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Research Article

Challenges Of Electronic Pedagogical Accompaniment- From The Point Of View Of Remotely Accompanying Professors –

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ABSTRACT

When a student gets accepted to the university for the first time, he will find a great gap between secondary education and university education, whether it is in educational curricula, pedagogical structures, educational climate, etc., which creates the need to have accompanying people to determine the course of study at the university in addition to external requirements related to how to conduct exams there and how to complete and present research and prepare applied classes, this process is called pedagogical accompaniment, and it was conducted by professors with new successful students previously in the form of attendance, while this year (2023/2024 is conducted in an electronic modern form, whereit is conducted remotely using modern communication technology, it is difficult and disturbed more than ever Hi-tech major gap in the pedagogical accompaniment process has a severe effect, Hence, this research paper addresses on the difficulties and challenges facing the application of electronic pedagogical accompaniment.

Keywords: University student , electronic accompaniment , communication technology, guardianship, professor accompaniment.

1- The Problem:

Trusting or mentoring is an educational process undertaken by a university professor with a group of university students, particularly first-year students, which is a common practice, as this group is entering the university environment for the first time and faces difficulty adapting to the university educational environment, especially given the larger size of the college or university, unlike high school, furthermore, there are multiple pedagogical structures for this group of students to enable them to adapt to the university campus, as with the emergence of modern technology and guidance, it was implemented for the first time in universities for the 2023/2024 academic year, and given its recent implementation, it has faced several problems, difficulties, and challenges that have hindered its implementation for both professors and students; thus, we pose the flowing question: What are the challenges facing the implementation of electronic educational mentoring?

2-Study Questions:

1- What are the most important challenges that stand in the way of applying electronic pedagogical accompaniment, and to what degree does it achieve?
2- are there any significant differences in the challenges of electronic accompaniment due to the demographic variables of the study sample?

3 - Hypotheses of the study:

1- Electronic pedagogical accompaniment faces many challenges that significantly hinder its application.
2- There are significant differences in the challenges of electronic accompaniment due to the demographic variables of the study sample.

4 - Study Objectives:

This study aims to:
- Exploring the obstacles that hinder the application of electronic accompaniment.
- Diagnosis of difficulties in the electronic accompaniment process.
- Finding solutions and addressing the problems that stands in front of the electronic accompaniment application.

5-Definition of Pedagogical Accompaniment:

Escorting is a new direction adopted by the Ministry of Higher Education and scientific research to help the new students adapt to the new university stage and integrate quickly and effectively within the framework of the philosophy of the MD system, which aims to improve the quality and composition of the student by informing and guiding him to raise his ability and the possibility of his participation in building his formative path by maximizing the volume of personal work. **(Gaane, 2018/2019, Page 39)**

6. Areas of Study:

6.1. Time Domain:
This study was conducted in the time period from 07/11/2023 to 07/01/2024

6.2. Spatial domain:
This study was limited to professors at the Faculty of Humanities and Social Sciences at Kasdi Merbah University, Ouargla.

6.3. Human domain:
The total number of professors accompanying students in the first year of the bachelor's degree is 30 professors, divided into 20 professors accompanying students in the joint specialized social sciences, and 10 professors accompanying students in the joint specialized humanities.

7 - Study Curriculum:

The method used in this study is the descriptive method, which is defined as: “one of the forms of systematic scientific analysis and interpretation, to describe a specific phenomenon or problem and depict it quantitatively and qualitatively by collecting data, analyzing it, and subjecting it to careful study” . **(Saati, 2014, Page 93)**
In our study, we used the descriptive approach, as it is one of the most widely used and important approaches in social research in terms of brevity of the subject, as well as the use of one of its most important tools, which is the questionnaire, to distribute it to the study community.

