

Technology and Adult Learning

Empowering Adult Learners with EdPuzzle

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Abstract

As adult education evolves in the digital age, instructors and learners increasingly rely on online resources and flexible learning environments. Video content, once a passive medium, is now a powerful component of blended and remote instruction. However, simply watching a video rarely guarantees comprehension or engagement, especially for adults balancing education with work and life responsibilities. The challenge for educators is to leverage technology in ways that foster active engagement, real-world relevance, and skill development. EdPuzzle, an interactive video platform, is emerging as a practical solution for adult educators striving to personalize instruction, support digital literacy, and drive learning outcomes across diverse settings.

EdPuzzle is an innovative online platform that enhances video-based learning through interactive features tailored for educational purposes. At its heart, EdPuzzle allows teachers to embed questions, audio notes, and commentary directly into video lessons, transforming passive watching into active engagement (Rachman et al., 2024). Originally popular in K-12 settings, EdPuzzle's flexible tools for customizing video assignments have proven adaptable for adult education environments, fostering greater comprehension and retention by encouraging learners to interact with content rather than simply view it (Janaki & Surendran, 2022).

Features

EdPuzzle offers a comprehensive toolkit of features designed to enhance the interactivity, accessibility, and meaningfulness of video-based instruction for both educators and learners in adult education settings.

- **Video cropping and editing:** Teachers can crop, trim, and edit videos to focus learners' attention on the most relevant portions, removing unnecessary content and creating concise, purpose-driven lessons.
- **Embedded questions:** Multiple-choice and open-ended questions can be inserted at key points within videos (Figures 1 and 2). This transforms passive viewing into an active experience, ensures comprehension throughout the lesson, and supports formative assessment by requiring students to respond before proceeding.
- **Live mode:** EdPuzzle's Live Mode allows instructors to project an interactive video lesson in real time, whether in-person or via virtual meeting platforms (Figure 3). All learners answer embedded questions simultaneously on their own devices as the video pauses for group responses. This feature encourages real-time engagement, immediate discussion, and collective problem-solving, making it ideal for both hybrid and classroom settings where interactive participation is desired.
- **Prevent skipping:** The platform includes a feature that prevents learners from skipping ahead in the video, ensuring that they engage with the entire lesson in the intended sequence before answering comprehension questions.
- **Instant feedback:** Learners receive immediate feedback on their answers to embedded questions, which reinforces learning and allows instructors to address misunderstandings promptly.
- **Detailed analytics and progress tracking:** EdPuzzle delivers rich analytics on student engagement time spent on each section, video completion, and question-by-question performance (Figure 4).

FIGURE 1: Embedding Questions

Singular & Plural Nouns – English Grammar Lessons
Harold Rolon Camacho

Singular & Plural Nouns – English Grammar Lessons
Elli (formerly ESL Library)

nouns

- people
- places
- things


Video Events


- 01:17 • Multiple-choice
- 01:26 • Multiple-choice
- 01:42 • Multiple-choice
- 02:12 • Multiple-choice
- 02:24 • Multiple-choice
- 02:43 • Multiple-choice
- 02:58 • Multiple-choice
- 03:00 • Multiple-choice
- 03:08 • Multiple-choice
- 03:15 •


FIGURE 2: Question Generation


Ambulance


Teacher Assist **Beta** [Learn more ↗](#)

 **Generate questions**

 **Multiple-choice question**

 **Open-ended question**

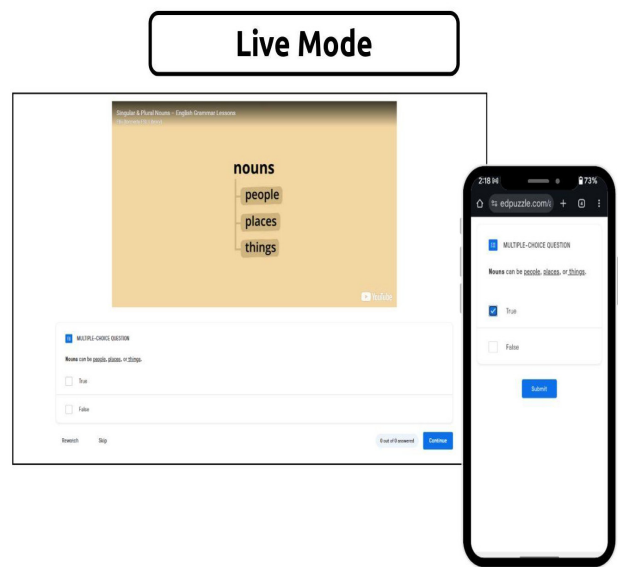
 **Note**

 **Why add these?**

Create questions to see which students understood the lesson, and add notes to give more information or get students' attention with a quick audio note!

