

Professional Competence in Distance Learning for faculty members in Physical and Sport Education Institutes

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Abstract:

This study aims to identify the level of professional competence in distance learning among faculty members of Algerian universities' physical and sports education institutes. The researcher has used the survey descriptive method. The study sample consisted of an estimated 51 physical and sports education professors selected randomly. The researcher used a scale of professional competence in distance education, and the following results were achieved:

- The level of teaching efficiency among faculty members is high.
- The level of cognitive efficiency among faculty members is high.
- The level of use of technology among faculty members is average.
- The level of professional competence in distance learning among faculty members of Algerian universities' physical and sports education institutes is high.

Keywords: Professional Competence, Distance Learning, Physical and sports education institutes.

Introduction:

The term "distance education" was only formally known in 1982, when UNESCO attempted to interpret the Scientific Commission for Education by correspondence. (ICCE) to a new name, the World Commission for Distance Education (ICCDE). Thus, the concept of distance education is unique, and there is still no fixed and specific definition of it, so the concepts of distance education multiplied and overlapped and were not based on a particular definition between teacher and learner and the variety of means used in the education process. (Tarek, Amer Abdul Rauf, p 05)

The distance education approach, also known as "distance learning," is one in which the instructor and pupils are geographically separated. This training tool uses satellite communication channels, the Internet, and audio and video equipment. The potential of remote learning has sparked a paradoxical amount of interest worldwide. It is well-known that the training method involves professors and students not speaking to one another directly during the session. This is a course that several universities offer via correspondence. The efficiency and calibre of remote learning in its contemporary. (E.Mukhamadieva F, 2020).

Thanks to the advancement of technology, distance learning has become more adaptable and thriving in the twenty-first century (Abas, 2015; Rehn, 2017). due to the rising development of remote learning, many universities and other organizations now offer some academic programs online. Students who cannot physically visit campus can benefit from these programs by having a pleasant environment. As a result, many colleges and other educational establishments provide synchronous and asynchronous online learning environments. This diversity in delivery modalities facilitates real-time engagement between teachers and students and their knowledge processing (Stadler et al., 2017).

According to the fundamental definition of distant learning, students and teachers are separated by space, and this gap is closed by the use of technology (Casarotti et al., 2002)

One factor promoting social and economic development is distance learning. In industrialized and emerging nations, it is quickly assimilating into the core of educational institutions. The globalization of remote education offers several chances for nations to fulfill the objectives of their entire educational systems. Interest in remote learning has skyrocketed due to technological advancements and the increased need for ongoing skill upgrades and retraining.

Although remote education is old, its use has become common in an exceptional circumstance in modern world history. Countries have stopped life by adopting an uncompromising principle of community distancing as the basis of life. This has forced all educational institutions to shift from attendance education

that allows physical affinity, which constitutes transmission, to e-education or distance education. 1.186 billion children and young people must stay within the world's 144.

This prompted officials and officials of the Ministry to accelerate finding a way to sustain education. However, at the lowest cost and the lowest human loss through distance education or e-education as a long-talked-about type of education and debate about the need to integrate it into the education process before COVID-19 is treated, but it has become a fundamental alternative and an urgent need for continued education in conditions of physical distancing .(Amani Issa, 2020, p54)

This is also the case in Algeria, where the Ministry of Higher Education and Scientific Research has used distance education since 29/2020/02 as an alternative to attendance education to ensure the continuation of the university year 2019/2020 and avoid the white year.

Even after the end of the Covid-19 pandemic, the Algerian State promoted distance education at its university level. It adopted it as a primary teaching pattern parallel to attendance education, especially in horizontal and exploratory units.

This is why we conducted this study to determine the level of professional competence of faculty members of the institutes of physical and sports education at the University of Algeria and to know how much control this type of education is.

We posed the following problem due to this:

What is the level of professional competence in distance learning among faculty members of Algerian universities' physical and sports education institutes?

Partial Questions:

1/ What is the level of teaching efficiency among faculty members?

