

Examining EFL Teachers' Perceptions: EFL Students' Digital Literacy and Project Based Approach (PBA)

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Abstract

This study was carried out to examine the role of project-based learning (PjBL) in maximizing students' digital literacy in secondary schools of Khenchela. The main objectives were to check EFL teacher's attitudes towards the role of PjBL in recent digitalized education. A primary concern is to examine carefully the impact of PjBL in enhancing students' digital literacy in Algerian Secondary education. Quantitative and qualitative data were gathered from EFL teachers using both a questionnaire and interview. The findings of the study revealed that teachers hold a positive attitude towards the valuable role of PjBL in fostering learners' digital literacy.

Key Words: Education, Digital literacy, Project-based learning.



Introduction

The effectiveness of project-based learning (PjBL) becomes a primary concern of educators worldwide. It is one of the most valuable current discussions in the field of didactics and educational sciences. Actually, several attempts have been done to diagnose the usefulness of this

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instructional approach however few studies focus on its link with boosting learners' digital skills and digital media in Algerian Secondary Education (SE). The lack of research on this topic has prompted an urgent need to investigate it carefully, since EFL teachers and EFL learners are going to develop vital skills via PjBL mainly digital skills, soft skills and 21st century skills. Thus, the purpose of the study is to examine the usefulness and effectiveness of PjBL in fostering learners' digital literacy in SE. The main research questions were:

1. What are EFL teachers attitudes towards the incorporation of PjBL in Algerian secondary education?
2. What is the impact of PjBL on learners' digital literacy in Algerian Secondary education ?

Literature Review

Various researchers examine the effectiveness of Project based approach and digital literacy, and their relationship. First, Project Based Approach (PjBA) is an innovative instructional educational approach and a learner centred approach since it is built around learners themselves as real active agents of knowledge (Thomas, 2000). Second, Boyed Danah (2014) declared that the emergence of digital literacy concept started in the United States of America. He said: "The notion of digital natives has political roots, mostly born out of American techno-idealism. In an effort to force the global elite to recognize the significance of an emergent mediated society, John Perry Barlow, a renowned poet and cyberlibertarian, leveraged this concept." (Boyd, 2014. P 177) one can deduce the urgent need to be digitally literate in a technology based society. He added: "We live in a technologically mediated world. Being comfortable using technology is increasingly important for everyday activities: obtaining a well-paying job, managing medical care, engaging with government. Rather than assuming that youth have innate technical skills, parents, educators, and policymakers must collectively work to support those who come from different backgrounds and have different experiences. Educators have an important role to play in helping youth navigate networked publics and the information-rich environments that the internet supports. ..., including the ability to control how personal information flows and how to look for and interpret accessible information ..." (p. 180), that's why it is very extremely to find ways to maximize EFL learners' digital soft skills. Notably, Spire and Bartlett (2012)

have categorized the intellectual process associated with digital literacy into three major categories: (a) to locate and consume digital content, (b) to create digital content, and (c) to communicate digital content (see Figure 1)

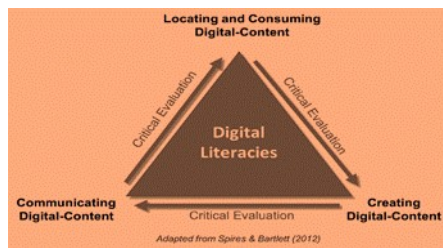


Figure 1. *Digital literacy practices involve the ability to locate and consume, create, and communicate digital content. (Spire & Bartlett, 2012)*

1.2 Digitalized Education

Digitalized education refers to educational technologies. It provides a valuable training for learners. It facilitates the teaching/ learning process by presenting educational contents in an interactive, attractive and creative forms. It improves users' academic performance and guide them proficiently to achieve success. Digitalized education harnesses the power of technology to revolutionize the learning experience, bringing interactive and engaging content to students anywhere, anytime, in other words, Online platforms and virtual classrooms enable access to a vast range of educational resources, fostering personalized learning and catering to diverse learning styles and abilities.

