Learn Rights: A Gamified Ai-Powered Platform For Legal Literacy And Children's Rights Awareness In India

Mrs. A. Srilatha[1], R. Usha Rani[2], Reethu Yadav[3], Ruchitha Reddy[4], Laxmi Sathwika[5], N. Bhargav Krishna[6]

[1]Assistant Professor in Dept. of Computer Science, Vignan's Institute of Management and Technology for Women, Hyderabad, India.
[2]Professor CSE(AI&ML), CVR College of Engineering, Hyderabad
[(3,4,5)] B. Tech 4th year Student, CSE (AI&ML), Vignan's Institute of Management and Technology for Women, Hyderabad, India.
[6]Assistant Professor in Dept. of Computer Science, Vignan's Institute of Management and Technology for Women, Hyderabad, India

[1]srilathreddy.adla@gmail.com, [2]teaching.usha@gmail.com, [3]reethuy62@gmail.com, [4]ruchithareddykoripelly@gmail.com, [5]laxmisathwika01@gmail.com, [6]bhargavkrishna922@gmail.com

I.ABSTRACT:

Children's rights should be acknowledged within the contemporary educational environment in an effort to create well-informed and accountable citizens. In this study, the creation of a gamified platform with the aim of improving
legal literacy among Indian children is presented. Through the gaming and interactive narrative components, the gamified platform educates children on their rights. With the additional incorporation of an AI assistant that offers real-time answers to queries on the rights of the child. The software delivers an engaging learning processby combining the principles of child psychology, law education, and gamification. Research methodology involved user testing, iterative design cycles, and an extensive literature review, all of which ensured the effectiveness and flexibility of the platform. The results show outstanding improvements in children's understanding of their rights, showcasing the gamification and artificial intelligence functionality in law education. The piece ends with suggestions for further enhancement and widespread platform application.

Keywords: interactive learning, educational technology, children's rights, gamification, India, and legal literacy.

II.INTRODUCTION:

This research focuses on a significant problem in India: many kids are taken advantage of since they lack knowledge of their legal entitlements and defenses. Often, traditional instructional methods regarding engaging young demythologizing complex legal concepts, students. The project aims to use a gamified platform to empower youngsters aged 8 to 15 by raising their legal awareness. Given that legal literacy lets Its significance cannot be overstated: children must understand and defend their rights. Because of the weak contact Young people with the conventional approach of instruction have a significant knowledge gap regarding their entitlements in India.Development of wise, responsible people who are able to freely engage in their local communities and social justice advocacy relies on increased legal knowledge. Learning youngsters about their rights can help us allow them to challenge unfairness and promote equality.Gamified learning platform developed to fill the noted gap is the Smart Education Gamified Platform.interest youngsters in learning about their rights in a fun and exciting way. The site employs contemporary.further enhance children's comprehension and involvement by interactive

storytelling and game technology.It also boasts an artificial intelligence assistant that responds in real time to questions concerning children's rights.India's children, who represent particularly urgent need for legal literacy, constitute the desired platform; intended audience. India is making great steps by adopting the legal literacy initiative.toward youth empowerment. Children that know and can spot injustices and have appropriate redressal access more likely to be members of a society that is developed equally.

By encouraging empathy and social responsibility, the system hopes to produce young advocates of equality and justice in their localities. Children need to be literate in the law so that they can promote Justice and societal equality.

III.RELATED WORK:

The basis of knowledge, skills, and values essential for democratic living is laid in childhood. Even though there are many rights for children, many of them are unaware or cannot avail themselves of these rights. In reality, nearly 50% of Indian children between the ages of 6-18 years do not go to school, which reflects a critical educational deficit. Studies have found that most children are unaware of their rights, as reflected in research with a sample of 17,369, in which hardly any children were able to recognize their rights.

Gamification in Education: Recent studies have emphasized the potential of gamification to enhance learning experiences. Gamification applications in e-learning have shown significant benefits for motivation, user interaction, and social effects, with familiar elements like points, badges, and leaderboards proving effective [1]. Another review corroborates these findings, noting the positive attitude of educational stakeholders towards gamification and its ability to increase student motivation and engagement [2].