02:36

FIGURE 3: Live Mode Example



These reports enable educators to monitor learner progress and tailor instruction accordingly.

- Platform integration: Seamless integration with learning management systems, including Google

Classroom, allows for easy assignment distribution, progress synchronization, and gradebook management.

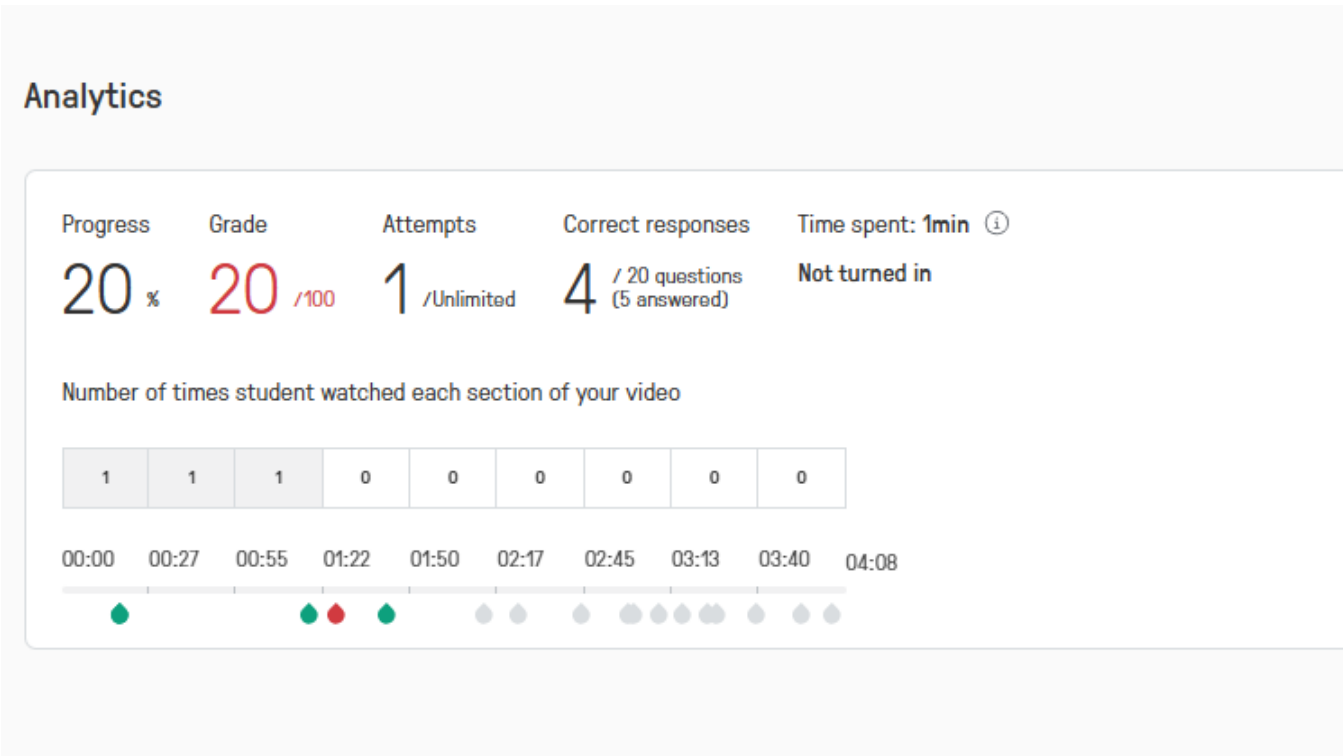
- Support for asynchronous and synchronous learning: Whether used for self-paced assignments or real-time instruction, EdPuzzle accommodates different adult learning schedules and instructional formats.

These features collectively help educators transform static video resources into custom, interactive learning experiences that foster engagement, digital literacy, and deeper understanding for adult learners.

