

Interactive Video as a Digital Solution to Address Attendance Challenges Among University Students

الفيديو التفاعلي كحل رقمي لمعالجة تحديات الحضور لدى طلاب الجامعة

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Abstract :

Attendance tracking has been a longstanding challenge in university settings. Lack of motivation is one of the most influencing factors that contribute to poor attendance. Hybrid education through Information and Communication Technologies (ICTs), offers a promising solution. However, those who lean toward autonomous learning may find online lectures uninteresting and boring. The aim of this research is to explore how to motivate and empower students who cannot attend classes to learn online. It focuses on descriptive and inductive approaches. In response to these challenges, educators seek digital learning models, including interactive videos. As for the sample, we relied on previous studies of different samples of university students that examined the impact of educational videos on their academic achievement. While creating interactive videos can be time-consuming, platforms like Edpuzzle simplify the process. One of the main results is that such a solution provides an interactive environment which effectively enables the learning process and leads to greater engagement and stronger learning for students.

Keywords: Attendance; Digital learning; Information and Communication Technologies (ICTs); Interactive videos; Edpuzzle platform.

ملخص:

لقد كان تتبع الحضور تحديًا طويل الأمد في البيئات الجامعية. يعد الافتقار إلى الدافع أحد أكثر العوامل المؤثرة التي تساهم في ضعف الحضور. يقدم التعليم الهجين من خلال تكنولوجيا المعلومات والاتصالات حلاً واعدًا. ومع ذلك، قد يجد أولئك الذين يميلون إلى التعلم المستقل أن المحاضرات عبر الإنترنت غير مثيرة للاهتمام ومملة. يهدف هذا البحث إلى استكشاف كيفية تحفيز وتمكين الطلاب الذين لا يستطيعون حضور الفصول الدراسية للتعلم عبر الإنترنت. يركز على المنهج الوصفي والاستقرائي. واستجابة لهذه التحديات، يسعى المعلمون إلى الاستعانة بنماذج التعلم الرقمي، بما في ذلك مقاطع الفيديو التفاعلية. أما بالنسبة للعينة، فقد اعتمدنا على دراسات سابقة لعينات مختلفة من طلاب الجامعات التي درست تأثير مقاطع الفيديو التعليمية على تحصيلهم الأكاديمي. في حين أن إنشاء مقاطع فيديو تفاعلية يمكن أن يستغرق وقتًا طويلاً، فإن منصات مثل أدبازل تبسط العملية. تتمثل إحدى النتائج الرئيسية في أن مثل هذا الحل يوفر بيئة تفاعلية تمكن عملية التعلم بشكل فعال وتؤدي إلى مشاركة أكبر وتعليم أقوى للطلاب.

كلمات مفتاحية: الحضور؛ التعلم الرقمي؛ تكنولوجيا المعلومات والاتصالات؛ الفيديو التفاعلي؛ منصة أدبازل.

Introduction :

Tracking students' attendance has been a persistent issue in universities. As educators, we notice students' unwillingness to attend in-person lectures. While some have valid reasons for their absence, such as work commitments, health issues, or movement distance, which can significantly impede their attendance, many others lack concrete reasons. This largely suggests that their absence is mostly due to a lack of motivation.

For this reason, the aim of this research is to find ways to motivate and empower students who cannot attend in-person classes and help them learn. It focuses on descriptive and inductive approaches based on providing some detailed account of current facts and analyzing its usefulness effectively. The research work explores previous studies on the subject to provide evidence.

Hybrid education offers a promising solution to students' absence by combining the best of both approaches; traditional classroom experiences and digital learning through the use of Information and Communication Technologies (ICT's). However, those who lean toward independent study may find lectures uninteresting and boring because online lectures such as just the PDF version can sometimes be boring or lack interactive elements. If students don't feel engaged, they may lose interest, and as known improving student engagement is crucial for their academic success.

