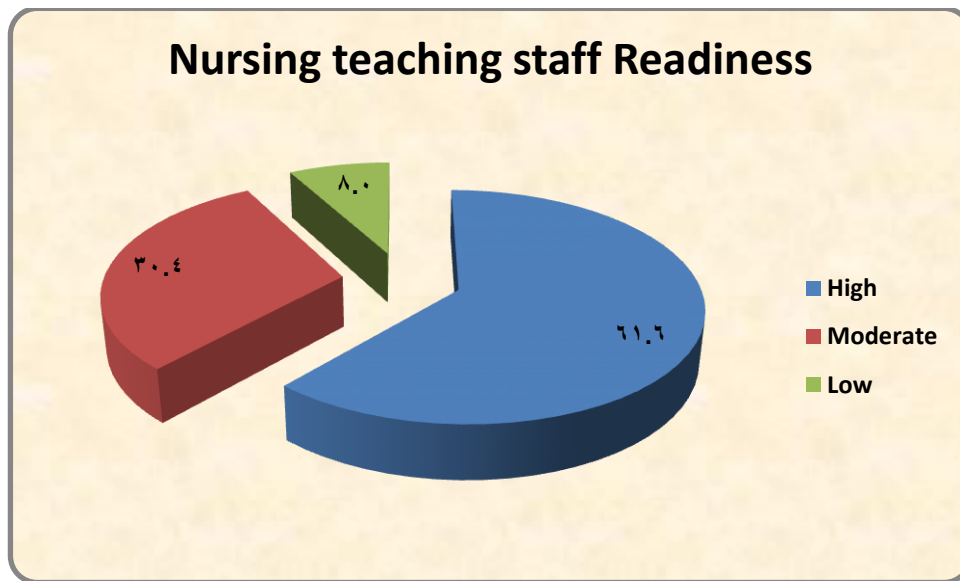**Figure (١):** Percentage Distribution of electronic portfolio readiness total levels among nursing teaching staff

Nursing teaching staff Readiness

٨.٠

٣٠.٤

٦١.٦

- High
- Moderate
- Low

Figure (٢): Percentage Distribution of electronic portfolio readiness total levels among nursing students

Nursing Students Readiness

١٩.٤

١٥.١

٦٥.٥

- High
- Moderate
- Low
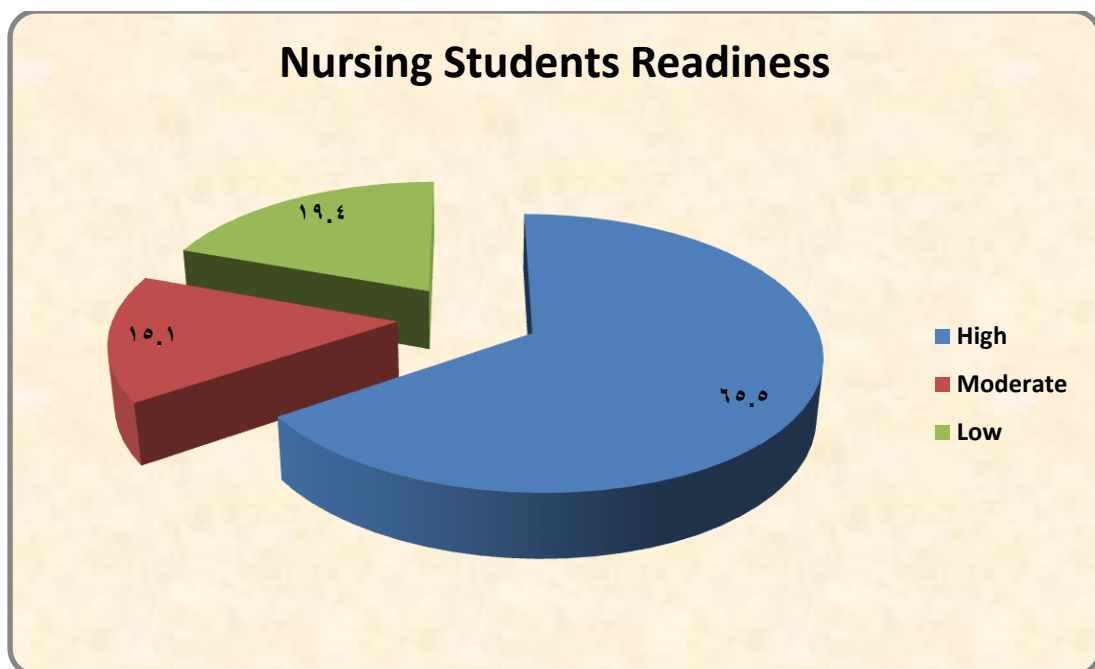
Figure (٣): percentage distribution of academic motivation total level among nursing student

