

## The Impact of Change in Time and Space on Students' Mental Health amidst the Covid-19 Quarantine

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**Abstract.** Given the increased number of investigations on students' mental health generally and during the Covid-19 quarantine specifically, it is imperative for educators and teachers to understand how best to provide the most suitable learning environment to foster students' performance. The problem addressed in the present study is the impact of change in the physical learning environment, mainly time and space, on students' mental health, and the extent to which it may be detrimental for students' learning outcome.

The study implored a quantitative approach in assessing this impact, 129 students from the department of English at Teachers' Higher College-ENS Laghouat have been sampled. After analysing the obtained data using SPSS 26.

The results of the study proved the presence of a significant impact of the physical learning environment on students' mental health. On the basis of the results, some pedagogical recommendations are suggested to raise teachers' awareness of the impact the learning atmosphere on students' performance.

**Keywords.** EFL Students, Learning Environment, Mental Health, Space, Time.

**المخلص.** نظراً للدراسات المعقدة والمتزايدة حول الصحة النفسية للطلاب بشكل عام وحول صحتهم النفسية أثناء الحجر الصحي لفيروس Covid-19 على وجه التحديد، فإنه من الضروري للمدرسين فهم أفضل السبل لتوفير بيئة تعليمية مناسبة وذلك لتعزيز أداء الطلاب. ان المشكلة التي تناولتها هذه الدراسة هي تأثير التغيير في البيئة المادية للتعليم، وخاصة الزمان والمكان، على الصحة النفسية للطلاب، ومدى تأثير ذلك على نتائج التعلم. اتبعت الدراسة نهجا كميا في تقييم هذا التأثير، حيث أخذت عينة مكونة من 129 طالباً من قسم اللغة الإنجليزية بالمدرسة العليا للأساتذة بالأغواط. وبعد تحليل البيانات باستخدام برنامج SPSS 26.

أثبتت نتائج الدراسة وجود تأثير لبيئة التعلم المادية على الصحة النفسية للطلاب. ومنه تم اقتراح بعض التوصيات التربوية لزيادة وعي المدرسين بتأثير بيئة التعلم على أداء الطلاب. **الكلمات المفتاحية.** زمان، مكان، صحة نفسية، طلاب اللغة الإنجليزية كلغة أجنبية، بيئة التعلم.

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## Introduction

Since the last century, teachers' roles have dramatically changed. As the planet witnessed rapid cultural and social changes, astounding advances in the field of communication and information technologies, leading to the internet introduction into schools. These factors had a crucial role in forging the teaching and functioning cultures of schools and started to change educators' perspective on the learning environment. This revolution has affected researchers and educators the world over, giving rise to an imperative need for this new generation of commodities to cope with enhancement 21<sup>st</sup> century teaching and learning needs.

This paper presents the conclusions of a study that explored the effects of changing some aspects of the learning environment on students' mental health amidst the Covid-19 quarantine. This quantitative study is designed to contribute to the quality of education and to raise educators' consciousness about the importance of the learning environment and its impact on students' psychology. In this regard, the conceptual framework of the present research consists of the definition of time and space, as parts of the learning environment, while the second part deals with the analysis of students' mental health through a questionnaire.

### 1. Background and Purpose of the Study

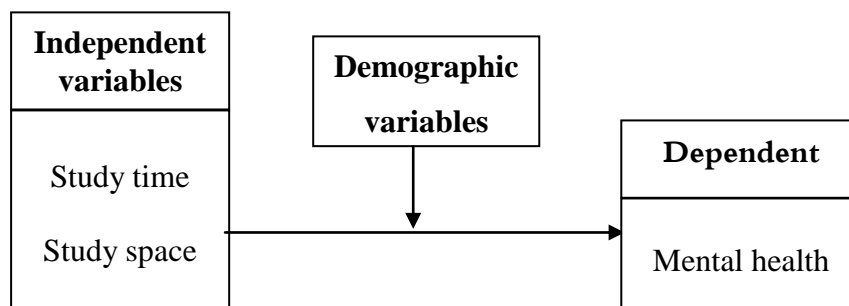
According to Che Ahmed and Amirul (2017) many studies have proved that the learning environment can impact learning outcomes as well as students' development. Research has revealed as well the existence of a tight relationship between the learning environment and students in terms of achievement, satisfaction, comfort, health and enjoyment. Moreover, the learning environment can impact students' behaviour and social interaction. Hence, the learning environment should be carefully selected to enable students to learn, collect information, gain experience and assess their learning.

