



## RESEARCH ARTICLE

# DISTANCE LEARNING PLATFORM: BENEFITS AND CONSTRAINTS

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### ABSTRACT

Since the announcement of the spread of the Coronavirus (COVID 19) in Morocco, the Ministry of National Education, Vocational Training, Higher Education and Scientific Research has decided to stop classes overall teaching cycles and the launch of Distance Education (EAD). In this context and to ensure pedagogical continuity and diversify possible alternatives, the Ministry of National Education, Vocational Training, Higher Education and Scientific Research has launched the system of distance education allowing teachers to communicate directly with their students and organize distance learning courses (Platforms, Video clips, Live, Classroom, etc.). Faced with this health crisis situation, several questions arise: Have teachers and learners been prepared and trained to face this unforeseeable situation? What are the distance learning conditions for students pursuing their studies in Morocco? In this study, we opted for a qualitative approach which consisted in collecting factual information via an online questionnaire intended for secondary school students qualifying in Morocco and on the basis of observations made with the same students. Furthermore, after analyzing the results collected, we found that the majority of students use the WhatsApp application to take distance learning courses, more than half of the students indicate that EAD can replace face-to-face classes. We also noticed on the one hand that 46.5% of the students questioned find that EAD facilitates the comprehension of the courses and on the other hand 55.6% of the students testify that it is difficult to follow a distance education. In contrast, 57.6% find that EAD does not change the way their teachers teach. Subsequently, 61.81% of students believe that EAD no longer helps improve education. In the end, we believe that distance education has more advantages than disadvantages compared to traditional education.

### INTRODUCTION

Constrained to face this pandemic context (COVID-19), the Ministry of National Education, Professional Training, Higher Education and Scientific Research has taken various measures for the sake of countering the spread of the pandemic and limit its effects. Indeed, higher education establishments have reacted by setting up various healthcare and educational systems, namely the courses which were normally given face-to-face have been substituted by distance learning since the release of the press statement from the ministry on March 16 [1]. This new method of distance learning implementing information and communication technologies (ICT) combines the advantages of face-to-face teaching and previous distance learning (flexibility of time and place) while avoiding their drawbacks (fixed time and place for the first, lack of interactions for the second). Thus, it represents a new specific field, pedagogically superior to previous face-to-face and distance learning [2].

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However, as in the past, it endures a high drop-out rate linked to various factors. In fact, this finding may seem surprising because the reinforcement of student motivation is often invoked as a justification for putting online courses that are commonly given in person. The evolution of technological instruments related to IT induces new possible uses in the field of learning and the development of new forms of teaching which open up fertile horizons in applications for a teaching structure. Therefore, the distance learning system has in general undergone both significant and constant evolution thanks to the contribution of these new technologies to the expansion of its users. Distance education, therefore, calls for the mediation of communication media tools and new pedagogical practices, in favor of the empowerment of learners' autonomy in search of learning. Moreover, the use of ICT in learning can modify the form of knowledge transmission and the appropriation of it. According to [3], "the field of educational technologies today integrates within the sciences of education the heritage of the psychology of learning and education, of pedagogy and of audiovisual, media education, instructional technology, school computing and educational software. More recently, it has extended to

integrated environments for the management of mediated learning as well as fully or partially distance learning systems. In this sense, Morocco, like all developing or Western countries, has grasped the importance of applying and integrating ICT tools in order to improve performance, quality and productivity, and also to harmonize it with the global standards, and by this to make of it a vector of development. For this, the Moroccan education system has undergone numerous reforms and upgrading programs [4].

**MATERIALS AND METHODS**

Our research is based both on a quantitative analysis of data collected via an online questionnaire as well as the observations made of students. The questionnaire was intended for secondary and vocational school students in Morocco, majoring in experimental sciences. In this study, we opted for a qualitative and quantitative approach for the sake of gathering factual information.

**Target population:** The target population is represented, on the one hand, by students (144 students) aged from 15 to 18, majoring in experimental sciences, vocational secondary cycle. The inquiry ran from the beginning to the end of April 2020. Samples are randomly selected from both public and private school classes.

