When you have a game like platform where knowledge is applied, knowledge becomes a resource. The more you know, the better you are at the game.

- “Eugene Shelly”
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IN SUMMARY
Sarah (aged 20) recently graduated from College and starts working at Harte Hanks. For her career enhancement, she joins an online digital marketing course offered by Lyngia University. In her own words-

“This course will help me in career advancement while managing working schedule and it will also put less burden on my pocket.”

Sarah chose Lyngia University as it has been in the news for bringing down the dropout rate and gaining good reviews about the course from the previous students. One of the alumni says, “I thoroughly enjoyed the course and it seemed like playing a game. I was hooked on throughout the course. Towards the end of the course, I felt very confident while appearing for the interviews for digital marketing. I attribute my success to gamified online course and highly recommend it for all Digital Marketing aspirants who are looking towards making a promising career in Digital Marketing.”

Sarah witnesses a completely different method of education. To start with, she gets rewards for submitting assignments on time, helping her friends, reading extra materials and of course, attaining high marks in exams. This motivates her to read more and have a positive attitude towards learning as every activity receives points. Even her rank is displayed on the leaderboard, where she can compare her performance with other students. The ranking of contestants is determined by the number of points, badges and trophies, which students accrue on showing the desired behavior during studies. Sharing performance on social media is possible. This not only helps to grow a competitive spirit, it also leads to social recognition of one's efforts.

Gamification dynamics and mechanics helps make dry curriculum engaging, keeps students hooked throughout the course, and encourages students to read more. This eventually leads to enhanced learning and low dropout rate.

**GAMIFICATION DRIVES DESIRED BEHAVIORS**

It is not the habits, but the right behavior that drives one's success at a workplace. And gamification has emerged as powerful tool to motivate people and drive desired behaviors and outcomes. Game mechanics and dynamics, when applied to general non-game activities, prompt the desired behaviors. Game mechanics, such as rewards and points adapted from games, make work more engaging, compelling and interactive. These mechanics evoke specific emotions that compel desires and motivate players—creating game dynamics. With the advent of internet and gaming, game mechanics have become a general phenomenon, making their incorporation easy and interesting.

For example, HR would like to accelerate the onboarding process, which includes reading the company policies, compliance training, health insurance etc. A gamification layer can create leaderboards of employees who have successfully completed onboarding. The results and recognition, being visible to everyone, pushes others to adopt desired behavior and complete onboarding.
GAMIFICATION IN ACTION

Gamification has been accepted wholeheartedly and is being used across industries to engage with consumers, maintain customer loyalty, encourage positive social behaviors, drive sales and encourage knowledge sharing.

The following examples illustrate the use of gamification and the results achieved:

- Comcast observed an average 127% increase in the number of appointments booked per day after installing gamification; this has had direct and positive impact on Comcast’s revenues.\(^1\)
- Employees at El Camino Hospital in Mountain View, CA achieved total weight loss of 1000 pounds through activities such as quizzes, raffles and competitions.\(^2\)
- HCL implemented gamification in recruitments and observed 90% decrease in pre-join churn rate.\(^3\)
- Bunchball observed 50% reduction in training cost of their customers after implementing gamification.\(^4\)
- Kaplan University increased 17% time spent in class; 85% of the students selected harder assignments and 9% achieved higher grades.\(^5\)

CURRENT STATE OF ONLINE EDUCATION

The ability to learn wherever and whatever has made online education very popular since the advent of internet. As online resources are available 24×7, it enables ease of studying anytime—and the geographical boundaries of learning are vanishing due to this. Online education also accommodates various learning styles and speeds of students. It allows students who learn faster to move on to the next level, while enabling slower learners to rewind and repeat lectures.

In spite of its great popularity, there is 90% attrition level in long online courses. Moreover, the learning in online set up has been found to be lower than in the case of classroom learning. These have been attributed to the low level of engagement, lack of attention, low collaboration and primary focus on certification than learning. The absence of physical teachers and classroom has an impact on collaboration, attention and engagement of students enrolled in online courses. Students are less sticky to the module and devices. They also cannot help from their fellow mates for assignments and discussions. They focus more on getting certificate than learning outcomes from the course.\(^6\)

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5. https://badgeville.com/kaplan-university/
CHALLENGES IN IMPLEMENTING EDUCATION GAMIFICATION

Gamification in education uses game mechanics and dynamics to engage students and provide them incentives for desired behavior. But when it comes to the actual design and implementation, there have been more failures than successes. Few of the gamification application instances failed to address specific behavior needs to be promoted to address existing problems.