In this regard, with the increasing use of information and communication technologies in teaching, it seemed obviously beneficial and easy to shift from the traditional environment of teaching and learning to the fashionable e-learning style. The current research was purported to assess the impact of changing the learning environment, namely time and space, on students' mental health during the Covid-19 confinement period, aiming to unveil whether this impact is significant at the 0.05 level.

#### 1.1. Research Model

The variables are divided into two types as shown in figure (01).

**figure (01): Research Model**



**Source: Research' Statement of the Problem.**

- a- The independent variable: the learning environment which encompasses both educational time and educational space which impact the dependent variable.
- b- The dependent variable: students' mental health.

### **1.2. Research Questions and Hypotheses**

The present study urges one to ask many questions among which one would mention the following.

- ✓ Is there a significant impact of change in the learning environment on students' mental health?
- ✓ Is there a significant impact of change in time on students' mental health?
- ✓ Is there a significant impact of change in space on students' mental health?

In fact, from the sample of the study and as an answer to the above raised question, four main hypotheses and other secondary hypotheses could be put forward:

#### **First Main Hypothesis:**

- 1- There is a statistically significant impact of change in the learning environment on students' mental health at the 0.05 level.

From this hypothesis, two sub-hypotheses emerge:

- 1.1- There is a statistically significant impact of change in the study time on students' mental health at the 0.05 level.
- 1.2- There is a statistically significant impact of change in the study space on students' mental health at the 0.05 level.

#### **Second Main Hypothesis:**

- 2- There are significant differences among students' mental health related to the variable of gender at the 0.05 level.

#### **Third Main Hypothesis:**

- 3- There are significant differences among students' mental health related to the variable of age at the 0.05 level.

#### **Forth Main Hypothesis:**

- 4- There are significant differences among students' mental health related to the variable of the educational level at the 0.05 level.

### **1.3. Review of Literature**

#### **1.3.1 Physical Learning Environment**

Physical environment does not actually have a one and precise definition, as it can bear multiple meanings, such as a sense of place in time and space, as in Tuan (1979), a single aspect like the classroom climate or seating or other similar basic aspects.

Tuan (1979) has narrowed down the definition of the concept of physical environment in three ways; the first way suggests that it is only physical without any inclusion of social climate or other non-physical aspects like discourse. The second stratification consists in the exclusion of situations in which physical environment is only equal to learning material and manipulatives, still, without excluding situations where the physical environment acts or functions as learning material. The third way is about concentrating on the indoor environment where the prominent part of education takes place.

Notwithstanding, the concept of "learning environment" will gain more significance since schools of the future are evolving into centres of constant learning. The term "learning environment" is nowadays largely used in educational discourse first because of the rising use

of information technologies for educational purposes and second, because of the prominent constructivist approach to knowledge and learning (Mononen-Aaltonen, 1998).

#### a. Educational Time

In order to succeed in understanding the research on the impact of time on the teaching and learning process, the familiarity with the various types of educational time with which researchers are dealing is necessary. Cotton (1989) provides multiple definitions of educational time through different scholars' perspectives, notably Anderson, Bloom, and Fisher:

**Allocated Time** which refers to the amount of time devoted to an activity or event. Whenever educators or scholars mention "allocated time" they are actually alluding to one of the following elements:

**School Time:** the period of time spent in school. Here, it may mean the number of school days in a year, or the number of hours in a school day.

**Classroom Time:** the period of time spent inside the classroom in the school (excluding recess, time of changing classes, etc).

**Instructional Time:** the period of time spent by the teacher delivering knowledge, skills and concepts concerning school subjects (excluding discipline, routine matters, etc).

**Time-on-task or engaged time:** referring to the period of time during which students concentrate on the learning task trying to learn (excluding time spent in socialising, daydreaming, etc).

**Academic Learning Time (ALT)** this term issued from the Beginning Teacher Evaluation Study (BTES) a considerable research conducted in the seventies. ALT is the period of engaged time that students spend doing activities of a level of difficulty suitable to their level, experiencing high levels of success (excluding time spent in tasks that are either too easy or too difficult).