How EdPuzzle Addresses Teaching Challenges in Adult Education

Teaching adults requires respect for their autonomy, life experience, and practical needs (Knowles, 1980; Merriam & Bierema, 2013). Adult learners arrive with a variety of backgrounds, prior knowledge, and unique motivations for returning to the classroom. They often balance multiple responsibilities such as work, families, and community involvement. For these reasons, effective adult education

FIGURE 4: Analytics and Progress Tracking



is rarely one size fits all. It must be adaptable, purposeful, and immediately relevant. EdPuzzle rises to this challenge by aligning closely with best practices and theories in adult learning, specifically andragogy, offering features and experiences grounded in the realities of adult education (Rosa et al., 2022).

A major challenge for adult learners is finding the time to engage in educational activities. EdPuzzle's flexible, self-paced format allows learners to participate when it fits their schedules. Whether they are working night shifts, caring for family, or taking classes after a long day, adult learners can pause, replay, or review content to deepen their understanding. This asynchronous model recognizes that adults may need to revisit difficult material more than once and supports mastery over simple completion (Oyebamiji & Ezeala, 2024).

Personalization is another crucial element for adult learning, and EdPuzzle excels by enabling the creation of lessons that can be contextualized to real-world experiences. Educators can choose or design video content that directly relates to learners' career fields, life challenges, or community contexts. This relevance increases intrinsic motivation and helps learners see the direct value of their coursework, which is especially important for retention and engagement among adult learners (Rosa et al., 2022).

Immediate feedback and formative assessment play key roles in supporting the success of adults in education. EdPuzzle's embedded questions and analytics provide both instructors and learners with valuable data in real time. As students work through a lesson, they receive instant feedback on comprehension questions. Teachers can then use detailed analytics to spot trouble areas, provide targeted guidance, and offer encouragement precisely when and where it is needed, thereby supporting growth and preventing frustration (Hidayat & Praseno, 2021).

Finally, in today's world, digital literacy is a foundational skill in both personal and professional life. For many adult learners, developing confidence and agency with technology is as important as mastering course content. EdPuzzle's digital environment provides authentic opportunities for learners to practice navigating online resources and develop habits for success in technology-

rich environments. As digital literacy is increasingly recognized as vital for sustainable adult education and workforce readiness, EdPuzzle becomes not just a tool for content delivery but a means of equipping learners for lifelong learning in a digital world (Oyebamiji & Ezeala, 2024).