1.3 Digital Literate Learners

Interestingly, digital literate learners are those who are able to use ICT's (Information and Communication Technologies) critically and safely. Many recent technologies as Google and Wikipedia requires users to use them rationally. A good example is the ability of using computers and mobile phones rationally to do different activities, such as to search for information, communicate with others, comment, debate, share interesting contents, evaluate or assess data. Today, high quality education necessitates boosting learners' 21st century competences and like as digital literacy, digital media, and soft skills. Thus, enhancing learners' digital literacy gains widespread credence as a major concern of educators. The collocation of digital literate

learners is used worldwide. All in all, towards high quality education, educators ought to equip digital native learners with all digital skills and competences. yet, not any learner who is exposed to ICT's is a digital literate learner, in this context Boyd Danah (2014): "Teens may make their own media or share content online, but this does not mean that they inherently have the knowledge or perspective to critically examine what they consume. Being exposed to information or imagery through the internet and engaging with social media do not make someone a savvy interpreter of the meaning behind these artifacts. Technology is constantly reworking social and information systems, but teens will not become critical contributors to this ecosystem simply because they were born in an age when these technologies were pervasive..." (Boyd, 2014 p177. Therefore, the task of educators goes beyond the efficient incorporation of modern technologies in teaching.

1.4 Digital Literate Teachers and Platforms

Nowadays, fostering the professional digital literacy is very important for teachers. Therefore, teachers ought to boost their digital soft skills and competencies, they have to incorporate ICTs in their instructional methods effectively. They need to bridge the gap to digital literate learners. They should use different search engines to find the appropriate teaching resources. Fostering the digital culture becomes a vital necessary step towards encyclopaedic education, this may happen through creating digital educational contents. Today, digital educational platforms are available to maximize learners' skills and competencies. Teachers and learners may use plenty of digital educational platforms to exchange information or to foster the language aspects, basic skills, language functions, and culture. Useful educational digital platforms are: EdApp, Kahoot, Arlo, Google meet, CreateLMS, Google Classroom, 360 learning, Ibtikar, Inquisiq, Tovuti LMS, Zoom, Coassemble, Funzi, Wix, Pluto LMS, Blink Learning, Skill Share, Teachable, Coursera, Udemy, LinkedIn, EDX and others. (see appendice n1 Google classroom in higher education and digital means in Secondary Education))

2. Project Based Approach (PjBA)

Interestingly, PjBA emphasizes active learning rather than passive learning. The teacher's role is to act out as a monitor, a guide, a feedback giver. However, the learner's role is to choose an interesting topic, search for data, collect interesting information, think critically and creatively, present

projects and products, assess themselves and peers, give and receive feedback in addition to other effective educational tasks. According to Marsh (2010), recent educational constructivist approach learning as an active process whereby learners construct creatively their knowledge by bridging the gap between already gained knowledge and current situations. scholars agreed that learners had better apply their scientific knowledge in situations requiring problem-solving and decision-making (Miller & Krajcik, 2019). Significantly, Gangwar (2017) declared that: "PjBA has several positive effects on student's content knowledge compared to traditional teaching method...Students who participated in Project based learning(PjBL), also benefitted from improved critical thinking and Problem-solving skill. PBL has been show to benefit a variety of students in developing collaborative skill " (Gangwar, 2017. p 741). Project based approach proves to be an effective instructional approach. Numerous theoretical and empirical studies stated that project based approach (PjBA) exerts an extremely valuable positive impact in maximizing learners' skills and competences. It engages students in investigating meaningful questions that are situated in their everyday lives (Ann et al, 2022), so this means that by engaging in project-based learning, students develop critical thinking, problem-solving, and teamwork skills, which are essential for success in the modern workforce. According to Simons & Baeten (2016), both learners and teachers benefit from the project-based learning technique. Doubtlessly, project-based approach is one of the best academic methods because it represents a learner-based process that regards carefully the needs and interests of learners and encourages them to participate actively in the learning process. (Gomez et al, 2017) this means that project based learning proves its efficiency in education. In the same context, Thomas Markham (2011) declared clearly that: "PjBL integrates knowing and doing. Students learn knowledge and elements of the core curriculum, but also apply what they know to solve authentic problems and produce results that matter. PjBL students take advantage of digital tools to produce high quality, collaborative products. PBL refocuses education on the student, not the curriculum...a shift mandated by the global world, which rewards intangible assets such as drive, passion, creativity, empathy, and resiliency. These cannot be taught out of a textbook, but must be activated through experience." it fosters a sense of ownership and motivation among students, as they take responsibility for their own learning and are driven by the desire to create meaningful and impactful projects, resulting in increased efficiency and deeper learning

outcomes , all in all PjBL provides learners' with knowledge and experiences that shape their profile effectively to face up real life challenges critically.