**Dead Time:** consist of the periods of time in the classroom during which students are doing nothing, in other words, time that the teacher has actually failed to manage.

It is of a particular importance to mention that the above definitions do not only represent the different periods of time or the time spent in various environments. However, they refer to the multiple perspectives of time conception and expenditure.

Anderson, in Cotton, (1989) has dealt with these conceptually different meanings. Arguing that:

Allocated time "tells you something about values" meaning that, the values of a particular region, school, or teacher are inferred in the periods of time devoted to different activities.

Instructional time "tells you something about classroom organisation and management". That is, the time devoted and spent in teaching portrays the teacher's capacity to organise instructional tasks and abbreviate or accelerate noninstructional ones like discipline.

Dead time units allow as well inferences about teacher's abilities of organising and managing skills.

Time-on-task, on the other hand, "tells you something about teaching", in other words, it represents the teacher's capacity to select learning activities and tasks that enable students to keep concentrating.

Berliner (1990) suggests that: “Some scientists and educational scholars find the concept of instructional time to be intellectually unexciting, so commonsensical, and of such obvious importance that it only leads to trivial understandings and to findings that have the status of truisms (e.g., students who spend more time studying learn more)...”

Accordingly, Anderson argues that academic learning time “tells you something about learning”, as it consists of situations where the link between students and learning material is well-made and the process of learning occurs in a typical manner.

### **b. Educational Space**

The Organisation for Economic Co-operation and Development (2006) provides the following definition for “educational spaces”:

“a physical space that supports multiple and diverse teaching and learning programmes and pedagogies, including current technologies; one that demonstrates optimal, cost-effective building performance and operation over time; one that respects and is in harmony with the environment; and one that encourages social participation, providing a healthy, comfortable, safe, secure and stimulating setting for its occupants”.

On the other hand, the common perspective of a physical learning environment suggests the atmosphere of a conventional classroom, or, in a broader sense, it may consist of a mixture between formal and informal systems of education where learning occurs both inside and outside of schools.

Multiple studies on students’ academic achievement in relation to the physical environment imply that the quality of the physical environment has a huge impact on students’ achievement. Earthman (2004:18), suggests “there is sufficient research to state without equivocation that the building in which students spend a good deal of their time learning does in fact influence how well they learn”.

In a similar vein, it is important to highlight the fact that students need some desirable designs that include friendly and agreeable entryways, well-organised private places for students, as well as some public spaces to reinforce the sense of community, with a special attention to the colour used (Fisher, 2000, as cited in McGregor,2004). Bunting similarly argues that today’s schools must create spaces that students would like to go to, the same way as cafes attract people, instead of a space which is purely functional (Bunting, 2004).

### **1.3.2. Students Mental Health**

The world Health Organisation defines “mental health” as: “a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community”.

The WHO highlights the fact that mental health is “more than just the absence of mental disorders or disabilities”. It also suggests that peak mental health concerns more than just avoiding active conditions, it is rather about the continuous maintaining of wellness and happiness. Moreover, they stress the crucial need to preserve and restore mental health on both, an individual basis, and through different societies and communities all over the world. According to the Suicide Prevention Resource Centre, problems of mental health may affect various aspects of students’ performance like students’ energy level, concentration, dependability, mental ability, and optimism. Research has shown as well that depression and anxiety strongly impact lower grade point averages dropping out of school.

In addition to that, many college students have argued that problems concerning mental health hinder their studies. According to the American College Health Association 2015 survey, students labelled the following mental health issues that were impacting their academic performance negatively within 12 months:

- Stress
- Anxiety
- Sleep difficulties
- Depression

In the present study, six items of the questionnaire were related to stress, anxiety, sleep difficulties and depression, to assess the impact of the learning environment change on students' mental health and performance.

## **2. Method and Tools**

### **2.1. Research Design**

In the empirical part of this study, a quantitative approach was employed using a survey method through an electronic questionnaire to ENSL students of English.

### **2.2 Population and Sampling Procedures**

The target population of the study consisted of university students in general, from different ages, levels and nationalities. However, the sample included 129 students of English at Teachers' Higher College -ENS Laghouat. From all the five levels, aging from 17 to 27, including 19 male students and 110 female ones.