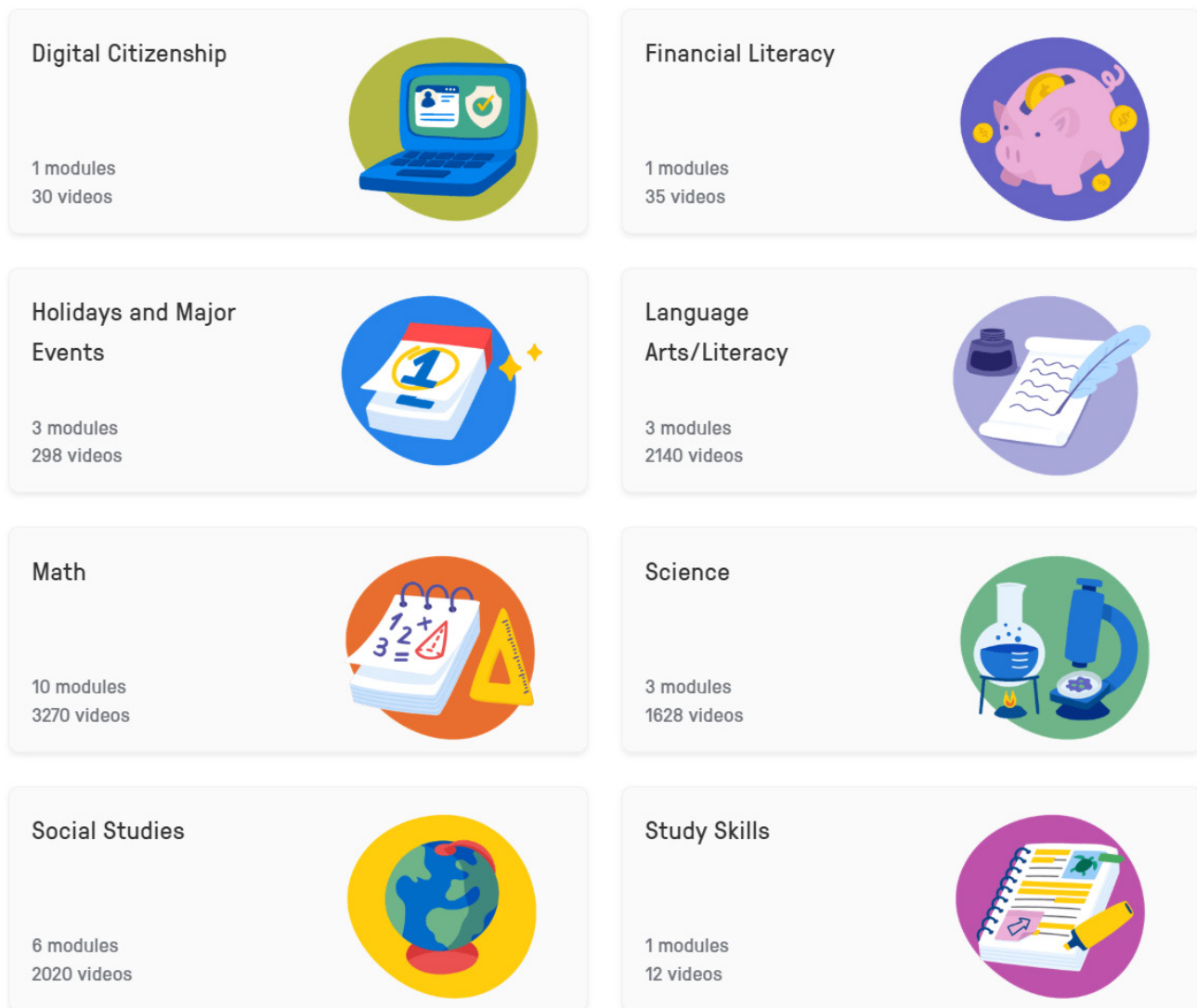
Real-Life Applications of EdPuzzle

EdPuzzle finds practical uses across a broad array of adult education settings, supporting both foundational skills and workplace readiness.

- **Language learning:** EdPuzzle supports English as a Second Language (ESL) instruction by embedding comprehension and vocabulary questions into authentic listening materials, such as real-world conversations, news reports, and workplace dialogues. Adult learners can pause, answer, and reflect as they progress, reinforcing listening skills and building practical language for daily life and work (Margawidjaya et al., 2024; Rini & Marpaung, 2024).
- **Professional training:** Instructors can develop interactive workplace scenarios, such as health and safety walkthroughs, customer service simulations, and technical tutorials. For example, employees might watch a manufacturing safety demonstration and answer scenario-based questions. Or they may participate in a simulated client meeting, analyzing communication skills and appropriate responses.
- **Critical thinking and digital literacy:** EdPuzzle encourages learners to evaluate digital content and practice analytical thinking through interactive assignments on topics like email safety, online banking, or media literacy. Instructors can assign videos on identifying misinformation or internet safety and embed critical questions to prompt deeper thought and application (Oyebamiji & Ezeala, 2024).
- **Civics and community education:** EdPuzzle can be used in civics classes to help adults understand voting procedures, public policy, or community resources. Videos explaining how to register to vote or access public benefits can be paired with embedded quizzes or "What would you do?" scenarios to enhance engagement and understanding.

FIGURE 5: Video Topics

Welcome to Edpuzzle Originals



- Financial and health literacy: Videos covering topics such as budgeting, credit scores, or basic health care can be accompanied by reflective or problem-solving questions within EdPuzzle (Figure 5). Adults can practice decision making on real-life financial or health situations (e.g., managing household expenses or understanding prescription instructions).
- GED and test preparation: EdPuzzle allows educators to create practice sessions for high school equivalency tests by embedding quizzes and explanations into

math, science, or reading instructional videos. Learners receive immediate feedback and can revisit challenging concepts as needed.

- Remote/Hybrid learning and onboarding: Organizations and adult education programs use EdPuzzle to deliver asynchronous lessons when in-person attendance isn't feasible. This includes onboarding for new students or employees, remote instruction, or self-paced training modules.

Benefits of Using EdPuzzle

EdPuzzle stands out for its ability to personalize education and motivate learners. Below are some benefits of using EdPuzzle.