8-Study Scale:

The tool used in this fact-finding study is the questionnaire, which is considered one of the most important tools of the descriptive approach, and the most appropriate tool for such a study, as it helps the researcher collect the necessary data on his research topic, where the questionnaire is defined as: “An important means of obtaining information from a large number of people, and one of the most widely used field tools in scientific research, and it also defined as a set of questions arranged around a specific topic, placed in a form that is sent to the concerned parties either by mail or delivered by hand in preparation for obtaining answers to the questions contained therein”. **(Nagy, 2019, page 85)**
The study questionnaire contains one scale that measures the challenges of electronic pedagogical accompaniment, which consists of 03 main axes:

8.1-the first axis: related to technical challenges, this axis consists of 07 paragraphs according to a five-point scale consisting of the following weighted responses:

Table No. (01): shows the alternatives for the axis

The alternative	very large	large	medium	small	very small
Degree	5	4	3	2	1

In the positive paragraphs, the degrees are reversed in the negative paragraphs.

8-2-the second axis: related to human challenges, this axis consists of 07 paragraphs according to a five-point scale consisting of the following weighted responses:

Table No. (02): shows the alternatives for the axis

The alternative	very large	large	medium	small	very small
Degree	5	4	3	2	1

In the positive paragraphs, the degrees are reversed in the negative paragraphs.

8-3-the third axis: related to administrative challenges, this axis consists of 07 paragraphs according to a five-point scale consisting of the following weighted responses:

Table No. (03): shows the alternatives for the axis

The alternative	very large	large	medium	small	very small
Degree	5	4	3	2	1

In the positive paragraphs, the degrees are reversed in the negative paragraphs.

Table No. (04): shows the field of weighted arithmetic mean and the corresponding direction

The direction	very large	large	medium	small	very small
Weightedaverage	5 - 4.2	4.2 – 3.4	3.4 – 2.6	2.6 – 1.8	1.8 – 1

9. Validity Test of the Study Tool:

The test or tool aims to measure what it was designed to measure, where internal consistency and discriminant validity were calculated.

9.1. True Internal Consistency:

This means that each item of the scale follows the same path as the scale as a whole, therefore, the Pearson correlation coefficient is calculated between each individual's score on the item and their total score on the axis to which the item belongs, as follows:

A) - The truthfulness of the internal consistency of the first dimension (technical challenges):

Table no. (05): shows the result of the truthfulness of the internal consistency of the first dimension

N of Item	**Correlation value**	**Sig**
01	0.357	0.053
02	0.640	0.000
03	0.786	0.000
04	0.487	0.006
05	0.517	0.003
06	0.570	0.001
07	0.613	0.000

We note from the table that all paragraphs correlate with the first dimension (technical challenges) at the level of significance 0.05

B) - The truthfulness of the internal consistency of the second dimension (human challenges):

Table no. (06): shows the result of the truthfulness of the internal consistency of the second dimension

N of Item	**Correlation value**	**Sig**
08	0.819	0.000
09	0.754	0.000
10	0.800	0.000
11	0.681	0.000
12	0.365	0.047
13	0.542	0.002
14	0.500	0.005

We note from the table that all paragraphs have a correlation with the second dimension (human challenges) at the level of significance 0.05

C) - The truthfulness of the internal consistency of the third dimension (administrative challenges):

Table No. (07): shows the result of the truthfulness of the internal consistency of the third dimension

N of Item	Correlation value	Sig
15	0.913	0.000
16	0.643	0.000
17	0.882	0.000
18	0.323	0.081
19	0.722	0.000
20	0.445	0.014
21	0.899	0.000

We note from the table that all paragraphs related with the third dimension (administrative challenges) at the significance level of 0.05, except paragraph No. 18, it is not a function because the significance level of Sig 0.081 is greater than the significance level of 0.05

9.2. Discriminatory honesty:

It aims to measure both ends of the grades, where 33 % of the survey respondents ' grades were taken, after arranging them in ascending order from the highest grade to the lowest grade, taking the lower grades and higher grades and comparing them through the use of the T-test for two independent samples as shown in the following table:

Table no. (08): shows the result of the discriminatory honesty coefficient of the scale

Degrees	N	Mean	STD	T	Sig	Level of significance	Degree of Freedom	Decision Making
Lower	10	3.31	0.25	-9.747	0.000	0.05	18	Statisticsreferences
Higher	10	4.39	0.24					

From the table, we note that the value of the (t) test is significant at the 0.05 level because the (sig) value is less than it, which confirms the existence of statistically significant differences between the lower and higher scores of the respondents, which proves that the scale of challenges of electronic educational accompaniment was consistent with what it was prepared for.