Academic Motivation Levels

٢.٢
١١.١
٨٦.٧
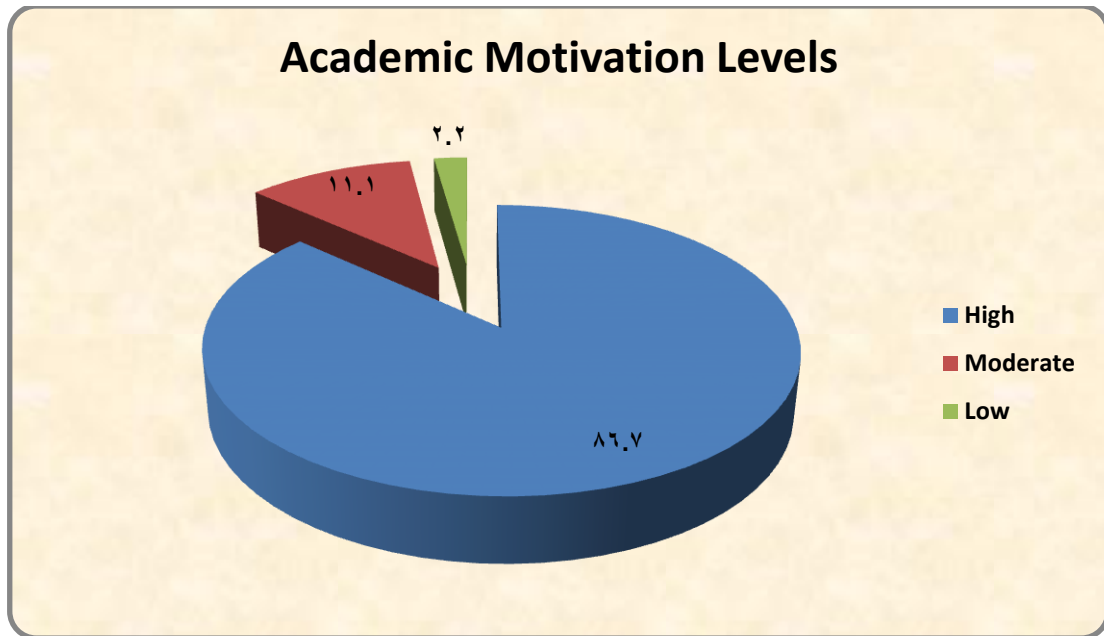
- High
- Moderate
- Low

Table (٣): Correlation between total electronic portfolio readiness and total academic motivation among nursing teaching staff and nursing students

Variables	Total academic motivation	
	r	P value
Total nursing teaching staff readiness	٠.٢٣٣	٠.٠١٣*
Total nursing students readiness	٠.٣٣٣	٠.٠٠٠**

(* A statistical significant difference P ≤ ٠.٠٥, ** A highly statistical significant difference P ≤ ٠.٠٠١)

Discussion:

E-Portfolios have been widely utilized by higher education institutions because of the numerous opportunities for learning, reflection and management of learning artifacts for their entire faculty career, and faculty feedback. Students use e Portfolios to map artifacts and make connections through reflection that is supported by peer and teaching staff feedback. E- Portfolios can also provide valuable support to students as they navigate challenges that arise throughout their faculty experiences, mediate dissonance that accompanies awareness, and develop confidence across multiple contexts which positively effect on students' academic motivation for learning (**Douglas et al., ٢٠١٩).**

The current study was conducted to assess nursing teaching staff and students' readiness about using electronic portfolio and its relation to students' academic motivation.

Regarding to personal characteristics of the nursing teaching staff, the findings of the present study clearly showed that more than one fifth of nursing teaching staff were worked in medical surgical nursing department. While the minority of them were worked in psychiatric nursing and mental health department. In relation to age more than one third of nursing teaching staff had age ranged between ٣٠-< ٣٥ years old. In relation to their marital status, the majority of them were married. Regarding their residence, less than two thirds of them living in rural areas. In relation to their academic degree, more than two fifth of them were assistant professor. Regarding to their years of experience, more than one third of them had ١٠-<١٥ years of experience.

Regarding to personal characteristics of studied nursing students, the results of present study revealed that less than two thirds of nursing students were aged equal and more than ٢٠ years old. As far as their gender, less than three quarters of them were females. In relation to their marital status, the majority of them were unmarried. Regarding to their residence, more than three quarters of them living in rural areas and more than one quarter of them were in the third academic level.