- Enhanced engagement: The interactive nature of EdPuzzle transforms traditional video viewing into an active learning process. Features like embedded questions, voice notes, and instant feedback keep learners involved, moving them from passive watchers to active participants. This hands-on interaction increases motivation, attention, and enjoyment, which leads to stronger retention and deeper learning (Janaki & Surendran, 2022).
- Improved outcomes: Studies show that adult learners using EdPuzzle achieve substantial gains in comprehension, listening, and vocabulary skills. The combination of videos, formative assessments, and opportunities for self-paced review gives learners the scaffolding they need to master complex material, reflected in measurable increases in test scores and demonstrated language proficiency (Margawidjaya et al., 2024; Rini & Marpaung, 2024).
- Supports lifelong learning: By integrating technology meaningfully into instruction, EdPuzzle helps adults develop digital literacy with the ability to navigate, analyze, and create information using digital tools. These skills are indispensable for continued personal and professional growth, ensuring that learners are equipped to participate fully and adapt in a rapidly evolving, information-rich world (Oyebamiji & Ezeala, 2024; Knowles, 1980).
- Equitable access: EdPuzzle opens doors for adults who may have missed out on traditional education or need flexible second-chance opportunities.

Because lessons can be accessed asynchronously and personalized for varying skill levels, EdPuzzle allows learners to study on their own terms. This flexibility and responsiveness make it a powerful tool for advancing the core mission of adult education: accessible learning for all (Oyebamiji & Ezeala, 2024).

Challenges of Using EdPuzzle

While EdPuzzle offers numerous benefits for adult education, educators and learners still face real barriers as they utilize the platform. Understanding these challenges is crucial for planning curricula, supporting learners, and maximizing the impact of technology-enhanced instruction.

- Infrastructure limitations: Many adult learners and instructors face technological obstacles, such as unreliable internet, lack of access to computers or tablets, or limited digital support at home or in community spaces. These infrastructure issues can make it challenging for some learners to consistently participate in video-based assignments and for instructors to monitor progress effectively (Astutik et al., 2023; Oyebamiji & Ezeala, 2024). Programs can help bridge access gaps by working with community partners, libraries, or local agencies to provide device lending or hotspot checkout programs. A solution to this issue would be providing downloadable content or printable resources where possible to help learners with intermittent connectivity. Technology orientations for both instructors and students can promote digital readiness and confidence.
- Teacher preparation time: Creating engaging, effective EdPuzzle lessons takes significant teacher time, both in designing original content and in adapting materials to meet the diverse needs of adult learners. Educators may need professional development (PD) and ongoing support to develop their digital lesson-design skills, integrate relevant real-world examples, and keep up with evolving best practices (Rosa et al., 2022). Institutions can offer structured PD focused on instructional technology and collaborative planning time. Sharing lesson libraries among colleagues, adopting templates, and accessing open educational resources can reduce duplication efforts. Gradually building a bank of

reusable EdPuzzle lessons helps lower preparation time in subsequent terms.

- Motivation and participation: Keeping adult learners motivated and actively engaged can be an ongoing challenge, especially when learners come from diverse backgrounds, varying experience levels, and diverse goals. EdPuzzle lessons must be contextualized and tailored to adult interests, practical realities, and cultural contexts. Instructors must employ thoughtful, flexible strategies to encourage sustained participation and address barriers to ongoing engagement (Rosa et al., 2022). Embedding topics that reflect students' daily lives, work, or aspirations helps increase relevance. Providing choice in assignments, setting clear goals, incorporating peer collaboration, and celebrating progress can foster persistence. Regular check-ins and formative feedback from teachers can also support continued engagement and make learners feel seen.
- App download, account creation, and logging in: For many adults—especially those who are not digitally savvy—just getting started with EdPuzzle can be a significant hurdle. Downloading the app, navigating a web browser, creating an account, and learning to log in can be intimidating and time-consuming. These early access steps may lead to frustration,

disengagement, or even exclusion for those with minimal technology experience. A potential solution would be to provide step-by-step printed guides and in-person or virtual onboarding workshops that guide learners through the setup process. Peer mentors or tech buddies can provide support before and after class. Where possible, instructors can demonstrate account setup on a projector or screen share. Facilitators should expect to allocate extra time for technology troubleshooting, and programs might consider creating “walk-in tech help hours” to lower the barrier to entry for all students.

Conclusion

EdPuzzle is a powerful resource for adult educators working to foster engagement, critical thinking, and digital literacy. As adult education moves further into the digital age, platforms like EdPuzzle help break down barriers to equitable, lifelong learning, but successful adoption requires attention to infrastructure, teacher training, and the realities of adult learners. The synthesis of research and foundational theory shows EdPuzzle is well-aligned with andragogical principles, which is supported by empirical evidence of improved outcomes in adult education contexts (Knowles, 1980; Merriam & Bierma, 2014; Oyebamiji & Ezeala, 2024; Rosa et al., 2022).

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