2.1 The Impact of PjBL on Learners

There is a need for more research documenting the effectiveness of PjBL. The latter proves to be a very beneficial approach to learners. various educators highlighted its effectiveness especially with relation to digital literacy. First, according to Guo (2020) Project based approach can be defined as a collaborative instructional inquiry-based method whereby learners perform various roles as integrating, applying and constructing new knowledge as they cooperate together to create solutions to complex problems (Guo et al., 2020. P 42). Additionally, Chen & Yang (2019) stated that PjBL leads learners to realize greater academic achievement. Furthermore, learners can gain priceless benefits through PjBL in obtaining content knowledge and fostering collaboration as well as group work skills. Moreover, they are highly motivated to learn via projects, PjBL became more favorable to traditional approaches.

Other advantages can be boosting self-efficacy, task value and positive attitudes towards all peers including peers from a different ethnic background. PjBL contributes to maximizing learners' intra- and interpersonal competencies (Kaldi et al., 2011). Actually, PjBL fosters learners' academic achievement in STEM, that is to say the fundamental subject matters: science, technology, engineering and mathematics. (Chen & Yang, 2019). Projects involve learners in a constructive investigation, involves inquiry, knowledge building, and resolution (Thomas, 2000). Worthy noted that, using ICT's in PjBl makes the environment more conducive and authentic to learners, since computer mediated learning provides access to data and information, expands interaction, cooperation and collaboration with others via networks, promotes laboratory investigation, and emulates tools experts use to produce artifacts. (Krajcik et al., 1994, pp. 488-489). Interestingly, PjBL encourages learners to acquire deeper relevant knowledge and skills to be invested to solve complex real life challenges. wherein learners are offered several opportunities to identify the theme of the project, outline the process, and review each step. Therefore Project Based Education (PjBE) opens a gateway of creation, inspiration, innovation, accountability, creativity as well as enhancing self-motivation, self- confidence, self-esteem and self-direction throughout team-based collaboration. That's why learners in different groups present the same

topics differently in inspiring unexpected ways, making education a fruitful experience. So, teachers will be blown away with outstanding creative and innovative projects such as : gallery art exhibitions (See appendix n 2), gallery walks arts, e-Books, personal videos, short recorded movies, personalized album covers, animations, creative mind maps, game shows, debates, role-plays, talk shows (see appendice n 3), magazines, collection of stories and blogs.

3. Research Methodology and Design

A mixed research method was used to gather both quantitative as well as qualitative data from EFL teachers. The intent for mixing quantitative and qualitative research designs is to maintain the strengths and ameliorate the weaknesses in both designs. Believing that mixing two methods together will yield a complete picture of the situation under investigation. Creswell (2012) maintained that “Mixed methods involves the collection and “mixing” or integration of both quantitative and qualitative data in a study. Mixed methods research has increased in popularity in recent years. it is a legitimate research choice. By mixing quantitative and qualitative methods researchers gain acceptance among the research community, offer richer insights, and result in more questions of interest for future studies”. Creswell (2012) declared: “ The choice of methods turns on whether the intent is to specify the type of information to be collected in advance of the study or to allow it to emerge from participants in the project. Also, the type of data analyzed may be numeric information gathered on scales of instrument or text information recording and reporting the voice of the participants. Thus, the population of this study consists of Algerian EFL teachers in Secondary education, in Khenchela city. Randomization was used as a strategy to give an equal chance to all the participants to be selected. The sample size was sixty(60) teachers.