Regarding electronic portfolio readiness among studied nursing teaching staff, the results of this study revealed that more than three fifths of nursing teaching staff had high readiness level about using electronic portfolio. And less than one third of nursing teaching staff had moderate readiness level about using electronic portfolio. From investigator point of view this could be due to that the teaching staff had experience in using the internet and modern technological means, also the electronic portfolio is one of the modern trends in evaluation, and therefore they are keen to learn it.

This result was in the same line with **Nasseif, (٢٠٢١)** who conducted a study about "Exploring E-Portfolio as a new technology tool in Saudi Arabian higher education: A case study" and found that the majority of teaching staff had high readiness level toward adapting electronic portfolio as a new tool in higher education. This result was supported with **Vorotnykova & Zakhar, (٢٠٢١)** who conducted a study about "Teachers' readiness to use e-portfolios" and stated that more than two thirds of teachers had high readiness level toward creating and using electronic portfolio.

Regarding electronic portfolio readiness level among studied nursing students, the finding of current study revealed that nearly two thirds of nursing students had high level of readiness about using electronic portfolio. And less than one fifth of nursing students had low level of readiness about using electronic portfolio. From investigator point of view, This may be due to the student motivated to collect

information about results of exams, achievements and know anything related to academic achievement to achieve better outcome.

This result was supported with **Mohamad et al., (٢٠١٥)** who conducted study about "Are students ready to adopt E-Portfolio? social science and humanities context" and stated that the majority of students had high readiness level toward adapting and using electronic portfolio. Also, this result was contraindicated with **Muin et al., (٢٠٢١)** who conducted study about "Students' perceptions on the use of e-portfolio for learning assessment" and found that the majority of students had low readiness level toward using electronic portfolio.

Regarding nursing students' academic motivation level, the results of the present study illustrated that that majority of nursing students had high academic motivation level, while the minority of nursing students had moderate academic motivation level. From the investigator point of view, this may be due to that the teaching staff provides make good communication with students and provide continuous support to them in order to increases their level of motivation through honoring them by giving rewards such as certificates of appreciation.

This finding was in the same line with **Saeedi et al., (٢٠٢١)** who conducted study about "The effects of teaching methods on academic motivation in nursing students" and stated that nursing students had high level of academic motivation due to using effective teaching methods as case-based learning, cooperative learning, learning contract, peer assessment, and self-assessment using video typing. Also, this result was agreed with **Noyens et al., (٢٠١٩)** who conducted study about "The directional links between students' academic motivation and social integration during the first year of higher education "and found that students had high level of academic motivation.

Additionally, this finding was contraindicated with **El-Sayed et al., (٢٠٢١)** who conducted study about "Academic Motivation, Academic Self-Efficacy and Perceived Social Support among Undergraduate Nursing Students, Alexandria University, Egypt" and reported that more than two thirds of nursing students had moderate level of academic motivation.

The results of present study revealed that there was a statistical significant correlation between total nursing teaching staff readiness toward using electronic portfolio and total academic motivation among nursing students. Also, there was a highly statistical significant correlation between electronic portfolio readiness among nursing students and their total academic motivation. From investigator point of view this could be due to teaching staff are keen to increase student motivation and show electronic portfolio is one of advanced technologies that help students know results and achievements over time.

This result was supported with **Erten et al., (٢٠١٩)** who conducted study about "The effects of e-portfolio implementation on academic motivation in an online collaborative learning setting" and revealed that there was positive statistical significant correlation between students readiness about using electronic portfolio and academic motivation of students. On the other hand this result was contraindicated with **Law & Hu, (٢٠٢٠)** who conducted study about "The effect of reflective portfolio learning on students 'motivation in learning english" and revealed that there was negative relation between using e-portfolios and academic motivation of students.

Conclusion

Based on the findings of the present study, it can be concluded that there was high readiness level about using electronic portfolio among nursing teaching staff. Also there was high readiness level about using electronic

portfolio among nursing students; also, the majority of nursing students had high academic motivation level. Moreover, the findings revealed that there was a highly statistical significant correlation between electronic portfolio readiness and total academic motivation among nursing students.

Recommendations

In the light of the findings obtained from the present study the following points are recommended:

For Faculty administration:

١.   Designing training programs for teaching staff & students about electronic portfolio to increase motivation for using it.

For nursing teaching staff:

١.Conducting workshops for teaching staff about how to use and apply electronic portfolio properly.

٢.Encouraging teaching staff to use different methods in teaching and evaluating students in order to attract student attention and increase their academic motivation.

For nursing students:

١.Conducting workshops for nursing students about how to use and apply electronic portfolio properly.

٢.   Conducting workshop for students to increase motivation such as effective communication skills, time management skills.

Further research:

١.   Examine the effect of electronic portfolio utilization on teaching staff and students' critical thinking and creativity.

٢.   Replication of the study on a larger probability sample is highly recommended to achieve generalizable results.

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