10-Test the Stability of the Study Tool:

The reliability of the scale means that it gives the same results if the scale is re-administered several times and at different times, as Cronbach's alpha coefficient and the split-half were used to calculate the reliability coefficient of the scale as follows:

10.1. cronbach's Alpha coefficient:

Table no. (09): shows the result of cronbach's Alpha for the scale

Scale dimensions	Cronbach's Alpha	N of Item
The first dimension	0.639	07
The second dimension	0.760	07
The third dimension	0.823	07
The scale as a whole	0.846	21

The table shows that Cronbach's alpha coefficient value for the scale dimensions is high, which indicates that the scale's reliability coefficient is high.

10.2. Semi-segmentation:

The reliability coefficient was calculated using the split-half method, dividing the scale's items into two halves: one half contained items with odd numbers, and the other half contained items with even numbers, and the Pearson correlation coefficient between the two halves of the scale was then calculated and corrected using the Spearman-Brown coefficient as follows:

Table (10): Shows the value of the correlation coefficient between the two halves of the scale.

	Correlation coefficient before correction	correction of correlation coefficient by Spearman – Brown equation
The value of the stability coefficient is	0.744	0.853

It is clear from the table that the value of the correlation coefficient is equal to (0.853), which is a high value, indicating that the reliability coefficient of the scale is high.

11. Community and sample study:

The study was conducted on the total number of professors accompanying first-year students in the joint core of social and human sciences at the Faculty of Humanities and Social Sciences at Kasdi Merbah University-Ouargla, estimated at 30, accordingly, a comprehensive inventory method was used to survey all professors accompanying first-year students in the joint core.

12-Statistical methods used in the study:

The following tests were used in the study and tested its hypotheses in order to confirm or deny them and under the conditions of each test as well as the quality of the data obtained from the study sample:
1- Test (T-test): this statistical method was used to test the discriminative honesty of the study instrument.
2- Test (Four Way ANOVA): the four-way variance analysis test was used to study the differences between the arithmetic averages of the study sample and the test of the second hypothesis of the study, this test is considered an extension of the Test (T Test) because the latter studies the significance of differences between only two averages, while the test (Four Way ANOVA) studies the significance of differences between a group of averages.
3- Pearson correlation coefficient: the Pearson correlation coefficient was used to calculate the truthfulness of the internal consistency of the scale, by calculating the correlation relationship between the paragraph and the dimension to which it belongs.
4- Cranach's Alpha coefficient: the Cronbach's Alpha coefficient was used to calculate the stability coefficient of the scale.
5- Spearman-Brown correlation coefficient: this coefficient was used in the test of the stability of the scale.
6- Descriptive metrics: such as the use of arithmetic averages, standard deviations, absolute repetitions and favorable ratios.
7- Using the SPSS program: all statistical methods were applied in this study by using the Social Sciences statistical package program, which is abbreviated as SPSS version No. 27.

13-presentation and analysis of data:

The data of the study variables are analyzed as follows:
1-the gender variable:

Table No. (11): The distribution of the study sample according to the gender variable

Gender	Frequency	Percent
Male	17	% 56.67
Female	13	% 43.33
Total	30	100%

We note from the table that the predominant category in the study sample of professors is the male category, with a percentage of 56.67 %, followed by the female category with a percentage of 43.33 %.