Most importantly, the research employed a quantitative methodology for gathering and analyzing data. Data was collected through a questionnaire that was administered via a private Facebook group in order to accomplish the research aims and obtain the information for the subjects, a questionnaire for EFL teachers is administered in the forms of scientific text to be analyzed carefully. The questionnaire consisted of different forms of questions mainly a closed ended questions (multiple response and Likert scale) and open-ended questions, Creswell (2012) mentioned that “Instrument data may be

augmented with open-ended observations, or census data may be followed by in-depth exploratory interviews. In this case of mixing methods, the researcher makes inferences across both the quantitative and qualitative databases.” p.21. Interestingly, it was reviewed by seven external researchers. The appropriate modifications were made before the questionnaire was administered to the participants. The study follows a case study design, with in depth analysis of the findings. This work takes the form of a case study of Algerian secondary education. A sample is sixty Algerian EFL teachers in Khenchela, collecting data about their attitudes, opinion, and experiences of the effectiveness of project based learning to foster learners’ digital literacy.

4. Results

Section one deals with the participants’ background information and the incorporation of PjBL in Secondary education. For example, concerning the gender of the participants, a random selection strategy was used here. In The sampling of 60 EFL teachers, the majority of the participants were female teachers, representing about 86% of the whole participants (about 53 female teachers, 88,33%), while a minority of male teachers representing 11,66% from the whole population (07 participants).

Q1. Do you think that PjBL help in enhancing learners’ skills and competencies?

Options: Yes (60, 100%) No (00, 00%)

The first question aims to analyze the position of secondary education teachers in Algeria on whether the project’s pedagogy develops students’ skills and competencies. There is no doubt that all the concerned EFL teachers have emphasized the essential role of the project's pedagogy in building learning and developing competencies and skills in a remarkable way.

Q2. How often do you implement PjBL in your teaching?

Options: Always (30, 50%) frequently (16, 26,66%) never (09, 15%) rarely (05, 08,33%)

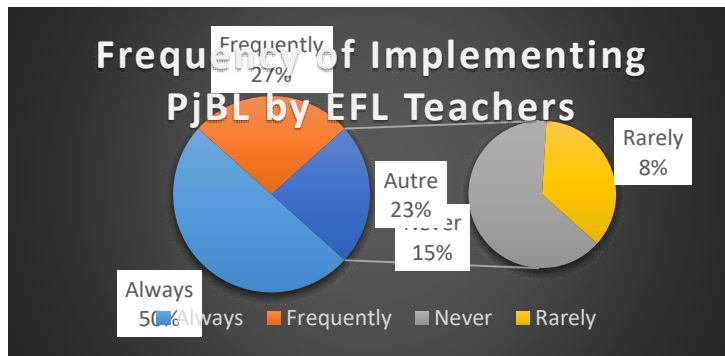


Figure n°2: Frequency of Implementing PjBL by EFL Teachers

As for the second question, it concerns the extent to which the project’s pedagogy is applied within in universities. Unfortunately, some of the answers indicated that some teachers did not apply the pedagogy of the project (never). Most of the answers were (always) by 39 EFL teachers, but some of the answers were (frequently). While five teachers chose rarely.

Q3. Decide upon the importance of PjBL in teaching process?

Options: Very Important (35, 58,33%) Fairly important (19, 31,66%) Unimportant (09, 15%)

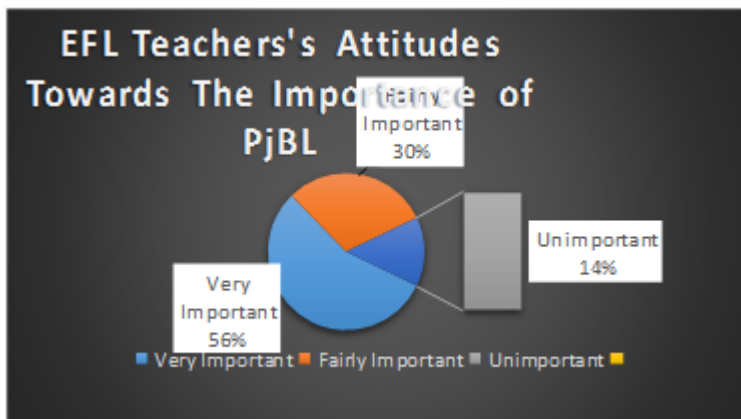


Figure n°03: EFL Teachers’ Attitudes to the Importance of PjBL

After analyzing EFL teachers attitudes towards the importance of project based learning in secondary education, results reveal a positive