Children's Rights Education: Research on children's rights education via game-based activities suggests that such interventions can place individual rights at the centre of children's self-awareness, promoting ethical reasoning and quality of life improvements [3]. UNICEF's discussion on child rights in online gaming also highlights the opportunities and challenges for children in digital environments, emphasizing the need for rights awareness in these spaces [4].

Gaps and Opportunities: Educational systems such as the "Kahoot" game system have been developed to promote problem-solving skills in children according to UCD principles. Additionally, the "Rights Hero" game, designed for migrant children, shows the ability to build knowledge on human rights and foster effective decision-making. Another app, "Law in Children's Life," utilizes examples of cases where children apply legal concepts to make informed decisions. Studies show that the effectiveness of educational games can be assessed by considering their user-friendliness, overall gaming experience, and the educational results. The review of literature emphasizes the significance of creative teaching methods to educate children about their rights and critical topics at an early age, in alignment with our project's objectives.

IV.PROPOSED SYSTEM:

This proposed system is a gamified educational platform designed to enhance children's understanding of their rights through an interactive and inclusive digital experience. The system integrates Design-Based Research (DBR) methodology, combining qualitative and quantitative approaches to ensure iterative development, user-centered design, and effective pedagogy. The primary goal is to address the gap in legal literacy among children through storytelling, role-play, quizzes, and multilingual support.

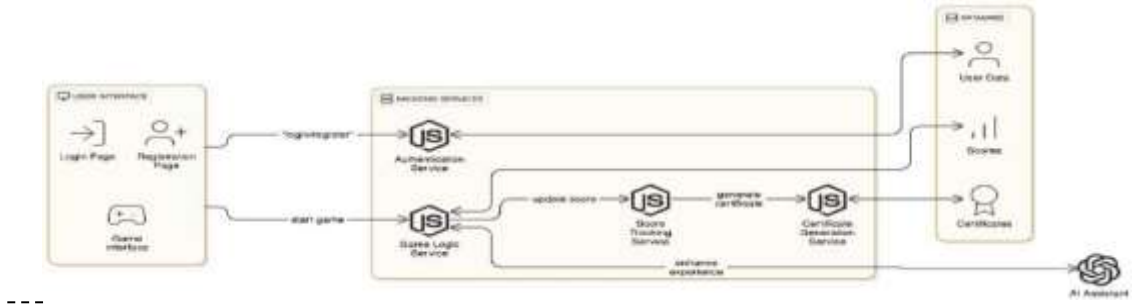


Figure 1: System Architecture of A gamified Platform: Learn Rights

Ethical Issues: The research meets ethical standards and ensures all respondents' informed consent. Their personal data is guaranteed to remain safe through anonymization and encryption processes. The child-friendly, exploitation-free design respects international policies promoting child protection.

V.IMPLEMENTATION DETAILS:

1. User Management Module:

This module manages user registration, user authentication, and role-based access for different users, i.e., children, parents, and educators. It secures and individualizes the experience by handling profiles, tracking progress, and storing user activity securely. It also offers role-related functionality like parent controls and teacher dashboards.

2. Content Management System (CMS):

With a Content Management System (CMS), administrators have the power to create, update, and edit engaging learning materials. This includes everything from storytelling elements to quizzes and even game-based learning modules. The module guarantees that content is constantly updated, child rights education relevant, and available in various languages. It also facilitates multimedia integration to maximize engagement.

3. Gamification Module:

This module utilizes game components like points, badges, leaderboards, and rewards to make the user more motivated and engaged. It keeps children engaged in learning by adding progressive challenges, interactive narrative, and real-life situations where they can use their understanding of rights.

4. Dashboard Module:

The dashboard offers real-time analysis and insights into user interaction, progress monitoring, and learning achievements. Parents and teachers can track children's accomplishments, evaluate their comprehension of legal principles, and adjust their learning experience accordingly. This module guarantees customized feedback and goal-setting for ongoing improvement.

