



Learning Trends for Modern Learners

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ABSTRACT

Before the pandemic e-learning was simply an option for those who wanted to learn, especially for those who could not travel to centers of interest, the pandemic-imposed e-learning as an option to perpetuate education. With these in mind, this article aims to show the most relevant trends in the field of e-learning. We will review the main trends and how they impact the field of learning.

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1. Introduction

With the unprecedented advance of technology that has seen spectacular growth in the last 2 years, eLearning is currently an increasingly popular education method. In recent years, the demand for eLearning has increased greatly due to the shift to online learning and remote work, also encouraged by the social context due to the pandemic. It is evident that this trend will continue in 2023 and beyond, with the eLearning market expected to reach a market size of USD 325 billion by 2025. In this article, we will discuss the top eLearning trends for 2023.

The context of learning is changing because the many disruptive technologies and demographic changes have imposed a need to constantly update the skills of an employee thus learning the business in which he performs to remain relevant on the market. Social connectivity, mobile and cloud technologies have transformed how, where and when people learn. Consumer experience is also of particular importance, as it has reshaped interactions and expectations at a workplace. [4]

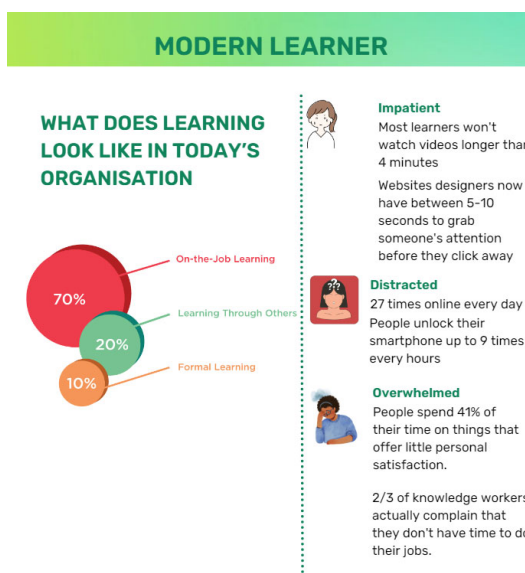


Figure 1. Modern Learner characteristics

The research carried out by Deloitte is of reference because it indicates a change in the way companies that want to remain competitive and make projections for the future, approach learning. Thus, a move away from structured, formal learning, which is controlled by the resource department human, towards

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continuous, individual-oriented learning. Even so, these companies face many challenges in aligning the current mentality, tools, and resources to the new needs.

Most HR departments support the 70:20:10 framework for learning, and companies spend over \$130 billion annually on learning and development. However, a percentage of 73% of company administrators say that the lack of skills is a threat to their business. Reviewing 70:20:10 we can conclude that it is not exactly a useful framework to help us visualize how learning occurs naturally in the workplace as there are many economic, market and technological factors that will influence this relationship.