2/ What is the level of cognitive efficiency among faculty members?

3/ What is the level of use of technology among faculty members?

Many previous studies have dealt with distance education in various respects, to which we recall the following:

1/ Effects of Online Distance Learning on Violence Risk Knowledge and Competencies

S.L. Kopelovich, J. Olson, K. Michaelsen, T. Wasser (2023)

Journal of the American Academy of Psychiatry and the Law 51(2), pp. 247-254, American Academy of Psychiatry and the Law, ISSN 10936793 (ISSN)

<https://doi.org/10.29158/JAAPL.230008-23>

Behavioural health professionals are charged with providing effective outpatient services while addressing patient and public safety, yet training in empirically-informed violence risk assessment strategies remains inaccessible. The authors developed and evaluated an online distance learning (ODL) course on clinical risk assessment targeting frontline providers and trainees in the United States. The ODL consisted of three modules: confidentiality, duty to third parties, and clinical evaluation of violence risk. We evaluated the response characteristics and reach among different disciplines, as well as training satisfaction, change in knowledge, self-perceived competence, and self-reported impact on practice at a six-week follow-up among 221 learners. Self-perceptions of competence and knowledge in the focal areas increased immediately after the training; self-perceived competence increased significantly at the six-week follow-up. Participants reported a moderate-high positive impact of the training on practice.

2/ Skills Development through Virtual Art-Based Learning: Learning Outcomes of an Advanced Training Program for Project Managers

B.Sandberg, E.Stasewitsch, J.Prümper (2022)

Education Sciences 12(7), MDPI, ISSN 22277102 (ISSN)

<https://doi.org/10.3390/educsci12070455>

Regarding emerging professional field requirements, uncertainty competence is a skill to be cultivated and integrated into project management education and training. Art-based learning is a promising approach because the artistic mindset is a suitable model for coping with uncertainty. However, it needs to be clarified to what extent art-based learning's experiential nature will result in soft skills development under the restrictions of distance education. The present quantitative study explores whether art-based executive training has a measurable effect on uncertainty competence in a virtual learning environment. Data collection and analysis applied a quasi-experimental pretest-posttest control group design. Participants in the experimental group completed a month-long virtual training program based on visual arts.

Contrary to its objective, the program did not cause meaningful changes in uncertainty competence or perceived stress but significantly affected participants' attentiveness and presence. Participants achieved a higher level of mindfulness in dealing with complexity. The results imply that—even in virtual settings—art-based approaches enhance terms of perceptive capacity and social presence but need to be long-term, related to participants' work context, and disturb participants' routines to affect uncertainty competence.

3/ Identification of student-teacher groups' ⇔ needs in physical education and sport for designing open distance learning on the model of miniature private online courses

M. Hamse, M. Talbi, S. Lotfi (2020)

International Journal of Advanced Computer Science and Applications 11(10), pp. 97-105, Science and Information Organization, ISSN 2158107X (ISSN), cited by 1 (0.25 per year)

<https://doi.org/10.14569/IJACSA.2020.0111013>

Currently, there are witnessing several distance-learning offerings: FOAD (Open et al.) MOOCs (Massive Open Online Courses) and SPOCS (Small Private Online Courses) in various intervention sectors, including education and training. However, more research needs to analyze participants' needs before implementing SPOCs in higher education. This study aims to identify the need to design and guide a techno-pedagogical device in SPOCs' form for teacher training. The results showed that more than 70% of interviewees declared that SPOC reduces participants' travel time, 87% aimed at developing professional competence in planning learning, 77% wanted students' evaluation, and more than 60% wanted to know the disciplinary knowledge relating to physical and sporting activities (PSA) and their Learning activities' management. In addition, 64.3% of participants preferred, as the device's form and design, the four modalities simultaneously: text structured in the title, video capsules, images, and sound recording. In terms of educational tutoring, more than 75% of participants declared their need to understand certain concepts in the course. These results will guide us to focus attention on three basic professional skills: planning, management, and evaluation of learning as a priority training module in the envisaged SPOC with technical and pedagogical support, both audiovisual and textual.