2-The variable of scientific rank:

Table No. (12): The distribution of the study sample according to the scientific rank variable

scientific rank	Frequency	Percent
Assistant Professor B	06	% 20
Assistant Professor A	04	% 13.30
Professor Lecturer B	05	% 16.70
Professor Lecturer A	11	% 36.70
Professor of Higher Education	04	% 13.30
Total	30	100%

The predominant scientific rank in the study sample is the rank of Lecturer A, 36.70%, followed by the rank of Assistant Professor B, 20%, followed by the rank of lecturer B, 16.70%, followed by ranks Professor of Higher Education and Assistant Professor A equally, 13.30%, which indicates that there is a mix between the scientific ranks of professors accompanying students in all their ranks and that the process of accompaniment does not concern a certain rank over the rest of the scientific ranks.

3. variable professional experience:

Table No. (13): shows the distribution of the study sample according to the professional experience variable

professional experience	Frequency	Percent
From 01 to 06 years	07	% 23.30
From 07 to 12 years	16	% 53.40
From 13 to 18 years	07	% 23.30
Total	30	100%

We note from the table, that the professors accompanying the students, the majority of them have experience ranging from (07 to 12 years) in the field of Higher Education, followed by another category of professors with great experience in the field of Higher Education, which are professors with the rank of Professor of higher education, as well as another category with little experience, which is the category that belongs to the rank of Assistant Professor B and A, which is equal in the percentages estimated at 23.30 %

4-variable accompaniment:

Table No. (14): The distribution of the study sample according to the accompaniment variable

Accompanying	Frequency	Percent
Social Sciences	20	% 66.70
Humanities	10	% 33.30
Total	30	100%

We note from the table that the majority of professors accompany the first-year students to a common stem social sciences, by 66.70%, while the professors who accompany the first-year students to a common stem humanities, their percentage is estimated at 33.30%, this is due to the fact that the number of students studying in the Social Sciences is much larger than the students studying in the humanities, which made the number of professors accompanying them more than the professors accompanying humanities students.
The number of social science students reached 20 cohorts, while the number of humanities students reached 10 cohorts, which made the professors accompanying social science students twice the number of professors accompanying humanities students.

5-analysis of paragraphs after technical challenges: we analyze each of the paragraphs of the dimension as follows:

Table No. (15): The respondents ' responses about the first dimension

N of Item	Frequency	very large	large	medium	small	very small	Mean	STD	Percent	The direction	Rank of Item
05	ni	12	07	11	00	00	4.03	0.89	80.60	large	05
	Fi%	40	23.30	36.70	00	00					
06	ni	09	08	09	04	00	3.73	1.05	74.60	large	06
	Fi%	30	26.70	30	13.30	00					
07	ni	03	03	09	08	07	2.57	1.25	51.40	small	07
	Fi%	10	10	30	26.70	23.30					
08	ni	14	10	04	02	00	4.20	0.92	84	very large	04
	Fi%	46.70	33.30	13.30	6.70	00					
09	ni	17	07	06	00	00	4.37	0.81	87.40	very large	03
	Fi%	56.70	23.30	20	00	00					
10	ni	22	08	00	00	00	4.73	0.45	94.60	very large	01
	Fi%	73.30	26.70	00	00	00					
11	ni	18	07	05	00	00	4.43	0.77	88.60	very large	02
	Fi%	60	23.30	16.70	00	00					
The axis as a whole							**4.01**	**0.51**	**80.20**	**large**	/

Qualitative analysis:

1- Paragraph No. (10), which represents (the absence of a Wi-Fi network in the University, exploited by the student), got the 01st place, with an arithmetic average of 4.73 and a standard deviation equal to 0.45, where we note that 94.60% of the study sample responded: "there is no WIFI network in the university to a very large degree for the student, to use it in the electronic pedagogical accompaniment process".
2- Paragraph No. (11), which represents (the rise in prices of technological devices (phones, computers)), got the 02nd place with an arithmetic average of 4.43 and a standard deviation equal to 0.77, where we note that 88.60% of the study sample responded: "that the prices of technological devices (phones, computers) are rising very much, which makes it difficult for the student to acquire and use them in distance education".
3- Paragraph no. (09), which represents (the lack of internet halls at the University used by the student), got the 03rd place with an arithmetic average of 4.37 and a standard deviation equal to 0.81, where we note that 87.40% of the study sample responded: "that there are no internet halls at the University for the student to use in the electronic pedagogical accompaniment process".