**Collecting and Processing Statistical Data:** The students were subjected to a survey in the form of a questionnaire containing 15 items [5] formulated as follows:

- Items 1 to 4: reveal the gender of students, their school grade levels, and the platforms on which their distance learning takes place.
- Items 5 to 13: measure the degree of understanding and assimilating distance courses as well as the level of student interaction and their satisfaction.
- Items 14 and 15: relate to their opinions concerning the benefits and constraints of distance learning.

The developed questionnaires were validated before their administration, Table 1 sums up the questionnaire used in this research [6]. Also, observations allowed us to collect information on the non-verbal behavior of the surveyed subjects [7].

**Participative Observation:** intense interactions between the researcher and the subjects, in the latter's environment. During this period, data is systematically collected [8]. An observation Table: the table contains the level of accessibility, flexibility, visual strain, their autonomy, and mental health as well as the degree of participation and their degree of attention during distance courses [9].

**Table 1. Questionnaires used in this work with different items**

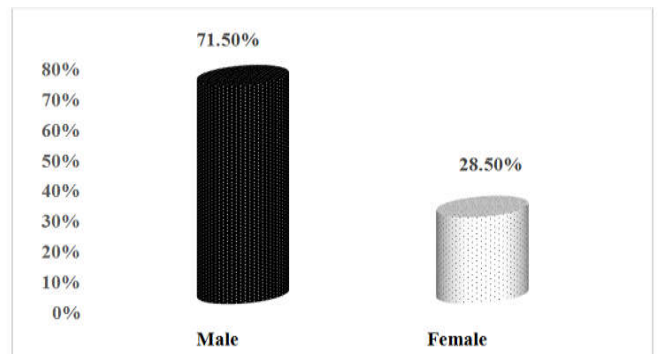
| Questionnaire  | Students                  |
|----------------|---------------------------|
| Elaborate      | Total number of items: 15 |
| Validate       |                           |
| Administrative |                           |
| Recover        | 4 General Items           |
| Exploite       | 9 Specific Items          |
| Analyze        | 2 Open Items              |

**Analysis and statistics:** The overall of the data collected during the observations and the administration of the questionnaires are processed and analyzed by the computer

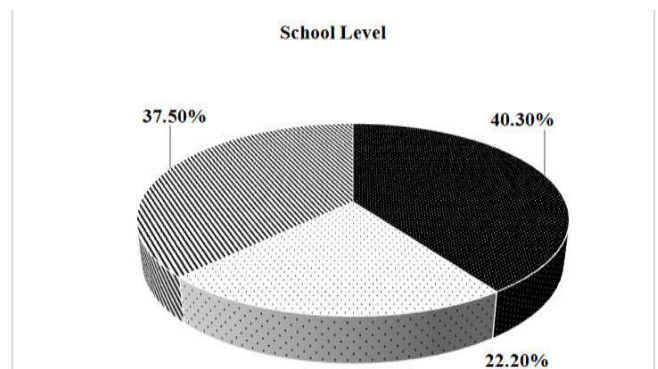
software (Excel), which is the easiest and the most known among most of the Moroccan teachers.

**RESULTS AND DISCUSSION**

**Questionnaire for Students:** On the one hand and according to the results obtained from the questionnaire shown in Table 1, we found that among the 144 students interviewed, female students are the majority with 71.5% against 28.5% of male students. On the other hand, 40.3% of the students of the second-year baccalaureate have answered our questionnaire, in contrast to 37.5% of the common core students, and finally 22.2% of the students of the first-year baccalaureate.



**Figure 1. Results obtained from the questionnaire regarding the student's gender**



**Figure 2. Results obtained from the questionnaire regarding the students' school level**

Among the means of communication used to provide distance courses during the lockdown are platforms and video conferences (Microsoft Teams, Zoom, YouTube, Facebook, and WhatsApp). The results show that 65.3% of the students mainly use WhatsApp application for distance learning followed by Zoom application with 18.8%, then YouTube application with 8.3%, Facebook with 4.9%. However, Microsoft Teams platform is very less used by students with only 2.8%. Notwithstanding, 52.8% of the surveyed students said they had known the Microsoft Teams platform compared to 47.2% who said that they had never heard of it. In addition, 46.6% of the interviewed students expressed that this platform is useful for distance education, 34.1% indicated that it is less useful for distance learning, 14.8% testified that it is not useful for teaching, in contrast to only 4.5% who testified that it remains essential for distance learning. On the other hand, and regarding the possibility of distance learning replacing classroom-based courses, we found out that more than half of students 56.9% share the same view that EAD can no longer replace face-to-face courses, 36.8% of the surveyed students said that EAD can be used instead of classroom-based courses, however, 6.3% of students find that EAD can replace face-to-face courses.