In response to these challenges, educators are seeking to explore the best of digital learning models, incorporating both in-person and online components, to enhance engagement and flexibility. One of these online tools is learning through watching videos. It is enough for us to return to YouTube statistics to know the number of YouTube followers to recognize the fact of using YouTube and hence take advantage of YouTube as a means of learning. However, not all YouTube videos serve the intended learning objectives. Besides, a significant portion of them lacks interactivity, resulting in passive learning experiences without meaningful interaction.

To tackle these challenges, educators are turning to interactive videos. The study draws on previous research involving various samples of university students to assess the impact of educational videos on academic performance.

Therefore, it is crucial for educators to explore the creation of interactive videos that empower students to reach their academic potential. These videos enable interactive learning experiences, allowing students to pause, answer questions, or seek clarification. However, developing such videos can be time-consuming and demanding for teachers, taking in consideration their numerous responsibilities, including teaching and exams responsibilities, supervision, participation in scientific events and so on.

To address this, some websites simplify the process by allowing teachers to create their own videos or select suitable ones from YouTube and transform them into interactive videos that foster active participation and enhance educational results. One of these platforms that facilitates the method of learning via video is the Edpuzzle platform.

In this article, we try to introduce teachers to this site, which can greatly help them, and which enables absent students, with or without an excuse, to understand and benefit from the lectures. It can also be used in face-to-face classes, not only remotely, either by integrating it directly into the classroom or through what is called 'flipped classroom' which represents a shift from traditional teaching methods to modern ones. A flipped classroom is an instructional strategy and a type of hybrid learning. Its pedagogy “involves inverting a course so that lectures are viewed outside of class and class time is devoted to active learning through activities such as demonstrations and group work” (Hussey et al., 2015, as cited in Simon & Nob, 2023, p. 46). Hence, this research paper will explore some concepts related to digital learning, making great emphasis on interactive videos mainly on how to get benefits from the Edpuzzle platform.

1. Definitions of main terms :

The field of using educational technology covers a wide range of concepts and practices which has a relation to the use of technology in education. Digital learning is an umbrella term that involves any type of learning including the use of digital technology. These are some definitions of these terms.

- Digital learning or digital education is a learning that is supported by technology or any instructional practice that makes effective use of technology (Wadgue, 2020, p. 60).

- Ally (2008) defined online learning “as the use of the Internet to access learning materials; to interact with the content, instructors, and other learners” (p. 2, as cited in Altowairiki, 2021, p. 414).
- Blended Learning, also known as hybrid learning, technology-mediated instruction, web-enhanced instruction, or mixed-mode instruction, “is a method of educating at a distance that uses technology, combined with traditional education, these we call hybrid courses” (Hinterberger et al., 2004, p.6, as cited in Abdelrahman & Irby, 2017, p. 3).

2. Benefits of digital learning:

Digital learning means learning through using technology. It allows educational content to be delivered online, allowing students to study through e-learning platforms such as online platforms, digital tools either passive or interactive and different digital resources. This can be outside the educational institutions or inside either on an individual charge basis or through what is known as learning spaces. According to Jisc (2006), “A learning space should be able to motivate learners and promote learning as an activity, support collaborative as well as formal practice, provide a personalized and inclusive environment, and be flexible in the face of changing needs” (p. 3).

Benefits of digital learning cannot be counted but the most important ones can be its accessibility, flexibility and accountability. Students have easy access to the materials whenever and wherever they need. The most addressed dimensions of flexibility in e-learning are learner related factors such as time, place, learning resources, interaction, and pace of learning (Li & Wong, 2018; Soffer, Kahan & Nachmias, 2019, as cited in Kokoç, 2019. p. 1).

Its flexibility fosters autonomous learning and enables learners to control their studies and take charge of their own learning. It also offers the students an environment to learn at their own pace and in respect to their own learning styles, preferences and needs. In the same vein, Poulková and Šimonová (2012) assert that “it enables easier and more complex realization of the process of instruction, offers the choice of place, time and pace for studying, allows an individual approach to students preferring a certain learning style. These are the key values important for the efficiency of the process” (p.10). One of the competencies of good educators is to consider learners’ diverse needs and

personalized learning styles and accordingly adapt teaching materials and methods. Hence, digital learning provides a varied database of resources and materials as a source of diverse content.