### **2.3 Data Collection and Research Instruments**

The data collection started from 11/08/2020 to 01/10/2020. The whole data collection period lasted for two months. The questionnaire link was posted on different Facebook pages and sent through emails to students. The questionnaire consisted of four axes; the first axis concerning personal information included three items, the second regarding educational time included nine items, the third axis, related to educational space included five items and the fourth axis which was devoted to the psychological state of the students included nine items. Likert's five degrees scale (Malhotra, 2004) was used to assess the participants' answers. So, a number was given to each degree of the scale in order to facilitate the statistical analysis process. It goes as follows: strongly agree (5), agree (4), neutral (3), disagree (2), strongly disagree (1).

### **2.4 Data Analysis Methods**

SPSS 26 program was used to statistically analyse the data and test the hypotheses; it included the following statistical methods:

- Cronbach's Alpha coefficient in order to test the reliability of the tool of the study.
- Frequencies and percentages in order to display the sample's characteristics.
- Arithmetic average and standard deviation to determine the directions of the participants' answers.
- The model of multiple linear regression to test the first main hypothesis and its sub-hypotheses.
- Independent sample t-test to test the second main hypothesis.
- One-Way ANOVA to test the third and fourth hypotheses.

### 3. Results of the Study

#### 3.1 Testing the Questionnaire's Reliability

In order to assert the reliability of the study tool (the questionnaire), the value of Cronbach's alpha coefficient has been calculated using SPSS program, the following results were obtained:

**Table (01): Cronbach's Alpha**

| Reliability Statistics |            |
|------------------------|------------|
| Cronbach's Alpha       | N of Items |
| ,915                   | 23         |

**Source: SPSS 26 output.**

It is noticed from the table above that Cronbach's Alpha coefficient equals ( $\alpha=0.915$ ). Therefore, it can be said that the study tool was very reliable and totally credible which means that the questionnaire can constitute a tool for the measurement of the variables being studied. Hence, the results of the questionnaire can be generalized to all the population being studied.

#### 3.2 Sample's Characteristics

In order to determine the characteristics of the sample of the study, the data of the first axis were represented defining the characteristics of the study sample using SPSS 26 program, as shown in table (02):

**Table (02): Sample's Characteristics**

| Variable | The variable categories     | Frequency | Percentage |
|----------|-----------------------------|-----------|------------|
| Gender   | Male                        | 19        | 14,7 %     |
|          | Female                      | 110       | 85,3 %     |
|          | Total                       | 129       | 100 %      |
| Age      | Below 20                    | 40        | 31,0 %     |
|          | 20 – 22                     | 56        | 43,4 %     |
|          | Above 22                    | 33        | 25,6 %     |
|          | Total                       | 129       | 100 %      |
| Level    | 1 <sup>st</sup> year degree | 28        | 21,7 %     |
|          | 2 <sup>nd</sup> year degree | 26        | 20,2 %     |
|          | 3 <sup>rd</sup> year degree | 21        | 16,3 %     |
|          | 4 <sup>th</sup> year degree | 39        | 30,2 %     |
|          | 5 <sup>th</sup> year degree | 15        | 11,6 %     |
|          | <b>Total</b>                | 129       | 100 %      |

**Source: SPSS 26 output.**

**a- Gender:** the above table shows that the number of males in the study sample is 19 out of 129 which represents 14,7 %, while the number of females is 110 out of 129 which represents 85,3 %, these are almost the same percentages in the population of the study. Meaning that the sample is in accordance with the population.

**b- Age:** the above table clarifies that the dominant category in the sample is the category (20-22 years) 56 out of 129 which represents 43,4 % while the least represented group is the

one (Above 22 years) 33 out of 129 which represents 25,6 %. This prevalence of the younger category is due to the fact that beginner students are more motivated to answer questionnaires and give their opinions than the graduating one.

- c- Level:** the above table shows that the dominant category in the sample is the category of the 4<sup>th</sup> year degree, 39 out of 129 which represents 30,2 %, while the least represented category in the sample is the one of 5<sup>th</sup> year level or 15 out of 129 which represents 11,6 % and this reflects their attention to the subjects that may help them in their future research.

### 3.3 Display of the Study Output

The study results are displayed through the tables containing the directions of the items constituting the questionnaire.

