



Educational Games as a Learning Method

Aparajita Paul¹ and Anikesh Midya²

Assistant Professor, Department of Basic Science and Humanities, Narula Institute of Technology, Kolkata, India¹

Student, Department of Electronics and Communication Engineering, Narula Institute of Technology, Kolkata, India²

Abstract: In the information age where emerging trends indicate the rapid rise in the screen time consumption overlapping with a steep decline in attention spans of young adults and teenagers alike, new challenges emerge with regards to teaching methods. Educators often find it hard to reach out to the class via the conventional teaching mechanism which fails to appeal to the experience of modern youth, nor does it provide them the stimulation and dopamine hits which a high budget production of a AAA studio game and or social media. With the pandemic acting as a tectonic shift for students and teachers alike it's high time to reevaluate the conventional teaching strategies and explore unconventional methods which connect better with the internet generation and how games can be on the forefront of this movement. We explore the role pre information age games played in society and how much of an impact they can create as an educational tool.

Keywords: Attention span, Screen time, Dopamine hit, Strategy

I. INTRODUCTION

Even before the emergence of the internet games have always played a crucial role as a tool for propagation of educational, moral and religious thoughts and playing them has contributed to refining critical thinking and decision making since the ancient world. Games like Senet and Royal Game of Ur which were considered as rather simple pass time soon captivated the minds of people as a way to connect with the afterlife and divinity.

While discussing ancient board games one cannot forget the ancient games of India which later assumed the form of many modern day board games still played to this day while the most renowned game chess derived from 'chaturanga' which consisted of four players representing four arms of the Gupta Army (infantry, horse cavalry, chariots and elephants) stressed an emphasis on strategic thought and teamwork to outwit the enemy forces a game of 'moksha patam' (later snakes and ladder) had a more spiritual aim to teach individuals how to reach higher level of consciousness and leave behind the earthly bounds to reach moksha.

Game of Chau par has featured in the epic 'Mahabharata' as a means for commentary about morality of one's actions. These examples demonstrate the power games hold as a teaching method and for such a long time. If it was possible in the times of ancient India, Egypt and Babylon what is stopping games from creating a similar impact today as an educational tool.



Fig. 1 A set of Senet



Fig. 2 Royal Game



Fig. 3 Chaturanga

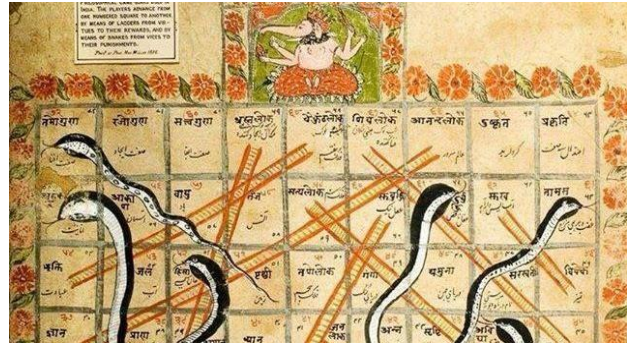


Fig. 4 Mokshapatam (Snakes and Ladders)



Fig. 5 Pacheesi (Earlier version)



Fig. 6 Pacheesi (Modernized version)

II. BENEFITS OF GAMES

The use of games as a tool to subconsciously instill values and skills ever since ancient times, games like Kriegsspiel were specifically created to train officers of the Prussian army matters concerning warfare. Similarly values such as Teamwork, Planning, Management and technicalities of a subject among many others but one of the fundamental benefits of aiming is that it helps in students accepting established rules and following them in order to win. Games also combine intrinsic and extrinsic motivations of a student in order to achieve a result. Such mechanics increase their involvement in classes and assignments through high scores, levels, in-game achievements which helps to internalize the knowledge gained through the game.

Karl Kapp classifies students/players into four distinct categories:-

- The achiever – Players who want to come on top and get the high score
- The explorer – Players who like to explore the surroundings of the game and become familiar to the environment
- The socializer – Players who like to communicate with their teammates
- The killer – Players who like to beat other players in 1 on 1 competitions

Games can be created to cater to these archetypes so more and more people can relate and engage with the game which stimulates their instincts and interests.

III. MODERN GAMES & FUTURE PROSPECTS

Games such as Europa Universalis 4, Hearts of Iron 4, Sid Meier's Civilization series, Age of Empires and the Total War franchise has sparked a rejuvenated interest in history a subject topic often described as boring by students. Adventure Escape genre of games put forward several mathematical, reasoning, and graphical pattern recognition questions while framing it within a story of survival and escape capturing the imagination of the mind and engaging them in such academic topics. Typing of the Dead inspired from House of the Dead (a zombie FPS) made typing more fun than ever with the adrenaline rush of shooting monsters. These examples just scratch the surface of the innumerable possibilities that lay ahead if we find the perfect balance of equal parts knowledge and equal parts fun. The impact of the pandemic on the education system is undeniable for the duration of the lockdowns. Teachers and students alike were forced to continue classes from their homes using nontraditional tools but the transition to online education was anything but smooth. One of the reasons for that can be attributed to the use of conventional methods used under unconventional platforms.

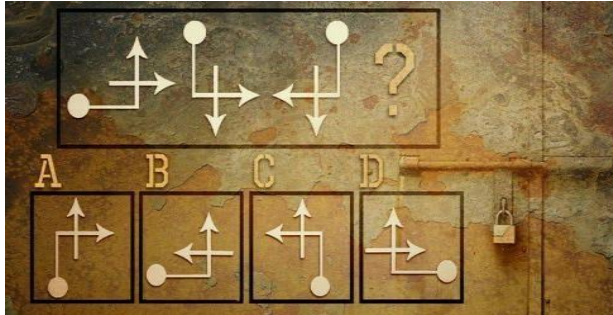


Fig. 7 Adventure Escape



Fig. 8 Sid Meier's Civilization



Fig. 9 Hearts of Iron IV



Fig. 10 Europa Universalis IV

But eventually newer ways were found Kahoot! Was an instant hit to keep students motivated both in class subjects as well as from stress of the pandemic. While the pandemic presented many problems and shed light on the growing cracks in an aging education mechanism which is lagging behind in the information age it also presents an opportunity to be the launching pad for the new and revamped educational mechanism which makes education feel less like a chore and embrace it as a part and parcel of life. The pandemic has created a huge demand for tools like Kahoot and more companies, institutes and administrations should look for developing such platforms to be more mainstream and not as a last resort. Following the principle of Supply and demand it is optimal to take advantage of this demand and all resources to liberate both the students and students from an increasingly monotonous cycle in which both tracking and making progress is way dull compared to the mechanisms of a game designed to hit all the right spots in the brain and produce a much-desired dopamine hit.

IV. CONCLUSION

This abstract is based on the principle that necessity is the mother of invention and the need of the hour is to revamp an aging education mechanism which was proved to be lacking in several areas during the pandemic, especially in keeping the students motivated amidst the stressful environment. This calls for mass mobilization and an all-hands-on-deck approach to brainstorm solutions. Games can help immensely in this new teaching approach and occupy a prominent role in future developments. If the majority of our social, financial and recreational life is online why shouldn't our education join the internet revolution? This abstract tries to look at education process through a different lens and the aspects it is lacking in through the perspective of students born in the information age and their experiences with conventional methods and the tough transition through the pandemic. It is evident that a change is necessary, and we should look towards all possible tools at disposal and how games are an untapped resource which should be further looked into.

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