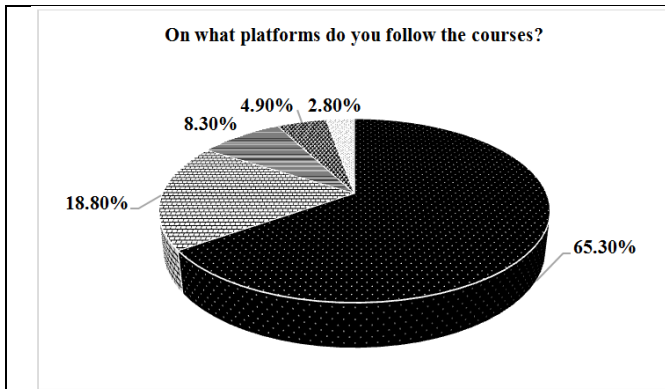


Figure 3: Results obtained from the questionnaire regarding the platform used

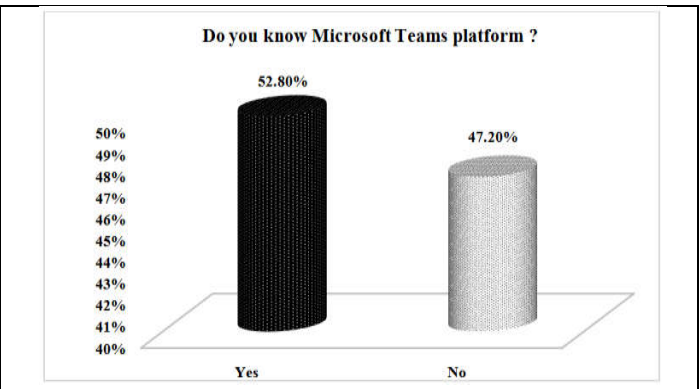


Figure 4: Results obtained from the Microsoft Teams platform knowledge questionnaire

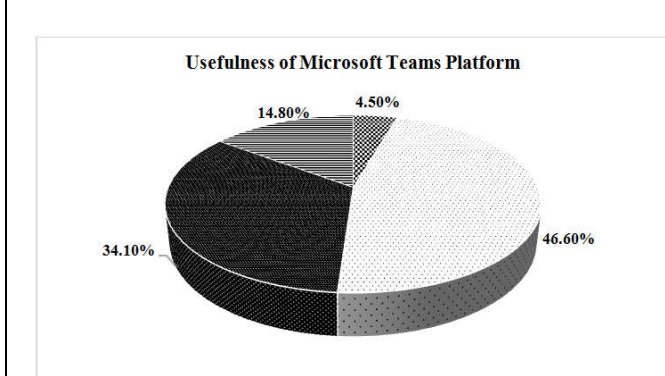


Figure 5: Results obtained from the questionnaire regarding the usefulness of Microsoft Teams platform

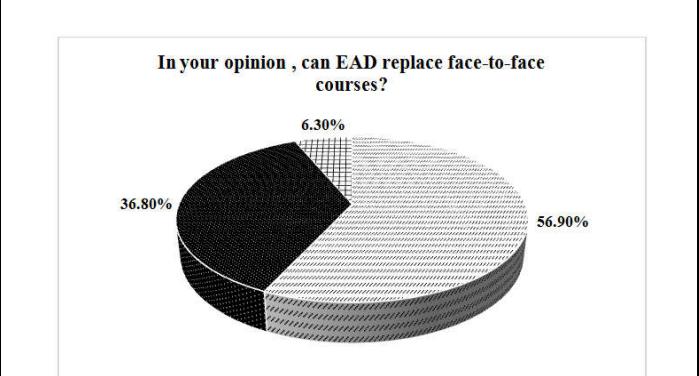


Figure 6: Results Obtained from the questionnaire regarding the possibility of replacing face-to-face courses with distance learning