4- Paragraph no. (08), which represents (weak internet flow among students residing in the University District), got the 04th place with an arithmetic mean of 4.20 and a standard deviation equal to 0.92, where we note that 84% of the study sample responded: "that the internet flow is very weak among students residing in the University District and therefore you find them suffering very much in the process of electronic pedagogical accompaniment".
5- Paragraph no. (05), which represents (the student does not have the internet), got the 05th place with an arithmetic average of 4.03 and a standard deviation equal to 0.89, where we note that 80.60% of the study sample responded: "that the student does not have the internet to a very large extent, which negatively affects the process of electronic pedagogical accompaniment".
6- Paragraph no. (06), which represents (the student does not have a computer at home), got the 06th place with an arithmetic average of 3.73 and a standard deviation equal to 1.05, where we see that 74.60% of the study sample responded: "Students do not have computers at home to a large extent, but a few of them own the device, and this is due to the high prices of computers in the markets, which made it difficult for students to purchase them".
7- Paragraph no. (07), which represents (the student does not have a Smartphone), got the 07th place with an arithmetic mean of 2.57 and a standard deviation equal to 1.25, where we see that 51.40% of the study sample answered that "Few students do not own a Smartphone, as the majority of them rely on it more than computers in the process of learning, communicating and chatting with others, due to the many advantages of a Smartphone and easy-to-use smart applications, as well as its price are OK and much lower than the price of a computer, which makes it its acquisition is easy and affordable for students".

6-Analysis of paragraphs after human challenges: We analyze each of the paragraphs of the dimension as follows:

Table No. (16): The respondents ' responses about the second dimension

N of Item	Frequency	very large	large	medium	small	very small	Mean	STD	Percent	Direction	Item Rank
12	ni	11	07	05	05	02	3.67	1.32	73.40	large	05
	Fi%	36.70	23.30	16.70	16.70	6.70					
13	ni	05	14	08	00	03	3.60	1.10	72	large	07
	Fi%	16.70	46.70	26.70	00	10					
14	ni	11	11	04	02	02	3.90	1.18	78	large	03
	Fi%	36.70	36.70	13.30	6.70	6.70					
15	ni	14	15	01	00	00	4.43	0.57	88.60	very large	01
	Fi%	46.70	50	3.30	00	00					
16	ni	08	09	12	01	00	3.80	0.89	76	large	04
	Fi%	26.70	30	40	3.30	00					
17	ni	11	15	04	00	00	4.23	0.68	84.60	very large	02
	Fi%	36.70	50	13.30	00	00					
18	ni	04	12	13	01	00	3.63	0.76	72.60	large	06
	Fi%	13.30	40	43.30	3.30	00					
The axis as a whole							**3.90**	**0.62**	**78**	**large**	/

Qualitative analysis:

1- Paragraph No. (15), which represents (the student's non-commitment to attend e-escort classes), got the 01st place with an arithmetic average of 4.43 and a standard deviation equal to 0.57, where we note that 88.60% of the study sample responded: “the student does not commit to attend e-escort classes to a very large extent because they have not yet understood the remote escort method”.
2- Paragraph No. (17), which represents the (lack of experience for accompanying professors about this modern style of accompaniment) got the 02nd place with an arithmetic average of 4.23 and a standard deviation equal to 0.68, where we note that 84.60% of the study sample responded: “the professors accompanying first-year students are a common stem suffer from a lack of experience very much about this modern style of accompaniment considering that they are applying it for the first time”.
3- Paragraph No. (14), which represents (the student does not respond to the professor in the electronic escort class), obtained the 03rd place with an arithmetic average of 3.90 and a standard deviation equal to 1.18, where we note that 78% of the study sample responded that the student does not respond significantly to the professor in the electronic escort class, due to the lack of experience among students in how to deal with the escort in its electronic part.
4- Paragraph No. (16), which represents (the absence of training courses for accompanying professors on the electronic accompaniment process) obtained the 04th place with an arithmetic average of 3.80 and a standard deviation equal to 0.89, where we note that 76% of the study sample have answered that the accompanying professors suffer greatly from the absence of training courses on the electronic accompaniment process and how it works.
5- Paragraph No. (12), which represents (the student's non-acceptance of the idea of electronic accompaniment), obtained the 05th place with an arithmetic average of 3.67 and a standard deviation equal to 1.32, where we see that 73.40% of the study sample responded that the students did not accept the idea of electronic accompaniment to a great extent, and that they prefer the traditional

accompaniment, which is conducted directly between the accompanying professor and the students accompanying him.

6- Paragraph No. (18), which represents (professors ' lack of control over technology well), got the 06th place with an arithmetic average of 3.63 and a standard deviation equal to 0.76, where we see that 72.60% of the study sample responded that professors do not control technology to a large extent, and this is due to lack of experience in dealing with digitization and the process of distance education.

7- Paragraph No. (13), which represents (the student's lack of control over technological means (smartphone, computer)), obtained the 07th place with an arithmetic mean of 3.60 and a standard deviation equal to 1.10, where we see that 72% of the study sample answered that the student does not have much control over technological means (smartphone, computer) and does not make the best use of them in the digital educational aspect, either in the process of research, distance education or electronic pedagogical accompaniment.

7-analyzing paragraphs after administrative challenges: we analyze each paragraph of the dimension as follows:

Table No. (17): shows the respondents ' responses about the third dimension

N of Item	Frequency	very large	large	medium	small	very small	Mean	STD	Percent	direction	Item Rank
19	ni	12	09	02	05	02	3.80	1.32	76	large	03
	Fi%	40	30	6.70	16.70	6.70					
20	ni	12	13	03	00	02	4.10	1.06	82	large	02
	Fi%	40	43.30	10	00	6.70					
21	ni	07	09	12	00	02	3.63	1.07	72.60	large	04
	Fi%	23.30	30	40	00	6.70					
22	ni	16	14	00	00	00	4.53	0.51	90.60	very large	01
	Fi%	53.30	46.70	00	00	00					
23	ni	03	08	11	00	08	2.93	1.34	58.60	medium	07
	Fi%	10	26.70	36.70	00	26.70					
24	ni	03	06	07	07	07	3.30	1.32	66	medium	05
	Fi%	10	20	23.30	23.30	23.30					
25	ni	03	05	11	09	02	2.93	1.08	58.60	medium	06
	Fi%	10	16.70	36.70	30	6.70					
The axis as a whole							**3.60**	**0.78**	**72**	**large**	/

Qualitative analysis:

1- Paragraph No. (22), which represents (the administration does not provide an internet hall to be exploited in electronic accompaniment), got the 01st place with an arithmetic mean of 4.53 and a standard deviation equal to 0.51, where we see that 90.60% of the study sample responded that the administration does not provide an internet hall to be exploited in electronic accompaniment.

2- Paragraph no. (20), which represents (the lack of material and moral incentives for the accompanying Professor) obtained the 02nd place with an arithmetic average of 4.10 and a standard deviation equal to 1.06, where we see that 82% of the study sample responded that there were no significant material and moral incentives for the accompanying professor that would contribute to pushing the remote accompaniment process forward, and make the professor strive and exert more effort in its implementation.

3- Paragraph No. (19), which represents (poor planning by the administration for the electronic escort process), got the 03rd place with an arithmetic mean of 3.80 and a standard deviation equal to 1.32, where we see that 76% of the study sample members answered that the administration does not plan to a large extent for the electronic escort process.