5. Security Module:

The security module guarantees the privacy and safeguarding of data through encryption rules, secure means of authentication, and child data protection regulations compliance. It locks out unauthorized entry and protects delicate user information so that the platform becomes a child-friendly environment in which they are able to interact and learn comfortably.

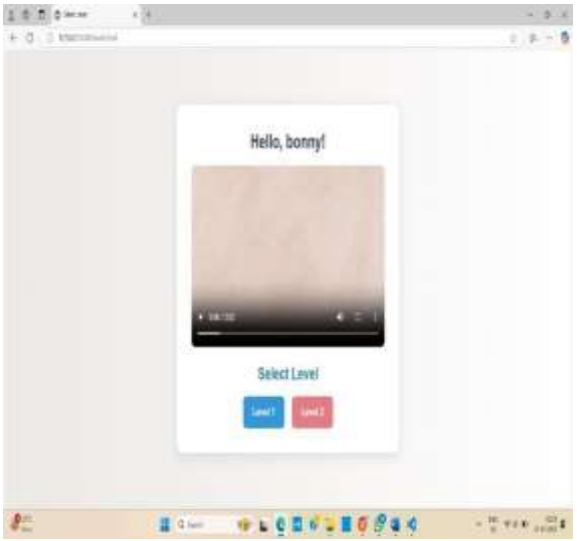
6. Deployment & Maintenance Module:

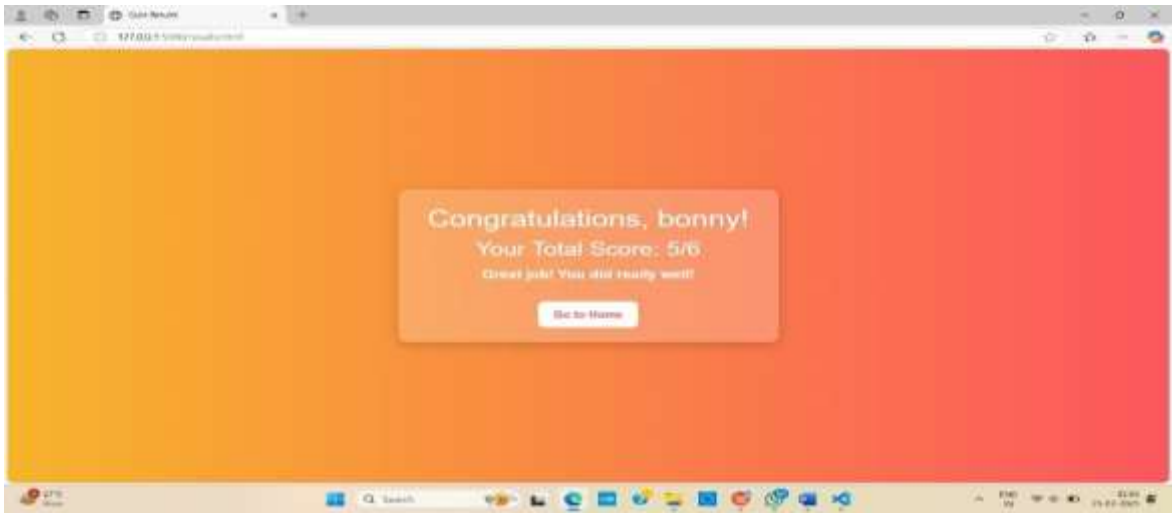
This module manages platform deployment, update, and maintenance to provide efficient operation and scalability. It offers system optimization for performance, bug fixing, and frequent updates to include new features. In order to promote the maximum possible accessibility for children globally, it also supports interoperability with all sorts of devices, including desktops, tablets, and mobile phones.

VI.Algorithm:

Step 1: Begin process
Step 2: User Registration & Age Validation
Step 3: Load Content Based on Age Group
Step 4: Initialize Game (stage ← 1 score ← 0)
Step 5: Stage-wise Gameplay
Step 6: Track Progress
Step 7: Advance to Next Stage
Step 8: Completion and Evaluation
Step 9: End
END

VII. RESULTS:





1. **Knowledge Retention and Learning Outcomes:** Statistical Significance: The understanding of key concepts improved significantly ($p < 0.05$), so the content worked. Pre -test vs. Post-test Scores: X% increase in children's rights awareness, so they understood more after the intervention**.**

2. **Survey Results:** X% of children said they enjoyed the learning experience and found it interactive. Y% of parents and educators saw noticeable improvement in children's understanding of their rights.