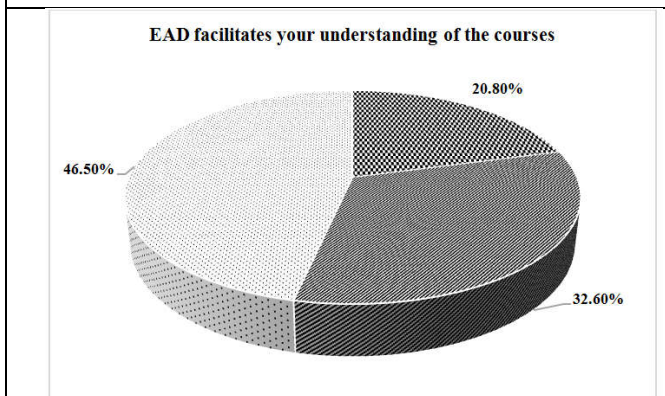


Figure 7: Results obtained from the questionnaire on the easiness degree of the EAD courses understanding

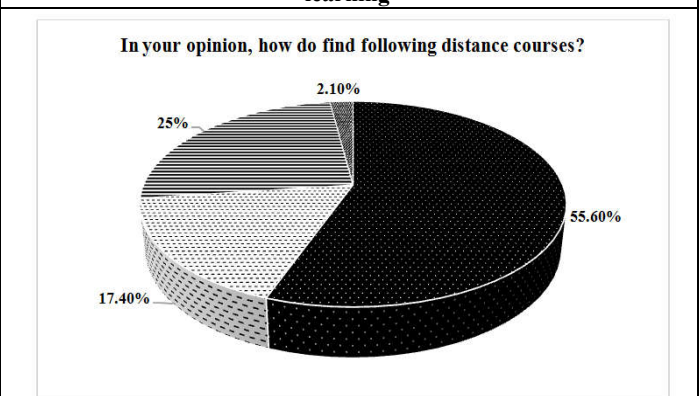


Figure 8: Results obtained from the questionnaire concerned with the degree of difficulty following distance courses

Answers related to the question: "Has EAD facilitated your understanding of the courses?" reveals that 46,5% of the students said that the EAD had fairly facilitated the assimilation process of the courses. Meanwhile, 32,6% of the students found that it doesn't facilitate the understanding of the courses, and 20,8% confirmed that EAD makes it easier to understand courses. We have to note that 55.6% of the interviewed students testified that it is difficult to follow distance learning, meanwhile 17.4% think it is very difficult. In contrast, 25% of the interviewed students indicated that taking distance courses was easy and only 2.1% said that it was very easy to take distance learning. The results of the questionnaire show that more than half of the surveyed students, 59% have slightly assimilated distance courses, 23.6% indicate having well assimilated the courses provided by the teachers in EAD meanwhile 17.4% of the interviewed students testified that they did not assimilate the courses in EAD.

In addition, 60.4% of the students find that EAD changes the way they learn in a given learning situation. On the other hand, the rest of the students think that EAD no longer changes the way they learn (rather not or not at all). Answers to the question "in your opinion, do you think EAD is changing the way your teacher teaches you?" show that 42.4% indicate that EAD has changed the way their teachers teach them, in contrast, 57.6% testify that EAD does not modify the way their teachers give them lessons (rather not or not at all). On the other hand, 47.2% and 18.1% of the students are respectively satisfied or very satisfied with the way their teachers teach them. On the other hand, 34.7% of the students think they are not satisfied with their teachers. We found out that 61.8% of the students think that EAD no longer contributes to improving learning given the presence of several constraints, namely the lack of teaching materials, computing tools besides the poor quality of the network in some regions, and the access to the

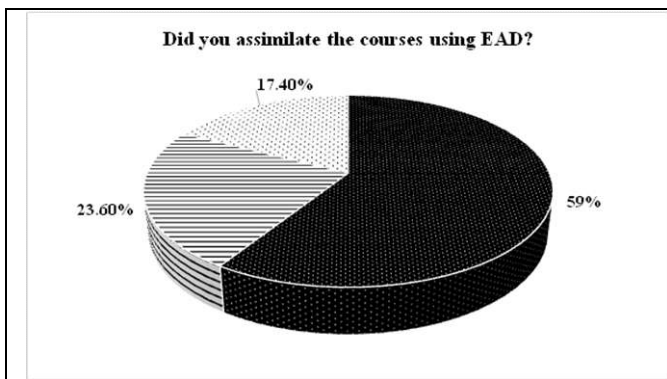


Figure 9. Results obtained from the questionnaire regarding the assimilation of courses using the EAD