Materials and Methods:

Research sample:

The sample study comprised 51 teaching staff of the Algerian universities' physical and sports institutes, selected randomly.

Sample Characteristics:

By gender:

Table 01 .Distribution of respondents by gender variable

Gender	Number of individuals
male	46
female	05

By age:

Table 02 .Distribution of respondents by age variable

Age	Number of individuals
30-35	12
35-40	17
40-45	11
45years and more	11

By degree:

Table 03 .Distribution of respondents by degree variable

Degree	Number of individuals
assistant professor B	03
Lecturer B	03
Lecturer A	30
Professor of Higher Education	14
Sports Consultant	01

By experience:

Table 04 .Distribution of respondents by experience variable

Experience	Number of individuals
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Less than 5 years	6
5 to less than 10 years	22
10to less than 15 years	10
15 years and more	13

By application:

Table 05 .Distribution of respondents by application variable

Application	Number of individuals
Google Meet	39
Zoom	09
Telegram	02
Moodle	01

Data collection tools:

The researcher used the professional competence scale of the teaching staff of the designer by researcher Randa Mohamed Sayed Ahmed of the Egyptian University of Assiut, consisting of 71 items spread over five sections: First section Personal features (12 items), second section Teaching and evaluation (15 items), third section interaction with others (15 items), fourth section Knowledge side (14 items), fifth section Technology employment (14 items), this metric is characterized by high validity and reliability.

In our research, we used 03 sections from the scale: the second, fourth, and fifth.

Validity and reliability were calculated again on a survey sample estimated at 30 professors,

Validity of tool:

The validity of the instrument was calculated by the sincerity of the internal consistency of each section with its items by the Alfa Kronbach coefficient, where the coefficient of Alfa Kronbach was high at each axis of the scale, indicating the validity of the tool

Table 06 .Validity of tool

Axis	Cronbach's Alpha	N of items
01	.890	15
02	.889	14
03	.873	14

Reliability of tool:

The instrument's reliability is calculated by testing and re-testing the method by distributing it to a sample size of 30 individuals. The Pearson correlation coefficient calculated the reliability.

Table 07 .Reliability of tool

sections	Pearson correlation	247Statistical Sig ($\alpha=0.01$)
01	.81	Significant
02	.83	Significant
03	.85	Significant

Scale Correction Key:

The formulation of the scale responses determined the scale weights according to the 5 point Likert Scale. (never, rarely, sometimes, often, always).

So that standard weight scores for positive phrases were given as follows: (1,2,3,4, 5), and vice versa in negative phrases where weights were given (5,4,3,2, 1), negative and positive phrases were identified in each section.

Table 08 .5 point Likert scale

Likert Scale	Interval	Defference	Description	Level
1	1.00-1.79	0.79	Never	low
2	1.80- 2.59	0.79	Rarely	
3	2.60- 3.39	0.79	Sometimes	Average
4	3.40 – 4.19	0.79	Often	high

5	4.20- 5.00	0.80	Always
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Results and Discussion:

View and analyze the results of the first section:

1st section :What is the level of teaching efficiency among faculty members?