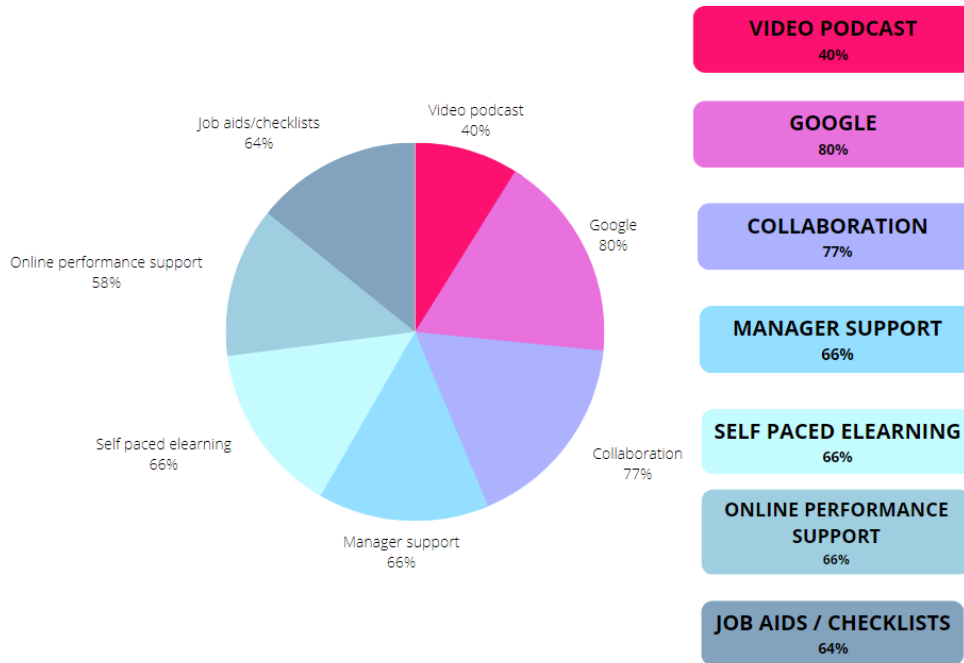


Figure 2. Modern Learner characteristics

2. E-Learning Trends

- Personalization** - One of the important trends of 2023 in eLearning that we can expect to see more and more used is personalization. Personalization is the adaptation of the learning experience to the needs, individual preferences, and possibilities of a learner. This trend is potentiated by the impact of the use of artificial intelligence, on an increasingly large scale, and of automatic learning, with eLearning platforms being increasingly efficient and capable of analyzing student data and offering personalized learning experiences. This personalization takes the form of personalized learning paths, content recommendations, and assessments that are tailored to a learner's skill level. Why is it a major trend and why do I think it is the future in eLearning? One of the main problems of the young generation is currently motivation and commitment. Personalization is important as it can help increase learner engagement and motivation by providing content that is relevant and interesting to the learner. Many eLearning platforms today have features that help improve learning outcomes, leading to reduced learner frustration and dropout rates.
- Microlearning** is another trend that will continue to gain ground in 2023 as it involves delivering small, bite-sized pieces of information to a learner, an approach that has become popular due to its ability to deliver content quickly and efficiently. This way a learner can use information in a way that fits their schedule and learning style. The most common forms of manifestation of microlearning are podcasts, videos, infographics and quizzes. Providing information in short and easy-to-remember chunks increases learning efficiency.

We could assume that microlearning would be a by-product of the evolution of learning patterns, especially in the conditions where the ability of the modern learner to pay attention and learn has been significantly reduced. However, microlearning departs from these assumptions and has become a very useful eLearning methodology because this type of learning has very good results for learners who do not have much time at their disposal. Research has already shown that it is already an effective learning tool as more is learned and the learner remembers more and applies what they have learned when they study in short, focused bursts than when they must stay in long lecture sessions.

We can go further with the argument of the importance of microlearning and its use, especially now in the age of the Internet, because when everyone has a mobile phone, and many people have a lot of time stuck in traffic or moving on long distances to work and the need to fill this time efficiently appeared.

Quizzes are already widely used and are increasingly used in combination with other learning techniques.

- **Gamification** - Gamification is defined as the use of game-like elements in different contexts and is becoming increasingly popular in the eLearning market in recent years as it can increase learner engagement and motivation. In 2023, we can see an increasing implementation of gamification on learning platforms. Gamification can take many forms, from creating rankings, badges to rewards, which increases involvement, motivation, and competition. Through gamification, learning becomes fun and interactive.



Figure 3. Gamification in eLearning

The mix of learning and fun makes learning interesting with a lot of potential. We can identify several ways in which gamification can transform eLearning:

1. Creating a story - Through gamification, a story is added to the eLearning experience by introducing protagonist, antagonist characters and a plot, the eLearning experience has captured more and more interest. When traditional eLearning focuses only on content, the focus is lost, but with gamification, additional plots are added that capture and motivate.
2. E-learning counts on learning, but supplemented with gamification, another objective can be added, namely the progress of a game. This creates rules, limits and developments.
3. With gamification, the interaction increases, because with the implementation of a game, the learners are involved through eLearning in a different way, much more competitive and attractive not only with the learning platform but also with each other.
4. Through rankings achieved during learning, based on knowledge and effort, another aspect of eLearning is added. The students not only go through the entire course until the assessment, but also become aware of their abilities during it. In the version without gamification, demotivation is the main factor that leads to abandonment.

Gamification in education takes many attractive elements from games and integrates them into eLearning, to increase the learning efficiency of learners. There are already studies on how gamification transforms eLearning by increasing user engagement, influencing behavior, and motivating participation. Using games for learning generates an experience from which students will use what was taught and apply it. Many attempts turned into experiences that led people to come back and continue the learning process.

- **Learning through videos** - Video-based learning is another trend that has grown enormously especially in the pandemic and is expected to be just as popular in 2023. Educational videos have been effective mediums for delivering information for many years. Another advantage is creating interactive and engaging learning experiences that are accessible to learners of all skill levels and learning styles. Video-based learning can take many forms, such as: a recorded lecture, live streaming and interactive.
- **Artificial intelligence** - Artificial intelligence (AI) is the main trend as a technology that will have a particularly important impact on the eLearning market in 2023. AI is used today to analyze learner data and provide personalized learning experiences, as well as to automate certain aspects of the learning process. Learning platforms aim to integrate artificial intelligence to provide learners with instant feedback and assistance, but also to identify knowledge gaps and provide recommendations for

additional learning. All these aspects can help the learning experience, in that a learner must have a solid knowledge base before moving on to more advanced subjects. As AI continues to improve, we can expect to see even more applications of this technology in the eLearning market.