#### 3.3.1 The Direction of the Items of the Second Axis (Educational Time):

**Table (03): The Direction of the Items of the Second Axis "Educational Time"**

| Number                                      | Items   | Mean        | Std. Deviation | Direction       |
|---|---|-------------|----------------|-----------------|
| 01  | During the confinement period, I planned and devoted enough time to study each subject.   | 2,62        | 0,962          | Neutral         |
| 02  | During the confinement period, I used to study at a set time.   | 2,50        | 0,985          | Disagree        |
| 03  | During the confinement period, I established habits of study: I knew exactly what and when I was going to study in order to save time.  | 2,79        | 1,102          | Neutral         |
| 04  | During the confinement period, I used generalisations in my schedule, for example "I study Civilisation at certain regular hours" or "I plan to complete a specific task" or "read and take notes on a specific chapter". | 2,78        | 1,023          | Neutral         |
| 05  | During the confinement period, I used to treat my study time as I would in class. I never missed it unless I was sick or had a family emergency.  | 2,01        | 1,072          | Disagree        |
| 06  | During the confinement period, Studying has been a permanent part of my daily routine.  | 2,44        | 0,909          | Disagree        |
| 07  | During the confinement period, I succeeded in managing how to space out my study periods and take appropriate breaks.   | 2,55        | 1,060          | Disagree        |
| 08  | During the confinement period, I used to schedule some time to do a cumulative review of the work for each course.  | 2,44        | 0,951          | Disagree        |
| 09  | During the confinement period, I used to leave some unscheduled time for flexibility.   | 3,05        | 1,106          | Neutral         |
| <b>The average of the second axis items</b> |   | <b>2,58</b> | <b>0,735</b>   | <b>Disagree</b> |

**Source: SPSS 26 output.**

It is clearly shown from the above table that there is a general disagreement concerning educational time (2,58). The less agreed upon item was the fifth (2,01) and the more agreed upon item was the ninth (3,05) which conveys the significance of the two items, meaning



that, most students agreed on the fact that they used to leave much of the time unscheduled (dead time). Accordingly, most of them also agreed that they would actually miss the planned study time for any reason. Hence, both items portray that students did not actually succeed in managing their time properly to maximize the benefits of this period.

It is also noticed that the ninth item is the less homogenous in their excluded answers with the standard deviation (1,106), while the item the more homogenous is the sixth with the standard deviation (0,909)

### 3.3.2 The Direction of the Items of the Third Axis (Educational Space):

**Table (04): The Direction of the Third Axis Items “Educational Space”**

| Number                                     | Items  | Mean        | Std. Deviation | Direction      |
|--|--|-------------|----------------|----------------|
| 10   | During the confinement period, I used to study in a consistent place (always the same, well-organised and suitable for studying).  | 2,95        | 1,258          | Neutral        |
| 11   | During the confinement period, I realised that the learning space has an impact on my mood while learning.   | 4,05        | 0,946          | Agree          |
| 12   | During the confinement period, I realised that even if “home” is full of distractions, they did not influence my study habits.   | 2,40        | 1,241          | Disagree       |
| 13   | During the confinement period, I could manage to get the same classroom atmosphere of discussion, collaboration and sharing ideas with mates through social networks.  | 2,41        | 1,279          | Disagree       |
| 14   | The confinement period, made students realise that “home” just like the classroom is not actually a limiting space but rather a comfortable place where they feel free to express themselves and share opinions in addition to the excitement and motivation to learn among friends. | 2,69        | 1,391          | Neutral        |
| <b>The average of the third axis items</b> |  | <b>2,90</b> | <b>0,796</b>   | <b>Neutral</b> |

**Source: SPSS 26 output.**

It is shown in the above table that there is a general agreement concerning educational space (2,90). The less agreed upon item was the twelfth (2,40) and the more agreed upon item was the eleventh (4,05) implying the significance of the two items in that they show that most students agreed on the fact that the learning space has a crucial impact on learning. Accordingly, most of them also agreed that home distractions played a prominent role in hindering their learning. Thus, both items suggest that students were actually conscious of the huge difference between the traditional and the virtual learning space, as most of them expressed their preference of the formal traditional setting.

It is also noticed that, the fourteenth item is the less homogenous in their excluded answers with the standard deviation (1,391), while the item the more homogenous is the eleventh item with the standard deviation (0,946).