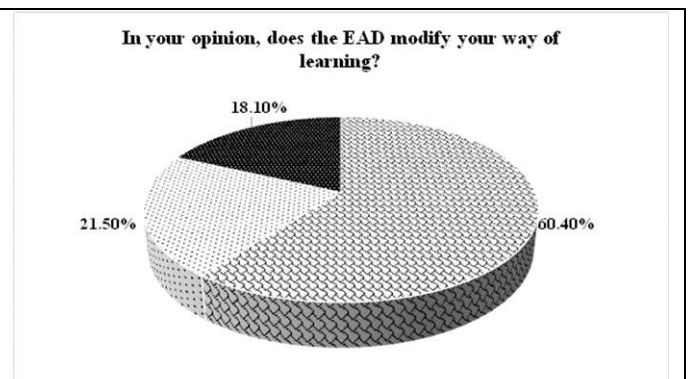


Figure 10. Results obtained from the questionnaire regarding the possibility that EAD could modify the way of learning among students

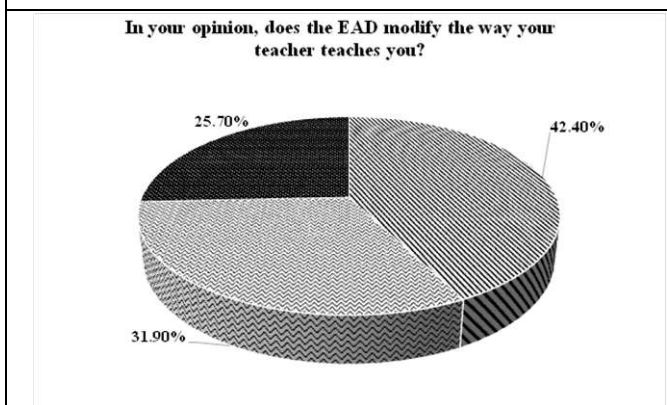


Figure 11. Results obtained from the questionnaire regarding the modification of the mode of teaching by EAD

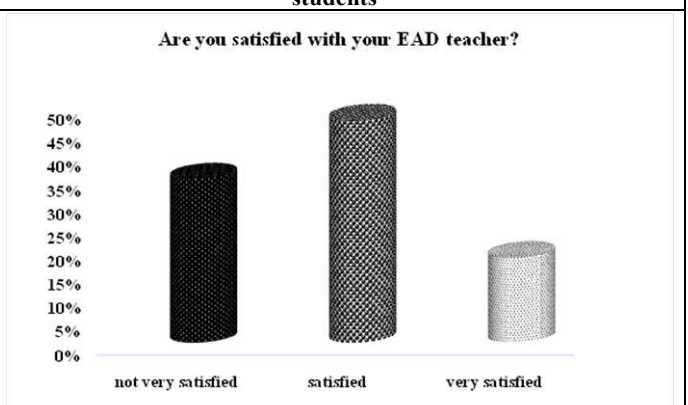


Figure 12. Results obtained from the questionnaire concerning the satisfaction with the mode of teaching by EAD