Table 09.Description Statistics of teaching efficiency among faculty members

Questions		always	often	Sometimes	rarely	never	Means	Std Deviation	degree
Q1	N	28	11	5	3	4	4.10	1.269	Often
	%	54.9	21.6	9.8	5.9	7.8			
Q2	N	25	18	7	1	0	4.31	.787	always
	%	49	35.3	13.7	2	0			
Q3	N	30	16	5	0	0	4.49	.674	always
	%	58.8	31.4	9.8	0	0			
Q4	N	21	22	7	0	1	4.22	.832	always
	%	41.2	43.1	13.7	0	2			
Q5	N	14	11	14	09	03	3.47	1.239	Often
	%	27.5	21.6	27.5	17.6	5.9			
Q6	N	22	23	5	1	00	4.29	.729	always
	%	43.1	45.1	9.8	2	0			
Q7	N	11	10	13	10	07	3.16	1.347	sometimes
	%	21.6	19.6	25.5	19.6	13.7			
Q8	N	2	2	15	13	19	2.12	1.089	rarely
	%	3.9	3.9	29.4	25.5	37.3			
Q9	N	34	9	6	2	0	4.47	.857	always
	%	66.9	17.6	11.8	3.9	0			
Q10	N	4	2	15	15	15	2.31	1.175	rarely
	%	7.8	3.9	29.4	29.4	29.4			
Q11	N	20	19	10	2	0	4.12	.864	often
	%	39.2	37.3	19.6	3.9	0			
Q12	N	11	19	12	6	3	3.57	1.136	often
	%	21.6	37.3	23.5	11.8	5.9			
Q13	N	9	15	19	7	1	3.47	1.007	often
	%	17.6	29.4	37.3	13.7	2			
Q14	N	0	2	4	14	31	1.55	.808	never
	%	0	3.9	7.8	27.5	60.8			
Q15	N	0	4	8	14	25	1.82	.974	Rarely
	%	0	7.8	15.7	27.5	49			
Weighted Mean									3.43
Std.Deviation									.32832

Table (09) shows (Description Statistics of teaching efficiency among faculty members), from which we find that the highest average was awarded to question (09) with a mean of **4.47** and std deviation of **.857**, while the lowest average was awarded to question (14) with mean **1.55** and std deviation **.808**.

The Weighted Mean of section (01) was **3.43** with a std deviation of **.32832**, which indicates that the trend of (the level of teaching efficiency among faculty members) is (often). as general trend according to 5-point Likert scale as shown in table (09) since **3.43** lie in the interval 3.40- 4.19.

The average of (teaching efficiency among faculty members) is **3.43**, which is considered a **high level**.

2nd section :What is the level of cognitive efficiency among faculty members?

Table 10.Description Statistics of cognitive efficiency among faculty members

Questions		always	often	Sometimes	rarely	Never	Means	Std Deviation	degree
Q16	N	22	22	05	02	00	4.25	.796	always

	%	43.1	43.1	9.8	3.9	00			
Q17	N	36	12	02	01	00	4.63	.662	always
	%	70.6	23.5	3.9	02	00			
Q18	N	24	19	07	01	00	4.29	.782	always
	%	47.1	37.3	13.7	02	00			
Q19	N	26	20	03	02	00	4.37	.774	always
	%	51	39.2	5.9	3.9	00			
Q20	N	19	18	11	02	01	4.02	.969	often
	%	37.3	35.3	21.6	3.9	02			
Q21	N	06	07	26	06	06	3.02	1.104	sometimes
	%	11.8	13.7	51	11.8	11.8			
Q22	N	17	21	10	03	00	4.02	.883	often
	%	33.3	41.2	19.6	5.9	00			
Q23	N	17	18	11	04	01	3.90	1.025	often
	%	33.3	35.3	21.6	7.8	02			
Q24	N	13	06	16	11	05	3.22	1.316	sometimes
	%	25.5	11.8	31.4	21.6	9.8			
Q25	N	17	16	12	05	01	3.84	1.065	often
	%	33.3	31.4	23.5	9.8	02			
Q26	N	16	22	08	05	00	3.96	.937	often
	%	31.4	43.1	15.7	9.8	00			
Q27	N	11	11	19	09	01	3.43	1.082	often
	%	21.6	21.6	37.3	17.6	2			
Q28	N	10	14	18	09	00	3.49	1.007	often
	%	19.6	27.5	35.3	17.6	00			
Q29	N	21	14	10	05	01	3.96	1.095	often
	%	41.2	27.5	19.6	9.8	02			
Weighted Mean									3.88
Std.Deviation									.47038

Table (10) shows (**Description Statistics of cognitive efficiency among faculty members**), from which we find that the highest average was awarded to question (17) with mean **4.63** and std deviation **.857**. In contrast, the lowest average was awarded to the question (21) with mean **3.02** and std deviation **1.104**.