### 3.3.3 The Direction of the Items of the Fourth Axis (Mental health):

**Table (05): The Direction of the Items of the Fourth Axis "Mental health"**

| Number                                      | Items  | Mean         | Std. Deviation | Direction       |
|---|--|--------------|----------------|-----------------|
| 15  | During the confinement period, my appetite and sleeping habits did not change.   | 1,95         | 1,198          | Disagree        |
| 16  | During the confinement period, I haven't experienced feelings of sadness, being overwhelmed, hopelessness and powerlessness.   | 1,84         | 1,128          | Disagree        |
| 17  | During the confinement period, I haven't encountered trouble concentrating and paying attention.   | 2,27         | 1,191          | Disagree        |
| 18  | During the confinement period, I did not use to have difficulty in reading and completing tasks.   | 2,76         | 1,267          | Neutral         |
| 19  | During the confinement period, I was enjoying the same activities I used to love.  | 3,18         | 1,308          | Neutral         |
| 20  | During the confinement period, I haven't experienced extreme anger or sadness over a relationship in my life.  | 2,32         | 1,159          | Disagree        |
| 21  | During the confinement period, I used to react positively and with sympathy to most things.  | 2,91         | 1,086          | Neutral         |
| 22  | During the confinement period, I was not used to talk a lot about the pandemic and death.  | 2,64         | 1,357          | Neutral         |
| 23  | I think this change in learning brought by the confinement period was beneficial to students in that it encouraged them to make more research in the topics they feel the need to improve themselves in. | 3,02         | 1,431          | Neutral         |
| <b>The average of the fourth axis items</b> |  | <b>2,544</b> | <b>0,798</b>   | <b>Disagree</b> |

**Source: SPSS 26 output**

The above table shows that there is a general agreement concerning students' mental health (2,55). The less agreed upon item was the sixteenth (1,84) and the more agreed upon item was the nineteenth (3,18) meaning that most students expressed through the sixteenth item that, during the confinement period, they did actually experience feelings of sadness, hopelessness and powerlessness conveying a sense of depression.

It is also noticed that the twenty-third item is the less homogenous in their excluded answers with the standard deviation (1,431), while the item the more homogenous is the twenty-first item with the standard deviation (1,086).

### 3.4 Testing the Hypotheses

#### 3.4.1 Testing the First Main Hypothesis and its Divergent Sub-hypotheses

The research relied on the method of the simple linear regression to test the main hypothesis and on the method of multiple regression to test the sub-hypotheses.

As shown by the SPSS output in table n°06, a model was given for the relationship between the dependent variable and the independent ones, according to the following equation:

$$\hat{Y} = -0.541 + 0,426 \cdot x_1 + 0,312 \cdot x_2$$

Where:  $\hat{Y}$ : Students' mental health,  $x_1$ : time,  $x_2$ : space

**Table (06): Testing the First Main Hypothesis and its Divergent Sub-hypotheses**

| Independent variables | Dependent variable   | T     | Sig          | B     | Test results                  |
|-----------------------|----------------------|-------|--------------|-------|-------------------------------|
| Educational time      | Mental health        | 3,771 | 0,000        | 0,426 | H <sub>1</sub> approved       |
| Educational space     | Mental health        | 2,987 | 0,003        | 0,312 | H <sub>1</sub> approved       |
| <b>Mental health</b>  | <b>Mental health</b> | /     | <b>0,000</b> | /     | <b>H<sub>1</sub> approved</b> |

Source:SPSS 26 output.

#### - Testing the First Main Hypothesis:

It is shown that the Sig (P-value) is inferior to or equals  $\alpha$  (Sig = 0,000  $\leq$  0.05).

So, H<sub>0</sub> is rejected and the alternative hypothesis H<sub>1</sub> is approved. This confirms that there is a statistically significant impact of educational time and space on students' mental health at the 0.05 level.

#### - Testing the First Sub-hypothesis:

It is noticed that the calculated t (3.771) is superior to the value of the tabulated t (1.997). So, H<sub>0</sub> is rejected and the alternative hypothesis H<sub>1</sub> is approved. This confirms that the Sig (P-value) is inferior to or equals  $\alpha$ .

Or, (Sig = 0.000  $\leq$  0.05) so: there is a statistically significant impact of educational time on students' mental health at the 0.05 level.