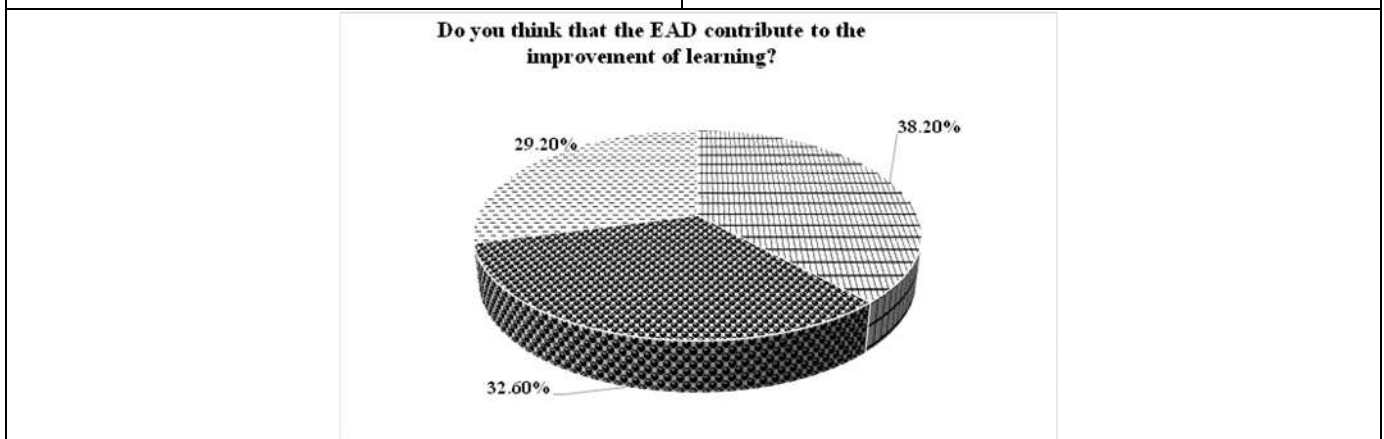


Figure 13. Results obtained from the questionnaire regarding the contribution of the EAD to improve learning

internet. On the other hand, nearly 38.2% of the students testify that EAD can help improve teaching provided that all of the constraints mentioned above are already taken into consideration. In addition, and as regards the answers to the questions concerning the main advantages and limitations that the students can obtain from the EAD, we have gathered their comments that we provide in full:

- To have a certain comfort that you couldn't find in the classroom. To have enough time to work.
- Now we are able to search for our lessons, also our teachers can help us a lot.
- The possibility of carrying on our lessons while we are safe and secure.
- Despite the huge task that these distance courses represent for students as well as teachers, this does not prevent the fact that they bring several advantages such as the availability of teachers at any time as well as the ability to catch up the lessons, which wasn't possible during face-to-face lessons and then, the teacher-student relationship has become more forged since we are all going through the same grief together and we have become united by the same goal which is that of safeguarding our country and its inhabitants.
- To have more time to study, we can say that we do not need any means of transportation to study.
- To be able to go through the lesson several times. In addition, the lessons and exercises are archived and

recorded, it is possible to concentrate on the lessons without any disturbance.

- Distance Learning can make the learner more independent.
- The pupil or learner is able to understand his lessons with a great spirit of inquiry and to auto-learn.
- The pupil doesn't need to feel shy and can express yourself well
- The learner can work at his own pace according to his own task, he doesn't get trapped in the school routine, moreover he can advance in the school curricula.
- In my point of view, the EAD has only a few advantages such as the physical comfort of the students when they are at home, but I prefer attending in the classes because this allows the learners to ask more questions and get the answers in a more precise way, however some teachers did not try to contact us during this confinement, unfortunately, so I find that I can understand better when I attend face-to-face classes.
- There is no students' noise. You can express yourself without being afraid or stressed in front of the other students.
- We are able to work with great concentration and to fully understand and also benefit from the great efforts of teachers to communicate information.
- To have more freedom and follow a personal system and have more time for rest.
- To be free and study comfortably.
- In my opinion, nothing can replace face-to-face teaching.
- The saving of time that can be lost while moving students. And to feel more at ease in the virtual classroom since you are at home.
- The main advantages are: - To be able to see documents, videos without wasting a lot of time - Being able to write, and follow our lessons in a way that is not so stressful as in the classroom.
- In my opinion there are no benefits to be gained but I think that the EAD has enabled us to contact our teachers and question them at any time we need feedback.
- From this experience I find that the EAD has proved effectiveness by simplifying the studies; teachers explain their lessons in a better way and we receive more detailed explanations according to our questions. We concentrate better when we are alone than in the noisy classroom even if it remains a classic atmosphere.
- It's more accessible, you just have to open your computer and start your course, but with a good quality of teaching.
- Avoid the stress of school.
- Flexibility in the study environment.
- The teachers' explanation will become subtle

### Observation Table Conducted with Students

Some student behaviors can actually influence their understanding and assimilation of the concepts studied in the distance course such as accessibility, visual fatigue, psychological state, attention, and participation. For this reason, we thought of making an observation table in which we can note the effect of the EAD on the behavior of the students during the session. The results obtained are grouped together and represented in the following table:

In addition, we found that the degree of motivation and the follow-up of EAD courses among the students were at an average level. Furthermore, accessibility and autonomy are moderate,