The Weighted Mean of section (02) was **3.88** with a std deviation of **.47038**, which indicates that the trend of (**the level of cognitive efficiency among faculty members**) is (often). as general trend according to 5-point Likert scale as shown in table (09) since **3.88** lie in the interval 3.40- 4.19.

The average (cognitive efficiency among faculty members) is 3.88, which is considered a high level.

3rd section :What is the level of use of technology among faculty members?

Table 11.Description Statistics of use of technology among faculty members

Questions		always	often	Sometimes	rarely	never	Means	Std Deviation	Range
Q30	N	13	19	15	04	00	3.80	.917	often
	%	25.5	37.3	29.4	7.8	00			
Q31	N	05	08	11	12	15	2.53	1.332	rarely
	%	9.8	15.7	21.6	23.5	29.4			
Q32	N	15	11	17	07	01	3.63	1.113	often
	%	29.4	21.6	33.3	13.7	02			
Q33	N	13	18	08	11	01	3.61	1.150	often
	%	25.5	35.3	15.7	21.6	02			
Q34	N	10	17	19	03	02	3.59	1.004	often
	%	19.6	33.3	37.3	5.9	3.9			
Q35	N	20	17	11	03	00	4.06	.925	often

	%	39.2	33.3	21.6	5.9	00			
Q36	N	2	8	14	11	16	2.39	1.201	rarely
	%	3.9	15.7	27.5	21.6	31.4			
Q37	N	05	03	07	36	00	1.55	.986	never
	%	9.8	5.9	13.7	70.6	00			
Q38	N	33	09	08	01	00	4.45	.832	always
	%	64.7	17.6	15.7	02	00			
Q39	N	01	05	12	14	19	2.12	1.089	rarely
	%	02	9.8	23.5	27.5	37.3			
Q40	N	02	00	07	19	23	1.76	.839	never
	%	3.9	00	13.7	37.3	45.1			
Q41	N	01	00	10	13	27	1.73	.918	never
	%	02	00	19.6	25.5	52.9			
Q42	N	16	16	15	04	00	3.86	.960	often
	%	31.4	31.4	29.4	7.8	00			
Q43	N	14	16	17	04	00	3.78	.945	often
	%	27.5	31.4	33.3	7.8	00			
Weighted Mean									3.06
Std.Deviation									.35052

Table (11) shows (**Description Statistics of the use of technology among faculty members**), from which we find that the highest average was awarded to question (38) with a mean of **4.45** and std deviation of **.832**, while the lowest average was awarded to the question (41) with mean **1.73** and std deviation **.918**.

The Weighted Mean of section (03) was **3.06** with a std deviation **.35052**, which indicates that the trend of (**the level of use technology among faculty members**) is (sometimes).as general trend according to 5-point Likert scale as shown in table (09) since **3.06** lie in the interval 2.60- 3.39.

So.the averge of (**cognitive efficiency among faculty members**) is **3.06** which consider a **average level**.

Conclusion:

Through statistical results, we conclude that:

- 1/The level of teaching efficiency among faculty members is high.
- 2/The level of cognitive efficiency among faculty members is high.
- 3/The level of use of technology among faculty members is average.

So the level of professional competence in distance learning among faculty members of Algerian universities' physical and sports education institutes is high.

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Appendix

QUESTIONNAIRE

Excellency, distinguished faculty members... May God's peace, mercy, and blessings be upon you.

Dear Colleague Dear Colleague:

The faculty member's professional competence is one of the main requirements in our current era and for the future of the educational process, especially synchronous and asynchronous distance education. The researcher has developed several paragraphs to determine the level of professional competence of the faculty academic, so I ask you to read the statements carefully and answer them objectively.