attitude. The majority declared that the instructional approach is a very important educational process. This was declared by 35 EFL teachers representing 58, 33% of the whole population; whereas, 19 EFL teachers believed that PjBL is a fairly important instructional method. Only 9 EFL instructors viewed that it is unimportant approach representing a minority of 15% out of 100%. It is than clear that PjBL proves its efficiency and effectiveness in the 21st century education.

Q04. In your opinion, what are the most challenging problems that may face your learners during project process?

EFL teachers declared that while implementing PjBL, EFL learners encounter some challenging obstacles. Among them is finding a theme that interests learners, lack of digital materials, poor internet connectivity, cost, and the availability of authentic resources, learners may not find the appropriate useful pedagogical tools. They also find difficulties to use mind-maps, guides, manuals, dictionaries, worksheets, courses, videos, infographics, games, lexicons or glossaries, films, web-pages, paralinguistic materials, photos, posters, questionnaire, as well as all tools can be technology-oriented appropriately. Furthermore, learners found difficulties in adapting the themes of projects. Another significant challenge that meets the implementation of PjBL is teamwork, a vital skill that embodies the potential for problem solving and free-riding by learners, with the difficulty experienced by teachers and learners in adapting to non-traditional pedagogies. Time management is an outstanding challenge. Teachers should make sure they manage time well, time allocated for each phase should be enough. Self-Assessment is also a challenge to weak learners or low level attainers.

Section Two: Enhancing Learners' Digital Literacy

Q5. Do schools need to prioritize digital literacy?

Option: Yes (55, 91,66%) No (05, 08,33%)

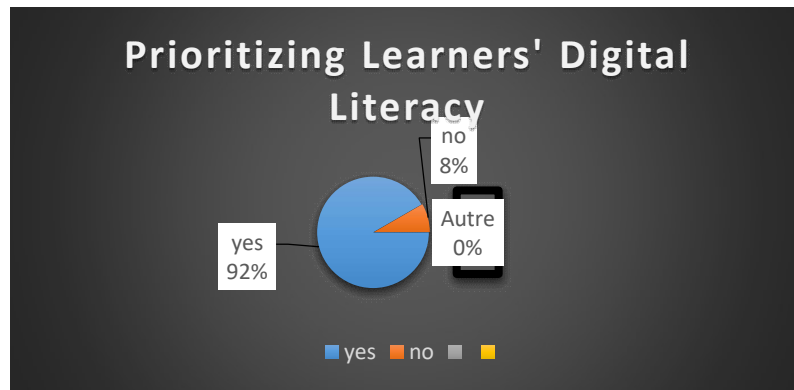


Figure 05: Schools and Prioritizing Digital Literacy

The majority of EFL teachers viewed that schools need to prioritize digital literacy, representing about 92% from the target population. This means that teachers hold a positive attitude towards maximizing learners 'digital skills. Learners familiarity with digital means is vital, since they had better be trained to solve real life problems in a digital era, with all this digital transformation, learners must be equipped with digital soft skills and competencies.

Q6. How can EFL teachers foster learners' digital literacy?

According to EFL teachers questioned, learners' digital literacy can be fostered through many tips. First, teachers can ensure rational access to digital materials and internet inside the school, with appropriate training for usage and skills. Second, through cyberclass they may improve digital skills. In addition to access to digital tools in the school while presenting projects by the end of each unit. They also added that via projects about themes related to technology and internet (as for 1st year SE projects), they will be able to expand their knowledge towards digitalization. And yet, learners still face inequalities in access, motivations, usage and skills regarding the digital literacy.

Q07. In your opinion, do you think that presenting projects foster learners' digital literacy?