Gamification needs to be a part of the learning process and not a separate module as duplication of efforts would only lead to frustration and dissatisfaction. Every part of gamification should be a part of learning, and rewards should be meaningful such that the end user feels attached and engaged\(^7\). Gamification needs a strong story line that is interwoven with the curriculum to make it more relevant.

INGREDIENTS FOR SUCCESSFUL EDUCATION GAMIFICATION

There are six levers that are critical to the success of gamification in education:

1. **Gamification story layer**: Gamification story applied over existing system needs to be wisely chosen. It includes dimensions, appropriate perspective, right scenarios and appropriate storyboard.

2. **Customization capability**: As students are diverse in online courses than in a classroom environment, there should be ample customization opportunities at the learner, teacher and admin levels. Group studies, complexity adjustment and customized targets should be incorporated.

3. **Adaptation for deep learning**: Gamification tools should be adaptive as per the demographics and learning progress of the student. It should be able to judge satisfaction level of the user and provide extra support if needed.

4. **Planning and strategy**: Shortlisting desired behaviors and designing process accordingly is important. The gamification module should account for personalities and reward appropriate behaviors. Rules should be laid out clearly.

5. **Optimized design**: It involves mapping emotional drivers, identifying personas and delineating the behavior of various types of behaviors.

6. **Aligned processes**: Gamification should be well-tied to the study processes, adhering to accessibility and existing standards. Gamification process objectives, metrics and desired outcomes need to be clearly defined.

TOOLS AND TECHNIQUES APPLIED FOR GAMIFICATION

Gamification uses game mechanics such as levels, leaderboards, collaboration, fun and game dynamics such as reward, recognition, self-expression and status challenge to engage.

Badges and points are awarded to encourage the desired behavior. For example, rewarding students on completion of all study tasks and submissions of assignments on time. This would help students and organizations to achieve their desired goals consistently. Leaderboards display the current position of the participants similar to games and create healthy competition to reinforce desired behavior. To earn rewards and badges, participants would be encouraged to gain edge over others. Social sharing of leaderboard status also offers opportunity for social recognition and healthy competition.

GAMIFICATION W.R.T. OTHER EDUCATION ENGAGEMENT TECHNOLOGIES

Technology in education mostly focuses on enhancing engagement to improve learning experience. Many pedagogies have been tried so far—including manual, technical and a mix of both—to enhance engagement.

Classroom projects were introduced to get students involved by forming groups and assigning group tasks. This improved coordination and knowledge sharing among students, which led to enhanced engagement and improved learning.

A learning simulation combines entertainment and instructions. This builds on real world scenarios to enhance learning. Simulation being used extensively in medical education and is widely accepted. It has been ranked highest in learning.

Alternate reality games involve game and drama played in the real world space and online, in which dozens of players come together to solve mysteries. These games help foster coordination and teamwork among players and increase engagement.

Scenario-based e-learning involves an asynchronous mode of delivery. As instructor is aware of the classroom learning style, he incorporates real world examples and scenarios in the given scenario-based learning module. These examples are very relevant for the classroom discussion, which makes learning fun and engaging. This interactive and engaging environment allows students to gather information and skills that they will easily recall for future use.
Gamification involves keeping the existing curriculum and at the same time, applying game dynamics and mechanics to improve engagement. This keeps the spirit and goals of existing pedagogy intact and simultaneously enhances engagement. Games are deeply ingrained in the psyche of human beings, which quickens its acceptance.

IN SUMMARY

With the advent of internet, online education has become very popular. It provides convenience, flexibility, a comfortable learning environment and high ROI. Universities have seen increased enrollment over years but dropout rate is very high (>90%). Low engagement level has been the major reason behind the dropout. Gamification in education, discussed in this paper, seeks to address engagement and learning problems. It uses game mechanics and dynamics to engage students, enhance coordination, inculcate competition and impart social recognition. Gamification has been quite successful in many industries. However, education gamification has been quite challenging. While selecting gamification, organizations should focus on important levers like customization, adaptive learning, design and aligned processes for achieving desired results from gamification. All universities, especially those that focus on online education, would benefit greatly from gamification.
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