4- Paragraph No. (21), which represent the absence of administrative motivation to apply electronic accompaniment, obtained the 04th place with an arithmetic average of 3.63 and a standard deviation equal to 1.07, where we see that 72.60% of the study sample responded that there is a significant absence of administrative motivation to apply electronic accompaniment.

5- Paragraph no. (24), which represents (the administration provides facilities and assistance to the accompanying Professor) obtained the 05th place with an arithmetic average of 3.30 and a standard deviation equal to 1.32, where we see that 66% of the study sample responded that the administration provides an average degree of facilities and assistance to the accompanying professor as much as he needs in the electronic accompaniment process.

6- Paragraph No. (25), which represents (when you inform the administration of students 'concerns, the latter does not respond to it), got the 06th place with an arithmetic average of 2.93 and a standard deviation equal to 1.08, where we see that 58.60% of the study sample members answered that when they inform the administration of students' concerns, the latter responds to it with an average degree, according to what is available to it and within the limits of its powers and capabilities.

7- Paragraph No. (23), which represents (the escort classes programmed by the administration do not fit the professor's schedule), got the 07th place with an arithmetic average of 2.93 and a standard deviation equal to 1.34, where we see that 58.60% of the study sample responded that the escort classes programmed by

the administration do not fit the professor's schedule at times, as many times the professor is not consulted and took his opinion at the appropriate time for him and his students who accompany them.

14 - Testing the hypothesis of the study:

14.1. Testing the first hypothesis:

Zerohypotheses (H0): the challenges to the application of electronic pedagogical accompaniment do not take a standard ordinal form.

Alternative hypothesis (H1): the challenges to the application of electronic pedagogical accompaniment take a standard ordinal form.

Table number (18) shows how to test the first hypothesis

Challenges	Mean of the dimension	Standard deviationof the dimension	Hypothetical average	Percent	Degree	Rank
Technical	4.01	0.51	03	% 80.20	large	01
Humanity	3.90	0.62	03	% 78	large	02
Administrative	3.60	0.79	03	% 72	large	03

We note that the challenges facing the application of electronic pedagogical accompaniment take a standard ordinal form, and this order is as follows:

Technical challenges came in first place, with the highest percentage compared to the rest of the challenges, and were largely achieved by 80.20%, with an arithmetic mean of 4.01 and a standard deviation of 0.51; Human challenges came in second place, where they were largely achieved by 78%, with an arithmetic mean of 3.90 and a standard deviation of 0.62; Administrative challenges came in third place, where they were largely achieved by 72%, with an arithmetic mean of 3.60 and a standard deviation of 0.79.

14.2. Testing the second hypothesis:

Zero hypotheses (H0): There are no significant differences in the challenges of electronic accompaniment due to the following variables: gender, academic rank, professional experience, student specialization at a significant level of 0.05

Alternative hypothesis (H1): There are significant differences in the challenges of electronic accompaniment due to the variables: gender, academic rank, professional experience, student's specialization at a significant level of 0.05

The statistical method used in hypothesis testing is the four Way ANOVA four-way variance analysis test

Table No. (19) Shows how to test the second hypothesis

Tests of Between-Subjects Effects						
DependentVariable:Measure_conflicts						
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Corrected Model	6,080[a]	14	,434	5,909	,001	,847
Intercept	352,243	1	352,243	4792,775	,000	,997
Gender	,035	1	,035	,479	,500	,031
Scientific rank	,508	3	,169	2,304	,118	,315
Professional experience	,004	2	,002	,024	,976	,003
Companystudents	,409	1	,409	5,569	,138	,271
Gender * rankscientific	,670	1	,670	9,113	,009	,378
Gender * experienceprofessional	,000	0	.	.	.	,000
Gender * companionstudents	,000	0	.	.	.	,000
Rank_scientific * experience_professional	,456	2	,228	3,099	,075	,292
rankscientific* accompanyingstudents	,000	0	.	.	.	,000
Experience_professional * company_student	,000	0	.	.	.	,000
Gender * rank_scientific * experience_professional	,000	0	.	.	.	,000
Gender * rank_scientific * companion_students	,000	0	.	.	.	,000
Gender * * experienceprofessional companionstudents	,000	0	.	.	.	,000