Options: Strongly agree (42, 70%) Agree (11, 18,33%) Neutral (05, 08,33%) Disagree (02, 03,33%) Strongly disagree (00, 00%)

Most of EFL teachers strongly agree that PjBL fosters learners' digital literacy and skills representing 70% of the whole population, while 11 teachers (18,33%) only agree about the statement. five teachers chose to be neutral and 2 others disagree about the impact of PjBL in enhancing learners' digital literacy.

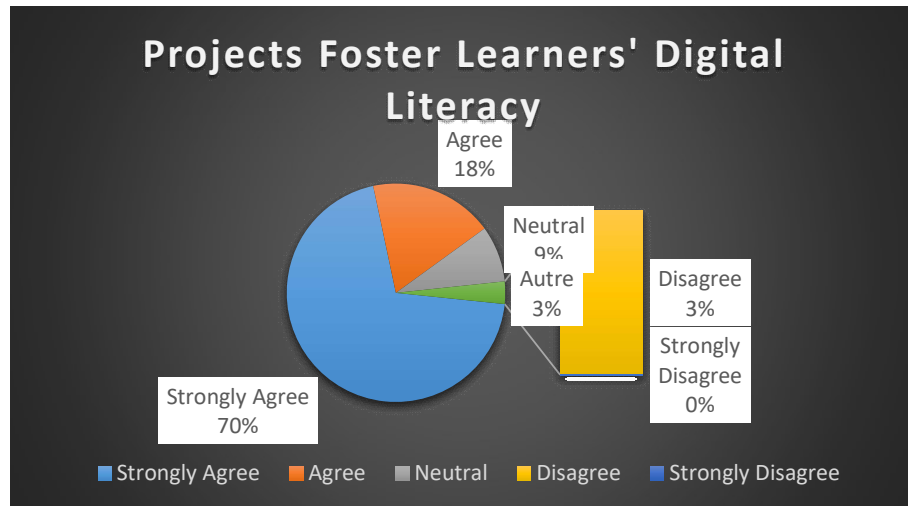


Figure n°07: Projects Foster Learners 'Digital Literacy

Q08. What do you suggest to foster learners' digital literacy via PjBL?

EFL teachers suggested interesting recommendations to enhance learners 'digital literacy via PjBL. First, all teachers should plan to use themes that are related to ICT's and technology, for example the first projects devoted to first year learners SE are about communication, the press and computers. Here teachers must encourage the choice of themes that are related to digitalization. Second, whatever the theme of the project is, learners ought to use ICT's and technological resources, at the level of school or at home. Third, teachers proposed extra sessions in the laboratory of foreign languages to maximize the successful use of digital resources and digital platforms. Learners have to be resilient online and offline during the process of project. They should be equipped with the appropriate digital tools to be active digital citizens, thus Algerian education system must ensure the development of adequate digital resources, with professional training for both

teachers and learners. They added that, parents should encourage learners at home to use digital tools since self-study strategy and learning from the social environment lead to the appropriate acquisition of digital skills. Parental guidance plays a vital role in enhancing learners skills.

5. Discussion

First, section one dealt with project based learning. It is deduced that EFL teachers have positive attitudes towards the incorporation of PjBL in Algerian secondary education. Results showed that the majority of teachers are really aware of the vital role of PjBL. They declared that there was significant change in learners' skills and competencies while applying PjBL, learners were able to explore real life problems and reach effective outcomes. PjBL engages learners in active learning and deep content knowledge. Remarkably PjBL is increasingly emerging as a prominent instructional approach, learners; and yet various challenging problems may encounter teachers while incorporating PjBL.

Second, section two examined the use of online digital platforms. Results indicated that learners and teachers are familiar with the use of ICT's and digital resources. Data shows that digital literacy can be enhanced through the use of smartphones, digital dictionaries, computers, data show and projectors, interactive boards, special training in the foreign languages laboratory, and projects, especially about digital themes such as: technology, internet, innovation, and communication tools

Section three is about enhancing learners 'digital literacy, schools need to prioritize digital literacy, to prepare digital native generation to face up high complex problems of global era critically. Teachers recommend to incorporate PjBL to maximize soft skills and competencies. ICT's ought to be part of daily education, curriculum needs to be based around digitalization of educational and recent technologies. Learners may also experience PjBL outside the classroom via digital platforms and application. It is high time educators start a rethinking pedagogy that improves PjBL or even online PjBL.