#### - Testing the second sub-hypothesis:

It is noticed that the calculated t (3.987) is superior to the value of the tabulated t (1.997). So, H<sub>0</sub> is rejected and the alternative hypothesis H<sub>1</sub> is approved. This confirms that the Sig (P-value) is inferior to or equals  $\alpha$ .

Or, (Sig = 0.003  $\leq$  0.05) So: there is a statistically significant impact of educational space on students' mental health at the 0.05 level.

#### 3.4.2 Testing the Second Main Hypothesis:

The research relied on the method of independent samples t-test as shown in the following SPSS output:

**Table (07): Testing the Second Main Hypothesis**

| T     | Df  | Sig   | Test results            |
|-------|-----|-------|-------------------------|
| 1,603 | 127 | 0,111 | H <sub>0</sub> approved |

Source : SPSS 26 output.

In table (07) the calculated t (1.603) is inferior to the tabulated t (1.997).

So, H<sub>0</sub> is approved and this confirms that the Sig (P-value) is superior to  $\alpha$ .

Or, (Sig = 0.111  $>$  0.05).

So, there are no significant differences among students' mental health answers due to the variable of gender at the 0.05 level.

#### 3.4.3 Testing the Third Main Hypothesis

The research relied on the analysis method of One-Way ANOVA as shown in the following SPSS output:

**Table (08): Descriptive Results of the Third Main Hypothesis**

| Descriptives |     |        |                |            |                                  |             |         |         |
|--------------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| psychology   |     |        |                |            |                                  |             |         |         |
|              | N   | Mean   | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|              |     |        |                |            | Lower Bound                      | Upper Bound |         |         |
| 1            | 40  | 2,7000 | ,62358         | ,09860     | 2,5006                           | 2,8994      | 1,44    | 3,56    |
| 2            | 56  | 2,2361 | ,87105         | ,11640     | 2,0028                           | 2,4694      | 1,00    | 4,78    |
| 3            | 33  | 2,8754 | ,67800         | ,11803     | 2,6350                           | 3,1158      | 1,00    | 4,44    |
| Total        | 129 | 2,5435 | ,79801         | ,07026     | 2,4045                           | 2,6825      | 1,00    | 4,78    |

Source: SPSS 26 output

Table (08) shows that the age groups are convergent in the mental health and the group expressing the lower psyche is the second one (20-22), (arithmetic average = 2,236). Whereas the group with the higher psyche is the third one (above 22) (arithmetic average = 2,875).

Table (09): Analysis of Variance of the Third Main Hypothesis

| ANOVA          |                |     |             |       |      |
|----------------|----------------|-----|-------------|-------|------|
| psychology     |                |     |             |       |      |
|                | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups | 9,907          | 2   | 4,953       | 8,716 | ,000 |
| Within Groups  | 71,605         | 126 | ,568        |       |      |
| Total          | 81,512         | 128 |             |       |      |

Source : SPSS 26 output

Table (09) shows that the Sig (P-value) is inferior to the  $\alpha$ .

Or: (Sig = 0,000  $\leq$  0.05). So,  $H_0$  is rejected and  $H_1$  is approved.

Thus, there are significant differences among students' mental health due to the variable of age at the 0.05 level.

### 3.4.4 Testing the Fourth Main Hypothesis:

The research relied on the analysis method of One-Way ANOVA as shown in the following SPSS output:

Table (10): The Descriptive Results of the Fourth Main Hypothesis

| Descriptives |     |        |                |            |                                  |             |         |         |
|--------------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| psychology   | N   | Mean   | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|              |     |        |                |            | Lower Bound                      | Upper Bound |         |         |
| 1            | 28  | 2,7341 | ,68383         | ,12923     | 2,4690                           | 2,9993      | 1,00    | 3,56    |
| 2            | 26  | 2,1966 | ,65795         | ,12903     | 1,9308                           | 2,4623      | 1,44    | 3,56    |
| 3            | 21  | 2,1376 | ,65537         | ,14301     | 1,8392                           | 2,4359      | 1,00    | 3,00    |
| 4            | 39  | 2,6553 | ,93755         | ,15013     | 2,3514                           | 2,9592      | 1,00    | 4,78    |
| 5            | 15  | 3,0667 | ,52587         | ,13578     | 2,7754                           | 3,3579      | 2,33    | 3,67    |
| Total        | 129 | 2,5435 | ,79801         | ,07026     | 2,4045                           | 2,6825      | 1,00    | 4,78    |

Source: SPSS 26 output.