Rank_scientific * experience_professional * company_student	,000	0	.	.	.	,000
Gender * rank_scientific * experience_professional * companion_students	,000	0	.	.	.	,000
Error	1,102	15	,073			
Total	448,746	30				
Corrected Total	7,182	29				
a. R Squared = ,847 (Adjusted R Squared = ,703)						

From the table, we note that the value of the significance (Sig) for the ANOVA test for the independent variables (gender, academic rank, professional experience, accompanying students) is greater than the significance level of α= 0.05, so we accept the null hypothesis and reject the alternative hypothesis, thus, we conclude that there are no statistically significant differences in the challenges of electronic accompaniment attributable to the variables: gender, academic rank, professional experience, accompanying students.

15-Study results and discussion:

15-1- The result of the first hypothesis:

By testing this hypothesis, it became clear that the challenges facing the implementation of electronic educational accompaniment take a standard ordinal form, where the technical challenges came first and to a large extent, which is the weakness of the Internet network, as well as the lack of an Internet hall at the university for students to use in the process of electronic accompaniment, in second place came the human challenges, which are represented by the absence of material and moral motivation from the administration, as well as the absence of coordination between the administration and the accompanying professor.

15-2- The result of the second hypothesis:

By testing this hypothesis, we found that there are statistically significant differences in the challenges of electronic accompaniment due to the following variables: Gender, scientific rank, professional experience, specialization of students, as the challenges, difficulties and obstacles facing the professors accompanying the first-year students are the same without differences and differences in gender, whether they are male or female, or according to the scientific rank of the accompanying professor, followed by his professional experience, or according to the specialization of the students accompanying them, as the Electronic it has already been mentioned in the first hypothesis.

16-Solutions and recommendations:

Through our diagnosis of the problems, difficulties and challenges that stand in front of the application of the electronic pedagogical accompaniment process in its correct and correct form, we recommend the following:

1- The necessity of providing internet halls within universities to help students use the internet if it is not available.
2- Programming training courses for accompanying professors on digitization and the use of modern communication technologies.
3- Improving internet speed in universities and university residences, especially since these suffer from weak internet access due to their distance from cities and the city center.
4- Linking e-accompaniment to introductory attendance sessions between professors and accompanying students, to eliminate the problems of e-accompaniment in terms of attendance.
5- Contracting with the Ministry of Communications to provide internet access, facilitate subscriptions, and reduce subscription prices to make them more affordable for students.
6- The accompanying classes must be flexible and not fixed, to allow the teacher and the accompanying person to change them when necessary.

17-conclusion:

The electronic pedagogical accompaniment process represents a novel approach recently introduced in Algerian universities during the 2023/2024 academic year. Historically, academic support relied on traditional methods, where professors met students in designated supervision halls for weekly sessions, where these sessions aimed to address student inquiries, resolve concerns, and relay issues to administrative authorities, however, the transition to electronic accompaniment-—mandated by evolving educational demands and the need to adapt to modern university climates—has encountered significant challenges, obstacles, and practical difficulties in its implementation.

This shift marks a pioneering effort in Algerian higher education, necessitating a reevaluation of entrenched practices. Key challenges include institutional resistance to technological adoption, gaps in digital infrastructure, and the need for training stakeholders in virtual mentorship tools, to ensure the effective

integration of electronic pedagogical accompaniment, these barriers must be systematically analyzed and addressed through targeted solutions, where the process can achieve its intended objectives of streamlining academic support and fostering a more responsive educational environment.

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