AMERICAN JOURNALS
Open Access, Peer Reviewed Journals

American Journal of Technology and Applied Sciences
ISSN (E): 2832-1766| Volume 17, | October., 2023

PROSPECTS FOR THE INTRODUCTION OF INNOVATIVE EDUCATIONAL TECHNOLOGIES IN MILITARY TRAINING

Bazarov Babur Oripovich Colonel
Dustjonov Farkhod Yaroshevich
Armed Forces of the Republic of Uzbekistan

A B S T R A C T

In recent years, innovative educational technologies have gained a lot of attention in various fields, including the military one. This article examines the prospects and potential advantages of introducing innovative educational technologies into Army training programs. We study how these technologies can improve academic performance, improve the effectiveness of training procedures, and ultimately contribute to the development of highly qualified and flexible military personnel. Key areas of focus include virtual reality, augmented reality, gamification, and adaptive learning. Using the benefits of these technologies, armed forces around the world can revolutionize their educational programs and adapt to the ever-evolving challenges of Modern Warfare.

K E Y W O R D S

Introduction

The rapidly developing nature of military action and the increasing complexity of modern threats necessitate the introduction of innovative educational technologies in the preparation of the army. This article offers an overview of the potential benefits of integrating modern technologies into the framework of military training, providing a progressive perspective on how these changes can significantly increase training results and operational readiness.

Virtual reality in military training (VR) :

Virtual reality (VR) has proven to be an invaluable tool in various fields, including military training. This section explores VR's potential to simulate real-world combat scenarios, allow listeners to interact with dynamic environments, make tactical decisions, and raise awareness of the situation. In addition, using VR can enhance teamwork and collaboration, as well as improve knowledge storage and transfer.

Augmented reality (AR) programs:

Augmented reality (AR) has tremendous potential in military training by providing listeners with real-time, context-sensitive information and placing them in a physical environment. This section provides practical examples of how AR can increase Soldier Readiness, increase combat effectiveness, maintenance and repair assistance, and head screens (HUDs) to support navigation.

AR technology provides a immersive learning experience by closing digital elements to the real world. In the context of spatial graphics and geometry, AR can persuade visualization and perception of complex shapes and constructions. Students can use AR programs to superimpose digital models, annotations, or step-by-step instructions on physical objects, to facilitate manual learning.Gamification in Army Education:

Gamification, incorporating elements of game design into a non-game context, offers a new approach to military education. This section explores the possibilities of gamification in the development of participation, motivation and skill among soldiers. By converting learning modules into interactive and immersive experiences, Game techniques can increase listener loyalty and knowledge retention. Gamification refers to the integration of game elements and mechanics into non-game contexts to improve user engagement, motivation and learning. In the context of Army training, gamification can be used as a tool to make the training and training process more interactive, dynamic and effective.

Some ways to implement gamification in Army Education:

• Training simulations: using virtual reality or augmented reality technology, soldiers can be immersed in realistic training simulations that mimic real-world combat scenarios. These simulations help increase pressure-based decision-making skills, problem-solving skills, and critical thinking.

* Leaderboards and competitions: creating a leaderboard and organizing friendly competitions helps to develop a healthy sense of competition among soldiers. Soldiers can monitor their progress, compare their performance with their peers, and strive to improve their ratings. This can be involved in motivation and the learning process.

• Success badges and awards: creating a system of achievements that rewards soldiers with badges, medals or points to complete tasks, pass exams or demonstrate specific skills can create a sense of success and recognition. This can encourage soldiers to actively participate in the training process and strive for excellence.

• Storytelling and story-driven learning: incorporating story elements into curricula can make them more interesting and compelling. Soldiers can follow a story or character through a variety of missions, where they must apply the acquired knowledge and skills to overcome challenges and progress in the storyline.

• Team-based challenges: organizing team-based challenges or exercises helps with collaboration and teamwork. Soldiers can work together to solve problems, complete missions, or achieve common goals, developing the skills needed for effective military action.

• Immediate feedback and progress tracking: the introduction of real-time feedback mechanisms and progress tracking tools helps soldiers assess their performance and identify areas of improvement. This can create a sense of responsibility and encourage soldiers to take an active part in the training trip.

In general, gamification can revolutionize Army Education by making training more fun, efficient and enjoyable for soldiers. This can increase their learning experience, increase motivation and ultimately contribute to their professional development and readiness for Real problems.

Adaptive Education Systems:

Adaptive learning systems analyze individual learner data to personalize educational content and delivery methods. This section highlights the benefits of adaptive training in the military field where customized training programs can meet the unique needs of each soldier. Adaptive systems optimize

learning outcomes and accelerate skill development by continuously adapting to their progress, performance, and strengths and weaknesses.

Challenges and considerations:

The introduction of innovative educational technologies in the military field also presents specific problems. This section discusses ideas such as cyber security, economic efficiency, infrastructure requirements, and the need for adequate training and support systems for teachers. Solving these problems is essential to ensure successful integration and optimal use of new educational technologies.