Table (10) shows that the age groups are convergent in the mental health. The lower psyche group is the third one (third year degree) with the arithmetic average = 2,137. Whereas the higher psyche group is the fifth one (fifth year degree) with the arithmetic average = 3,066.

Table (11) : Analysis of Variance of the Fourth Main Hypothesis

| ANOVA          |                |     |             |       |      |
|----------------|----------------|-----|-------------|-------|------|
| psychology     | Sum of Squares | df  | Mean Square | F     | Sig. |
| Between Groups | 12,200         | 4   | 3,050       | 5,456 | ,000 |
| Within Groups  | 69,312         | 124 | ,559        |       |      |
| Total          | 81,512         | 128 |             |       |      |

Source: SPSS 26 output.

Table (11) shows that the Sig (P-value) is inferior to the  $\alpha$ .

Or: (Sig = 0,000  $\leq$  0.05). So,  $H_0$  is rejected and  $H_1$  is approved.

Hence, there are significant differences among students' mental health due to the variable of Level at the 0.05 level.

#### 4. Discussion of the Findings

1. The results showed that the higher average of all the 23 items was the eleventh (4,05), where most students agreed that there is a significant impact of the educational space on students' mental health which will be affecting in turn their performance and academic achievement. The homogeneity of the answers emphasizes this claim with the Std = 0,946.
2. Most of the students disagreed on the sixteenth item which states that they have not experienced any feelings of sadness, hopelessness and powerlessness. Meaning that this confinement period strongly affected their mental health leading them to experience feelings of depression and anxiety which surely influences in a negative way their academic performance. This item's answers were also homogenous with the Std = 1,128 strengthening this claim.
3. Similarly, the fifteenth item suggesting that students have not experienced any change in appetite and sleeping habits, was disagreed upon, suggesting that students have

- actually experienced many changes in their lifestyles and this can be interpreted by psychologists that they were suffering from anxiety and depression.
4. Concerning the aspect of educational time, from the items 02,05,06,07,08 it can be concluded that students have not succeeded in any way to organize or manage their time in a proper and beneficial way. As they declared that studying was not a part of their daily routine, they were not as serious and punctual as they used to be at university, and they did not do any cumulative work as a way of revision.
  5. In the items 17 and 20, most students argue that, during the confinement period, they have actually experienced feelings of sadness and extreme anger over some relationships in their lives, the reason why they were not able to concentrate or pay attention to anything related to their studies.
  6. Most of the answers to the items 18 and 19, where students were asked whether they had some difficulties in reading and completing tasks or whether they used to enjoy the same activities as previously or not, were neutral. Obviously because they have already stated previously that they have not revised or studied during this period. Moreover, they did not really have the chance to try to diversify their activities because of the quarantine.
  7. There is a statistically significant impact of educational time and space on students' mental health at the 0.05 level.
  8. There are no significant differences among students' mental health answers due to the variable of gender at the 0.05 level.
  9. There are significant differences among students' mental health due to the variable of age at the 0.05 level.
  10. There are significant differences among students' mental health due to the variable of Level at the 0.05 level.

## Conclusion

This study focused on the impact of changing time and space, as major parts of the learning environment, on students' mental health amidst the Covid-19 quarantine. After studying the phenomena that are of interest to this study and analysing students' responses through the questionnaire, the results revealed that there is a significant impact of changing the learning environment on students' mental health. Moreover, most students agreed that this confinement period negatively impacted their mentality, resulting in hindrance of their academic performance and achievement.

The only limitation of this study was the number of participants involved, since only 129 students answered the questionnaire while the total number of students enrolled at the ENSL department of English is above 350.

Some recommendations may be suggested regarding the atmosphere of teaching and learning and its impact on students' mentality to enhance the academic achievement and students' results:

- Teachers and administrative staff need to take into consideration the impact of the confinement period on students' mental health.

- Educators and researchers need to highlight the importance of the formal academic setting that enhances students' performance.
- The fashionable e-learning method is certainly helpful and beneficial, especially during such periods of quarantine, but the traditional strict and formal environment remains the most efficient in the process of teaching and learning.

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