Findings

Generally, results reveal that EFL teachers have positive attitudes towards the incorporation of project based learning (PjBL) to foster learners'

digital literacy. Unfortunately, Algerian educational institutions are experiencing lack of technologies and digital materials. Therefore, the implementation of effective digital education relies essentially on the frequency of implementing high quality PjBL, in addition to the availability of digital resources, the internet connection, the quality of internet network itself, and the degree of learners' familiarity with digital applications and tools.

Conclusion

Due to recent massive digital shift in education, now no one can deny that project based learning enhances learners' digital literacy. Though educational staff may encounter so many challenges from various perspectives, educational leaders may provide fruitful solutions and recommendations to ensure effective implementation of digitalization of education. Therefore, digitalization in Algerian Secondary education generally mirrors the positive expectation of its future development, it reflects a positive teacher attitude to the role of PjBL in maximizing learners' digital skills. Additionally, there is an urgent reason to critically assess the internal process of digitalization in Algeria and a path for further research study directions. The research topic aims to enhance the educational system in Algerian educational institutions and accelerate the effective incorporation of digitalization of education. To sum up, PjBL proves to be efficient educational process since it fosters learner's 21st century skills and competencies and it enhances digital literacy. Notably, in a digital era, teaching and learning processes also must be digital. Learners are described as digital natives and monitors ought to ensure the incorporation of a culture of digitalization of education, wherein digital literacies are increasingly necessary to be polished by digital natives (i.e., creating posters, blogs, record lives, creating animations, web sites...etc). In short, digitalization in education necessitates the innovative incorporation of digital technological tools and resources in teaching and learning processes. Interestingly, PjBL appears to turn learning an active, interactive, engaging, and motivating process to learners. Education turns to be an amalgamation of ICT's, creative learning, and outstanding up to date digital content. When exposed to PjBL and E-PjBL, learners are able to improve their digital skills, soft skills as well as self-directed learning skills. Interestingly Project based pedagogy enables EFL learners to search and utilize digital resources creatively. It plays a valuable significant role in enhancing their digital literacy, creativity,

efficiency, learning ability, and productivity. Finally, Project based learning enhances learners' digital literacy as far as it is incorporated effectively. Educators ought to work towards smart classrooms.

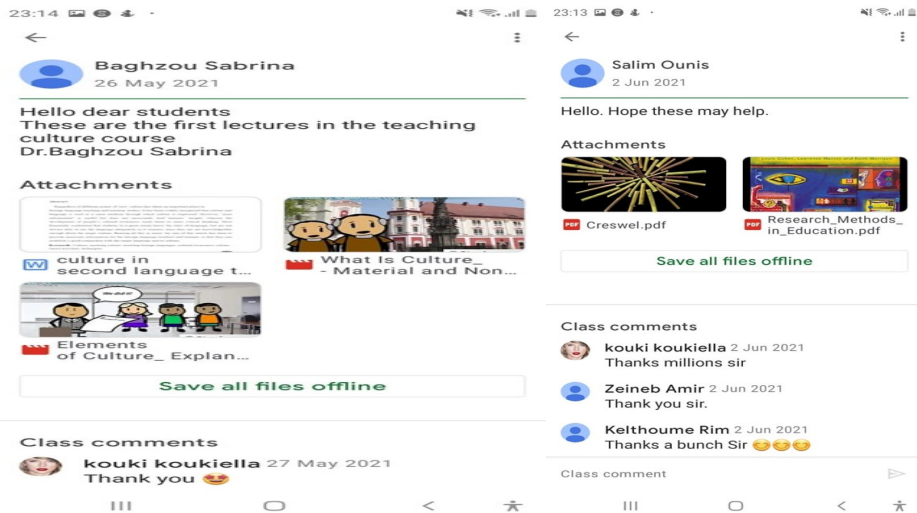
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Appendices

Appendix n°1 : Google Classroom Platform In Khenchela



Digital Tools in Algerian Secondary Schools



Appendix n°2: Gallery Art Exhibition (Project)



Appendix n°3: Talks Show Projects