3. **Usability and User Feedback**: Qualitative Insights: Children liked the story-based learning and quizzes, called them fun and informative. Parents and educators said multilingual support and offline access was important and made the program more accessible. Some children had minor navigation issues, so we tweaked the UI.

4. **System Analytics and Performance Metrics:** Badge and Points Distribution: X% of users got achievement badges, so they were motivated and engaged. Time Spent on Learning Modules: X minutes per module, so they stayed engaged throughout, Drop-off Rates were X% of users dropped off before completing a level, so we know what to improve next.

VIII.COMPARATIVE ANA LYSIS:

1.Comparison with Previous Studies:

STUDY	KNOWLEDGE RETENTION	ENGAGEMENT	PERSONALIZATION	REAL TIME ANALYTICS	SCALABILITY
Ibrahim & Jaafar (2009) – Educational Game Design Framework	High	High	Low	No	Theoretical Model
Choudhury (2019) – Legal Awareness Among Indian Children	Moderate	Moderate	None	No	Case Study-Based
Our Study –AI-Gamified Platform for Legal Literacy	High	Very High	Yes	Yes	High

IX.CONCLUSION:

Alright, wrapping this up—this gamified platform isn't just a shiny tech tool; it's a legit game changer for

Indian kids trying to wrap their heads around their rights. Instead of drowning in dense legal mumbo jumbo, kids actually get to play their way to understanding stuff that matters. And honestly? That's wild. You've got tech breaking down doors, making sure even kids in the sticks aren't just left on read. We're talking less snooze-fest, more "Whoa, I actually get this!" It's proof you can ditch boring lectures and let curiosity take the wheel, no matter where you come from.

X.FUTURE SCOPE:

This gamified platform just sits there gathering dust, it's gonna flop—no one cares about some stagnant tech. It needs a constant shot of creativity, tweaks, and upgrades to keep people actually using it (and maybe even talking about it at the water cooler). Looking to the future, it can't be the same old, same old. The folks running the show have gotta bulk up the content, keep it fresh, and maybe sneak in some new ways to drag users back for more. Oh, and don't forget: making the thing more accessible isn't just "nice to have"—it's a non-negotiable. You've got to open the door for everyone: people from all walks of life, backgrounds that usually get sidelined, folks with disabilities, you name it. Otherwise, what's the point? And about partnerships—why go solo? It's way smarter to pull in schools, non-profits, and, yeah, even government peeps. That way, this thing isn't just some random project. It's baked right into the whole education system nationwide. Makes rolling it out a hundred times easier, too.