It somehow ensures accountability as all students are motivated to make an effort to achieve mastery and educators can control this. Teachers can also assign assessment via interactive tools such as online quizzes to evaluate learners' performance and provide feedback.

In general, using digital tools such as learning platforms, virtual classrooms or other means more effectively can enhance student learning experiences and generate valuable data on their interactions, performance, success rates and engagement. This can be used to gain insights about both students and universities in general. In the same vein and in this domain, the main support is to "encourage the advanced use of learning platforms by academics to deliver better outcomes for students and the university and to capture valuable learning data for use in analytics" (Johnston et al., 2018, p. 127).

One of the main aspects of digital learning is interactive learning which refers to an educational approach where learners actively engage in the learning process rather than being passive through the use of interactive digital tools. Additionally, it encourages independent learning. An interactive learning environment that is not static should enrich the experience of the learners by allowing them to explore information on their own (Stahl, 2006, pp.47-8, as cited in Usoro et al, 2010, p. 58). Some of the main tools of digital interactive learning is video technology especially interactive videos. These are some of the researches conducted on the benefits of interactive videos in learning mainly learning foreign languages.

3. Previous related studies on the effectiveness of using interactive videos in education:

This is an attempt to provide a comprehensive survey of some scholarly sources published on this subject and their relevant findings.

A recent research entitled *Meta-analysis of Instructional Video Technologies* by Yupeng Lin and Zhonggen Yu (2023) evaluated the effectiveness of different instructional video technologies. According to this analysis, In-class video clips

like those shown during lectures compared with Outside-class video clips and video games enhance learning effectiveness significantly and have a positive impact on learning outcomes. This highlights the importance of context and instructional delivery mode. In addition, instructional video technologies were particularly effective for learning motivations and practical skill learning. (Lin and Yu, 2023).

Another study entitled *Effectiveness of Using Video Technology in Teaching English Language at University Level (A case Study of Sudan Open University Lecturers* by Amani Eltayeb Hassab Elrasoul Mohammed and Elsiddig Abdelsadig Elbadawi Balla (2022) reached some important results. These are some of their important findings: 1) Video and sound effects are very effective in teaching English language. 2) Videos make lessons interesting because they attract the student's attention. 3) Integrating videos into lessons creates enriching visuals and a special interactive environment. 4) Teaching English through videos allows teachers to be creative when designing language lessons. 5) Radio can certainly provide interesting content in the classrooms. (Mohammed and Balla, 2022, pp.107-108)

Jassim and Dzakiria (2018) in their article *The Impact of Using Video in Developing English Language Proficiency* in the journal "The Journal of Social Sciences Research", have addressed the benefits of video as an educational tool to improve Iraqi postgraduate students' English skills. This research shows that using videos helps Iraqi postgraduate students improve their English skills. Students believe in the power of video to improve their English, and data confirms its positive impact. Video serves as a valuable tool, motivating students and creating real learning environments where they practice English with teachers and peers.

An analysis of 31 empirical studies published between 2006 and 2018 was conducted by Phan and Dubien (2022). They explore some research on video integration in second language learning with much emphasis on its effectiveness for enhancing grammar instruction. This study found that using videos can help students learn grammar better. Videos provide real-life examples and context, which motivates students and makes learning more enjoyable. The study suggests that integrating videos into grammar lessons with specific activities before, during, and after viewing can be effective. Overall, videos can enhance grammar instruction and offer valuable insights for teaching grammar.

Hence, interactive instructional videos can significantly improve learning outcomes across various educational environments. Their effectiveness is most noticed when they are strategically integrated into specific contexts aligned with targeted learning objectives.

Digital interactive learning, mainly educational videos, allows educational content to be delivered online, allowing students to study through e-learning platforms through which their teachers can guide them and provide feedback online. One of these beneficial interactive platforms is Edpuzzle.