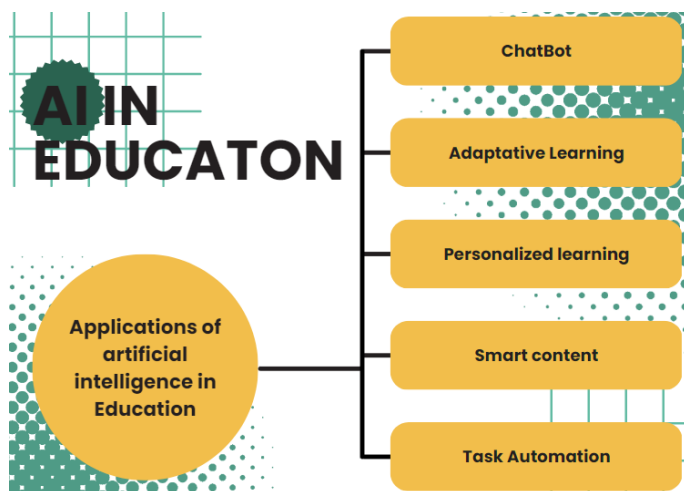


Figure 4. Applications of artificial intelligence in education

3. The impact of using ChatGPT in education

ChatGPT (Chat Generative Pre-Trained Transformer) is a chatbot launched by OpenAI in November 2022, initially as a prototype very quickly attracting attention for its detailed answers and articulate answers in many fields of knowledge.

It is already used to generate text in the form of essays, articles, stories, but also to analyze data, to build customer support systems, and to help answer questions from many fields.

With the evolution of technology and the increasing accessibility of the Internet, artificial intelligence systems have become an increasingly important tool in the learning process. One of these systems, ChatGPT, offers numerous advantages and opportunities to improve learning and simplify the teaching process. [11]

Examples	Capabilities	Limitations
"Explain quantum computing in simple terms"	Remembers what user said earlier in the conversation	May occasionally generate incorrect information
"Got any creative ideas for a 10 year old's birthday?"	Allows user to provide follow-up corrections	May occasionally produce harmful instructions or biased content
"How do I make an HTTP request in Javascript?"	Trained to decline inappropriate requests	Limited knowledge of world and events after 2021

Figure 5. ChatGPT interface

The ChatGPT interface is available through a web page, easily accessible from any browser, without an installation kit or a kit to be downloaded. OpenAI has not yet released an official application, the ChatGPT version currently remains a prototype idea, although the Internet is full of fake versions. You can download the source code for ChatGPT from GitHub, for a desktop version, but this requires some technical knowledge. There are many users who already use it to create their own applications in different fields.

ChatGPT can be used in education in the following ways:

1. Generating personalized educational content, such as answers to questions, summaries of readings, or explanations of complex concepts.
2. Automatic assessment of knowledge and skills, through test questions and self-assessment.
3. Real-time student support through quick responses to questions related to lessons or assignments.
4. Creating mock conversations that allow students to practice communication skills in a variety of situations.
5. Automate repetitive tasks such as generating reports or assessing student progress.

First, ChatGPT can be used to generate customized educational content. For example, it can be used to answer specific student questions by providing clear and detailed explanations of difficult concepts or subjects. This can be of real help to students who need further clarification or wish to reinforce their knowledge. ChatGPT can also be used to generate reading summaries or provide additional information on specific topics.

Second, ChatGPT can be used to automate the assessment of knowledge and skills. The system can be programmed to generate test questions and automatically grade student responses. This can be a real help to teachers, who can save a lot of time and effort by automating this process. This can also provide instant and accurate feedback to students, helping them identify their strengths and weaknesses and improve their performance.

Additionally, ChatGPT can be used to provide real-time support to students. This can be a real help for students who need quick help with lessons or assignments without having to wait to meet. Education has evolved significantly in recent years thanks to technology and advances in artificial intelligence. One of the latest additions in this field is the use of artificial intelligence-based chatbots, such as ChatGPT, in the educational process. In this essay, we will discuss the impact of using chatGPT in education and how it can help improve the learning process.

4. Conclusions

In conclusion, we can expect the eLearning market to continue to grow in 2023, given that many of the identified trends are driven by spectacular developments in technology and the increasingly applied implementation of artificial intelligence. The future of eLearning is shaped by personalization, microlearning, gamification, artificial intelligence, and video-based learning. All are trends that could be significant in the coming years, as more and more eLearning providers incorporate these technologies into their eLearning platforms, and since they want to remain relevant on the market, they will certainly improve them. Learning becoming more accessible, more attractive, and more efficient for students, through these technologies is a competitive plus for those who implement such technologies.

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