Scale guidelines :

- Fill out all the required initial information.
- The following pages are paragraphs related to professional competence in distance education. You are required to read each statement with concentration, determine the extent to which the statement applies to you, and choose the degree of approval accurately and objectively, as it is graded from always (5) degrees to never (1) degrees.
- Please do not leave any paragraph unanswered. And put a mark (√) on the chosen answer.
- You should not select more than two options in one paragraph, as the statement will be considered invalid.
- The answer is used for scientific research purposes only and is confidential.
- Please accept my sincere thanks and appreciation for your efforts, valuable time, and support for this tool
- Which aims to achieve the professional competence of the educational body in the speciality of social service

First: Primary data

Please choose the appropriate paragraph

- **Gender :** Mal () Female ()
- **Age :**
 - From 35 years to less than 30 years ()
 - From 30 years to less than 35 years ()
 - From 35 years to less than 40 years ()
 - 60 years and more

- **Degree:**
 - assistant professor B ()

Lecturer B ()

Lecturer A ()

Professor of Higher Education ()

Sports Consultant ()

- **Experience:**
 - Less than 5 years ()
 - From 5 years to less than 10 years ()
 - From 10 years to less than 15 years ()
 - 15 years and more ()
- **Average Institute :**
- **Application:**
 - Google Meet ()
 - Zoom ()
 - What's up ()

Telegram ()

Moodle ()

N	Items	Response				
		always	often	sometimes	rarely	never
Teaching Efficiency Section						
01	Provide students with the course program and its objectives before lectures start.					
02	I strive to develop students' logical and innovative thinking in my specialized courses.					
03	I try to take an exciting teaching style to attract students to the scientific content offered.					
04	I offer timely feedback on students' questions about the parts of the course.					
05	Use different assessment methods for students remotely appropriate to the course's outputs.					
06	Explain information in different ways that suit individual differences between students.					
07	I find myself isolated in the virtual lecture without a direct meeting with students					
08	I forget to announce the course's updates and dates clearly.					
09	Interact with students and management through professional mail.					
10	I am unable to communicate the information to students with a subject during distance education.					
11	I choose words that motivate students to learn during distance education					
12	It is difficult for me to perform any work without reference to the Institute's management					
13	I find it difficult to consult students in a distance learning environment					
14	I'm trying to meet the scheduled dates for my lectures electronically					
15	I formulate and place the content of the course electronically in the context of specific objectives					
Cognitive Efficiency Section						
16	I incorporate modern teaching references into my remote teaching methods.					
17	I understand the professional terminology of my specialization and the courses I teach					
18	New knowledge and information gained from e-learning activities					
19	See recent scientific references and research in my field of specialization					
20	Attend meetings and courses in my field of specialization to increase my knowledge					
21	It is difficult for me to prepare electronic tests					
22	I can use technical software to save information					
23	I identify useful e-learning sources to use for my students					
24	I find it difficult to design interactive lectures electronically					
25	I use the digital library in scientific research					
26	Looking for new technological techniques to use in education					

27	I need to learn to design the gauge content electronically to download it on the Moodle platform	
28	I find it difficult to do scientific research in my specialization from time to time.	
29	I find it difficult to remember the scientific material of the scale.	
Use Technology		
30	I care about using different technical means to communicate with students	
31	I prefer to record lectures electronically than to give them directly	
32	I follow important websites in teaching and practising my specialization	
33	I am good at preparing electronic duties for the course	
34	Activate different learning sources through the e-environment according to emergency developments	
35	I can lead student task forces in various situations	
36	feel tired that increasing the number of students exceeds my professional and teaching abilities	
37	I'm afraid of giving lectures directly through virtual classes.	
38	I strive for continuous development and training in my specialization	
39	I find it difficult to explain the scientific steps to deal with students' cases remotely	
40	The impact of learning was transmitted by objective evaluation of students	
41	I wish myself enough time to give the lecture.	
42	I miss the ability to use most educational technical programs	
43	I avoid using measured e-teaching tools	