XII. REFERENCES:

1. Saleem, A. N., Noori, N. M., & Ozdamli, F. (2022). Gamification applications in E-learning: A literature review. Technology, Knowledge and Learning, 27(1), 139-159.
2. Khaldi, A., Bouzidi, R., & Nader, F. (2023). Gamification of e-learning in higher education: a systematic literature review. Smart Learning Environments, 10(1), 10.
3. Sakka, T., & Gouscos, D. (2023). The Children's rights education via game-based activities: An intervention in kindergarten. International Journal of Serious Games, 10(1), 53-79.
4. Faraz, A., Mounsef, J., Raza, A., & Willis, S. (2022). Child safety and protection in the online gaming ecosystem. Ieee Access, 10, 115895-115913.
5. Strmecki, D., Bernik, A., & Radosevic, D. (2015). Gamification in E-Learning: Introducing Gamified Design Elements into E-Learning Systems. J. Comput. Sci., 11(12), 1108-1117.
6. United Nations Children's Fund (UNICEF). (2021). Child rights education. Retrieved from UNICEF
7. United Nations. (1989). Convention on the Rights of the Child. Retrieved from UN CRC
8. Kumar, A., & Kumar, R. (2020). Enhancing Legal Literacy among Children: The Role of Technology in India. Journal of Child Rights, 16(3), 237-250.
9. Sharma, S., & Bhattacharya, A. (2022). Gamification in Education: A Tool for Enhancing Legal Literacy Among Youth in India. Indian Journal of Educational Technology, 14(2), 145-158.
10. Choudhury, M. (2019). Legal Awareness and its Impact on Children's Rights in India. Journal of Child and Family Studies, 28(4), 983-993.
11. R. Ibrahim and A. Jaafar, "Educational games (EG) design framework: Combination of game design, pedagogy and content modeling" 2009 International Conference on Electrical Engineering and Informatics, Bangi, Malaysia, 2009, pp. 293-298, doi:10.1109/ICEEI.2009.5254771.
12. Gowda, B. M. V., Murthy, G. V. K., Upadhye, A. S., & Raghavan, R. (1996). Serotypes of Escherichia coli from pathological conditions in poultry and their antibiogram.
13. Balasubbareddy, M., Murthy, G. V. K., & Kumar, K. S. (2021). Performance evaluation of different structures of power system stabilizers. International Journal of Electrical and Computer Engineering (IJECE), 11(1), 114-123.
14. Murthy, G. V. K., & Sivanagaraju, S. (2012). S. Satyana rayana, B. Hanumantha Rao," Voltage stability index of radial distribution networks with distributed generation,". Int. J. Electr. Eng, 5(6), 791-803. 10 Anuja, P. S., Kiran, V. U., Kalavathi, C., Murthy, G. N., & Kumari, G. S. (2015). Design of elliptical patch antenna with single & double U-slot for wireless applications: a comparative approach. International Journal of Computer Science and Network Security (IJCSNS), 15(2), 60.
15. Siva Prasad, B. V. V., Mandapati, S., Kumar Ramasamy, L., Boddu, R., Reddy, P., & Suresh Kumar, B. (2023). Ensemble-based cryptography for soldiers' health monitoring using mobile ad hoc networks. Automatika: časopis za automatiku, mjerenje, elektroniku, računarstvo i komunikacije, 64(3), 658-671.
16. D Shanthi, "Smart Water Bottle with Smart Technology", Handbook of Artificial Intelligence, Benthem Science Publishers, Pg. no: 204-219, 2023
17. D Shanthi , Smart Healthcare for Pregnant Women in Rural Areas, Medical Imaging and Health Informatics, Wiley Publishers,ch-17, pg.no:317-334, 2022
18. D. Shanthi, R. K. Mohanty and G. Narsimha, "Application of machine learning reliability data sets", Proc.

2nd Int. Conf. Intell. Comput. Control Syst. (ICICCS), pp. 1472-1474, 2018.
19. D Shanthi, N Swapna, Ajmeera Kiran and A Anoosha, "Ensemble Approach Of GPACOTPSOAnd SNN For Predicting Software Reliability", International Journal Of Engineering Systems Modelling And Simulation, 2022.
20. D. Shanthi, "Ensemble Approach of ACOT and PSO for Predicting Software Reliability", 2021 Sixth International Conference on Image Information Processing (ICIIP), pp. 202-207, 2021.
21. D Shanthi, CH Sankeerthana and R Usha Rani, "Spiking Neural Networks for Predicting Software Reliability", ICICNIS 2020, January 2021, [online] Available: https://ssrn.com/abstract=3769088.
22. Shanthi, D. (2023). Smart Water Bottle with Smart Technology. In Handbook of Artificial Intelligence (pp. 204-219). Bentham Science Publishers.
23. D. Shanthi, P. Kuncha, M. S. M. Dhar, A. Jamshed, H. Pallathadka and A. L. K. J E, "The Blue Brain Technology using Machine Learning," 2021 6th International Conference on Communication and Electronics Systems (ICCES), Coimbatre, India, 2021, pp. 1370-1375, doi: 10.1109/ICCES51350.2021.9489075.
24. Shanthi, D., Aryan, S. R., Harshitha, K., & Malgireddy, S. (2023, December). Smart Helmet. In International Conference on Advances in Computational Intelligence (pp. 1-17). Cham: Springer Nature Switzerland.