10 points that illuminate the potential prospects for the introduction of innovative educational technologies in military training:

1. Advanced engagement: innovative technologies such as virtual reality (VR), augmented reality (AR), and gamified training platforms can significantly increase listener activity and motivation during military training. This can lead to the preservation of knowledge and the development of skills.
2. Realistic simulations: advanced simulators combined with high-resolution graphics and immersive environments offer realistic training scenarios for military personnel. These simulations can replicate a variety of combat situations to help soldiers gain experience in a safe and manageable setting.
3. Cost reduction: the application of innovative educational technologies can reduce overhead associated with traditional military training methods. Using a Virtual training environment, expensive resources such as ammunition, fuel, and equipment can be saved.
4. Availability and portability: with the development of mobile devices and internet connectivity, educational technologies can be accessed remotely, allowing staff training in different locations. The portability of these technologies allows on-demand training, regardless of geographical limitations.
5. Individual education: innovative educational technologies are able to adapt to individual educational styles and pace and provide customized learning experiences for military personnel. Personalized learning paths can refer to individual strengths, weaknesses, and educational goals, maximizing the effectiveness of training programs.
6. Data-based performance assessment: advanced technologies can collect and analyze data during training exercises, allowing a detailed performance assessment. This data-driven approach helps to identify areas of improvement and provides real-time feedback to the audience, which helps to improve continuous skill.
7. Cyber security training: the introduction of innovative educational technologies can also meet the need for cyber security training in military operations. Interactive platforms and simulations can provide practical experience in protecting against cyber threats and preparing employees for digital warfare.
8. Distance cooperation and communication: educational technologies can facilitate distance cooperation between military personnel, allowing them to train together even when physically separated. Virtual classes, collaborative learning environments, and real-time communication tools can enhance teamwork and coordination skills.
9. Life education: the application of innovative educational technologies in military training can promote a lifelong culture of education among personnel. By offering convenient and interesting learning experiences, self-contained modules and continuous professional development, soldiers can be updated with the latest techniques and practices.

10. Technology transfer: investing in innovative educational technologies for military training can also enhance technology transfer between the military and civilian sectors. Research and development for military purposes can lead to advances that are more widely used in areas such as health, education and industry.

While these perspectives provide potential benefits, it is important to consider the challenges and ethical implications associated with the introduction of innovative educational technologies into military training. The implementation of these technologies should be carried out carefully and in accordance with specific military goals and values.

7. Conclusion:

Including innovative educational technologies, it undoubtedly promises a great promise for the future of military training. Potential benefits from Virtual reality to augmented reality, gamification, and adaptive learning systems are of great importance. Armed forces around the world must take advantage of the opportunities offered by these technologies to change their training programs and develop a highly qualified, flexible and operational ready military workforce. Through careful consideration, cooperation and investment, the prospects of educational innovation in the army can be realized in order to bring military capabilities to new heights.

References

1. J. Kiszely, "Post-Modern Challenges for Modern Warriors" (Shrivenham Paper No. 5, Defence Academy of the United Kingdom, Swinton, Wiltshire, UK,
2007).
2. J. E. Coulson, Ed., Programmed Learning and ComputerBased Instruction (Wiley, New York, 1962).
3. E. H. Galanter, Ed., Automatic Teaching: The State of the Art (Wiley, New York, 1959).
4. J. D. Fletcher, M. R. Rockway, in Military Contributions to Instructional Technology, J. A. Ellis, Ed. (Praeger, New York, 1986), pp. 171–222.
5. Office of Technology Assessment, U.S. Congress, Power On! New Tools for Teaching and Learning (OTA-SET-379, Government Printing Office, Washington, DC, 1988), p. 158.
6. D. Bitzer, P. Braunfield, W. Lichtenberger, IEEE Trans. Educ. 4, 157 (1961).
7. R. C. Atkinson, H. A. Wilson, Eds., Computer-Assisted Instruction: A Book of Readings (Academic, New York,1969).
8. A. S. Gibbons, P. G. Fairweather, in Training and Retraining: A Handbook for Business, Industry, Government, and the Military, S. Tobias, J. D. Fletcher, Eds. (Macmillan Reference, New York, 2000), pp. 410–442.
9. J. D. Ford, D. A. Slough, R. E. Hurlock, Computer Assisted Instruction in Navy Technical Training Using a Small Dedicated Computer System: Final Report (Research Rep. No. SRR 73-13, Navy Personnel Research and Development Center, San Diego, CA, 1972).
10. J. F. Vinsonhaler, R. K. Bass, Educ. Technol. 12, 29 (1972).
11. J. D. Fletcher, Int. J. Cogn. Ergon. 5, 317 (2001).
12. W. R. Uttal, in Programmed Learning and Computer-Based Instruction, J. E. Coulson, Ed. (Wiley, New York, 1962), pp. 171–190.
13. J. R. Carbonell, IEEE Trans. Man Mach. Syst. 11, 190 (1970).