4. Edpuzzle Meaning and Benefits:

Edpuzzle is a very easy tool that offers us the possibility of converting videos into interactive and personalized lessons. According to Edwards (2023), Edpuzzle is a digital tool that enables educators to utilize a wide range of high-quality online videos and create their own for teaching purposes. Importantly, it simplifies the process of editing and adding interactive elements for students. It's a great way that can be used to learn not only languages but any science, while providing teachers with tools to lead and evaluate student progress. According to Bhat (2020), it is considered as one of the amazing platforms of LMS (A Learning Management System) and it integrates seamlessly with Google Classroom and various other platforms.

Edpuzzle takes videos from any platform and turns them into an active activity. This makes it an ideal tool for the flipped classroom approach, suitable for both in-person and virtual learning environments (Bhat, 2020). Flipped teaching is where the amount of information is shared via online ways of delivery as videos and in in-Person sessions learners get more clarifications or do assignments.

The video is a valuable tool for the learning process. Students prefer and like to use videos in their learning. These tools can be easily accessed and referred to at any time. Additionally, it can be adapted to the student's pace of learning and personal needs. Through the Edpuzzle platform, teachers can turn videos into interactive and dynamic lessons. It helps teach students according to their needs and learning speed. Through using interactive activities, teachers transform the learning process from passive to active, leading to increased engagement and stronger student learning. Besides, "Edpuzzle videos were also

shown to be a useful tool in decreasing student anxiety and increasing preparedness.” (Shelby, SJ. & Fralish, ZD. 2021, p. 533).

Here, these are some of the things that are possible within Edpuzzle.

- Video lessons allow students to learn visually, and move at their own pace of learning. As educators, we recognize that students do not have the same level of speed of comprehension but this cannot decide their success or failure. Interactive videos empower students by enabling them to watch, pause, and re-watch content as they need for mastery and success.
- One of the biggest challenges with videos is tracking student engagement and comprehension. Edpuzzle offers the tools that can hold each learner accountable for what he is learning through interactive video lessons that integrate questions, audio notes, and comments.
- With Edpuzzle, teachers can add questions at specific points in the video to check student understanding or encourage deeper critical thinking and discussion. These questions can be multiple-choice, open-ended questions, or audio-based tasks to express their thoughts in their own words. Even more, teachers can insert notes or audio notes to provide extra information during the video (Online and Blended Teaching Hub, What is Edpuzzle?).
- Teachers also can provide immediate feedback to guide students and empower their learning. They can encourage students to reflect on their answers and the video content (School Data Leadership Association).

5. How to use Edpuzzle? :

To start using Edpuzzle, one must go through sequenced steps taken (from School Data Leadership Association and Edpuzzle Help Center), starting by creating an account on this platform. these steps are as follows:

- Create a free account on www.edpuzzle.com.
- Select a video lesson that interests you. or upload a personal video.

- Personalize the video: you can cut it to keep only the important parts, add audio comments, and above all integrate quizzes and open questions.
- Assign the video: Once you have prepared your interactive video, you can assign it to your students. They will be able to watch it and answer the questions at their own pace, which is ideal for practicing listening comprehension.
- Assessment and tracking: Edpuzzle provides detailed statistics on each student's results, including the number of times the video has been viewed and answers to questions. This allows you to monitor progress and tailor teaching to individual needs.

Conclusion :

Some of the main features of digital interactive learning, mainly educational videos, are to engage students, promote critical thinking, and provide instant feedback. Instructional videos mainly interactive ones enhance learning in different educational settings, especially when used strategically within specific contexts designed for specific learning objectives. Encouraging educators to use interactive learning platforms effectively benefits both students and the university as a whole, while valuable data can inform instructional decisions, identify areas for improvement, and help optimize educational processes. Edpuzzle is an example of interactive learning platforms which can be used in both traditional classroom experiences and digital learning. It provides the learners the ability to learn effectively and get instant feedback. It forms a beneficial digital tool that provides an interactive environment that empowers the learning process effectively and leads to higher engagement and stronger student learning.