**Table 2. Representation of the results of the observation table (-: weak, ±: average, +: High)**

| Theme             | Level                                 |   |
|-------------------|---------------------------------------|---|
| Accessibility     | ±                                     |   |
| Flexibility       | +                                     |   |
| Visual fatigue    | +                                     |   |
| Time Organization | +                                     |   |
| Autonomy          | ±                                     |   |
| Physical State    | Boredom                               | + |
|                   | shyness                               | - |
|                   | Comfort and Ease                      | + |
|                   | Interaction                           | - |
|                   | They are motivated                    | ± |
|                   | They answer questions                 | ± |
|                   | They ask Questions                    | - |
| Attention         | They follow the stages of the courses | ± |
|                   | They follow the instructions          | + |
|                   | They are stressed                     | ± |
|                   | They can concentrate                  | - |

As for stress, the students showed a relatively ordinary degree. [13] Indicate that when designing an EAD using ICTs, the pedagogical considerations often neglect the motivational aspects. On the other hand, as [4] shows, the first experiences of online distance education had ended in failures mainly related to the loss of motivation from part of the students. In addition, the majority of the surveyed students reveal very low interaction and concentration, moreover evidence from the teachers whose experience in EAD is between 1 and 7 years in similar studies carried out by [11] reveal that: *In face-to-face learning, interaction and dialogue take place in a direct way. From a distance, more your interactivity is needed, preparation, support. And none / or little interaction with the teachers.*

### Conclusion

When our team of teacher-researchers launched this research, their first objective was to assess the impact of the use of distance learning platforms (EAD) integrating ICT in the teaching process. -learning. Obviously, this evaluation had to be done through precise and rigorous observations, surveys by questionnaires to the students. Indeed, relevant data was collected and the various results that we have cited show that despite the efforts made by school institutions and teachers through affording devices and tools to facilitate learning and communication during the period of the confinement due to the health crisis, many problems have been raised by secondary school students in terms of distance education: study environment, techniques used, availability and commitment of teachers. Obviously, the situation varies from one school institution to another. In addition, the observed benefits of distance learning during the confinement period can be summarized as follows:

**Convenient:** Access to information from anywhere at any time. The distance is no longer an obstacle to academic learning. [15] Report that EAD provides greater accessibility to learning, since they at least allow to reduce a distance related to geographical factors.

**Flexibility:** Learning is easier when it adapts to the learning needs and preferences of each learner. Indeed, [10] affirms that distance learning offers more levels of freedom, compared to face-to-face learning.

**Adapts to different needs:** A variety of methods and tools that can be used satisfying all learners.

**Instant results:** Online learning offers a variety of ways to give a constructive feedback to the learners. Indeed, [16] states that distance learning allows the individual to learn in his immediate context.

On the other hand, the limitations and constraints encountered in distance learning can be summarized as follows:

**The pedagogical experience can turn out to be a bit lonesome:** It will not be easy for all learners to participate in online discussions and actively engage with their teachers or virtual classmates. In addition, certain types of educational issues can be difficult to tackle on an online basis. Finally, some questions can get lost among the many other requests and discussions. This may give some learners the impression that they are lacking in support and reassurance.

**Visual fatigue:** The constant use of a computer or tablet can cause vision problems and other health problems.

**The Need of a certain degree of self-discipline:** Some learners are not sufficiently motivated to study. Traditional learning has an advantage of following the progress of each learner; it is a benefit for those who feel the need to be tracked closely in order to learn appropriately.

**Less interaction:** The learner experiences a feeling of isolation, due to the individual format of this type of learning, which can give him a feeling of loneliness

**Limited access to contents:** some learners do not have a computer, tablet or even a smartphone, connected to the network .

Finally, in order to make this education system a successful one and make significant advances in the field, we suggest the popularization of pedagogical tools, the use of e-learning and support for all learners so that they can comprehend digital learning.

This work could therefore be carried on from another perspective because it is limited to a single stakeholder who is the student, hence the need to question the teachers and all the other stakeholders in this system in order to resolve more serious and related problematic issues, namely: *are we ready for an EAD in The Moroccan establishments? Do IT services and media centers guarantee an efficient and favorable EAD? Do teachers have enough skills to integrate ICT into EAD?*

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