Bibliography List:

1. Abdelrahman, N., & Irby, B. J. (2017). Hybrid Learning: Perspectives of Higher Education Faculty. In Information Resources Management Association USA (Ed.), Blended Learning: Concepts, Methodologies, Tools, and Applications (pp. 1-28). IGI Global.
2. Altowairiki, N. (2021). Online collaborative learning: Analyzing the process through living the experience. International Journal of Technology in Education (IJTE), 4(3), 413-427. <https://doi.org/10.46328/ijte.95>

3. Bhat, B. H. (2020). Digital Tools to Enrich our Virtual Classroom for Innovative Teachers, & Students. In Babu, R. U. M. (Ed.), *Technology Learning in the Contemporary World* (pp. 50-58). Krishna Publication House, Gujarat.
4. Edpuzzle Help Center. For Teachers – Edpuzzle Help Center
5. Edwards, L. (2023). Tech & Learning: Tools and Ideas to Transform Education. (August 2023). What is Edpuzzle and How Does It Work?. What is Edpuzzle and How Does It Work? | Tech & Learning (techlearning.com)
6. Jassim, L. & Dzakiria, H. (2018). The Impact of Using Video in Developing English Language Proficiency, *The Journal of Social Sciences Research*. (4),16-22.
7. Jisc. (2006). Designing Spaces for Effective Learning: A Guide to 21st Century Learning Space Design. untitled (master-foresight-innovation.fr)
8. Johnston, B. MacNeil, S. & Smyth, K. (2018). Conceptualising the Digital University: The Intersection of Policy, Pedagogy and Practice. Switzerland: Springer Nature Switzerland AG.
9. Kokoç M. (2019). Flexibility in e-Learning: Modelling its Relation to Behavioural Engagement and Academic Performance. (Flexibility in e-Learning: Modelling its Relation to Behavioural Engagement and Academic Performance (researchgate.net))
10. Lin, Y & Yu, Z. (2023). A Meta-analysis Evaluating the Effectiveness of Instructional Video Technologies. Technologies, Knowledge and Learning. <https://link.springer.com/article/10.1007/s10758-023-09669-3>. (Consulted on 13/07/2024)
11. Mohammed, A. E. H. E, & Balla, E. A. E. (2022). Effectiveness of Using Video Technology in Teaching English Language at University Level. (A case Study of Sudan Open University Lecturers, DIAA Journal of Psychological and Educational Researches, Algeria, 3(2), 89- 108
12. Online and Blended Teaching Hub, Edpuzzle. EdPuzzle – Online Teaching Hub (purdue.edu
13. Phan, N., & Dubien, M. (2022). Teaching Grammar to English Language Learners with Video: An Integrative Literature Review on Effectiveness, Perceptions, and Practices. 25-39. Teaching Grammar to English Language Learners with Video: An Integrative Literature Review on Effectiveness, Perceptions, and Practices (researchgate.net)
14. Poulková, P & Šimonová, I. (2012). Flexible e-learning: Online courses tailored to student's needs. (<https://www.researchgate.net/publication/285339659>)
15. Shelby SJ, Fralish ZD. Using Edpuzzle to improve student experience and performance in the biochemistry laboratory. *Biochem Mol Biol Educ*.2021;49: 529–534. <https://doi.org/10.1002/bmb.21494>
16. Simon, P. D., & Nob, R. M. (2023). The Use of the Flipped Classroom Model in Online Teaching: Teachers' Perspectives. 16th DLSU Arts Congress Proceedings, 7(01), 45-53.
17. The Official Website of the School Data Leadership Association. School Data Leadership. EdPuzzle. Getting Started with EdPuzzle (schooldataleadership.org)
18. Usoro, A. Majewski, G.& Bloom, L. (2010). Individual and Collaborative Approaches in E-Learning Design. In Tzanavari, A & Tsapatsoulis, N. Effective, Interactive and

Cognitive Methods for E-Learning Design: Creating an Optimal Education Experience.
Hershy. New York: Information Science Reference.

19. Wadgue, M. (2020). A Study on Digital Education. In Babu, R. U. M. (Ed.), Technology Learning in the Contemporary World (pp. 59-60). Krishna Publication House, Gujarat.
20. What is Edpuzzle? (youtube.com)