

**ROLE OF GAMIFICATION IN THE INDIAN EDUCATION SYSTEM WITH
REFERENCE TO HIGHER EDUCATIONAL INSTITUTIONS IN BANGALORE CITY**

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Abstract

The Gamification in education is one of the teaching pedagogy in which the students will be learning the concepts through game design elements like points, performance graphs, Badges, Leader Boards, Avatars, Meaningful stories, teammates, activities, experiments and so on in the classroom setup. This technique will enhance the student engagement, foster motivation and performance among the students which results in the positive learning environment. Due to the lack of information about the technique of gamification and how does it works and how to incorporate it in the education system, we have conducted a research which shows that the students are really interested in bringing the gamification concepts in the educational system which will improvise the learning experience through pragmatic approach. This enable the students to apply the knowledge of concepts gained as per the industry requirements. The researcher has applied descriptive statistics to present the key aspects such as students involvement, confidence and better

career approach and applied ranking method to identify the consideration of gamification as per the respondents. It is concluded that Gamification is certainly one of the technique which will bring the radical change in the educational system in India but the proper ICT enabled classes will facilitate the effective implementation of the techniques for efficacy in learning.

Keywords: Gamification, Student Engagement, Career Approach, Learning Environment and Learning Experience.

1. Introduction

The Indian Education System started with traditional methodology in the ancient India where the education was being transferred from guru to shishaya, for such type of educational system is called as Gurukul system of Education (Residential Schooling System). It included the learning of life skills such as Archery, astronomy, medicine, philosophy, political science, economics, religion, yoga, physical education, and defence studies in which students were getting the benefit of pragmatic approach of education.

Later, British invaded India and established themselves with great powers had made them to bring a revolutionary change in the Indian Education System as T. B Macaulay proclaimed that “We must at present do our best to form a class of person’s Indian food and colour but English in tastes, in opinions, in morals and in intellect” for which he implemented Downward Filtration Method. Eventually, he made English has a medium of Education and diverted the money to English education by building the English public schools in India.

After India got Independence, Education Commission of India had brought in the concept of 10+2 pattern of education. This system in India has four levels: lower primary (age 6 to 10), upper primary (11 and 12), high (13 to 15) and higher secondary (17 and 18). The lower primary school is divided into five “standards”, upper primary school into two, high school into three and higher secondary into two. Consequently, Teaching was confined to classrooms and the link with nature was broken, as also the close relationship between the teacher and the student.

Education has become highly marks oriented rather than knowledge oriented, which led to the rise of marks driven education system rather than conceptual driven education system. To fill this gap, the gamification in the Indian Education system would bring a radical change in the learning process and equip the students to acquaint the concept more effectively.

Gamification is an educational approach to motivate the students to learn by using the game designing elements in the learning environment. This concept aims to increase the student engagement and interaction in learning the concepts as the education is an area with high prospective for application of the learnt concept. The gamification is a technique which will enable the students to understand the concepts using certain games like points, timers, badges, leader boards, quiz and storytelling.

Gamification helps students to increase their concentration, engagement and competitive behaviour in understanding the concept and thereby it enhances the productivity of each student in the class. The learning outcomes can also be measured using gamification in the education system.

2. Review of Literature:

Errol Scott Rivera et.al (2021) Gamification, the application of game elements to non-game situations, has gained traction in education as a mechanism for improving motivation and/or learning outcomes. In this article, the emphasis is given to the student engagement and how Gamification aligned to learning or training outcomes as a measure of student engagement.



Kiryakova et.al (2014) It also focused on the success rate of three domains of learning: cognitive, affective and psychomotor through gamification. The main problems in modern education are related to the lack of engagement and motivation of students to participate actively in the learning process. Because of that, teachers try to use new techniques and approaches to provoke students' activity and motivate them to participate in training. In this article, Gamification is an effective tool which will help the engagement of students and also motivates them towards studying the contents through gaming software.

Campillo-Ferrer et.al (2020) Gamification concept had been tested on the online gaming platform called Kahoot, which is considered to be the creative and effective tool to promote motivation, engagement and meaningful learning. The integration of this game-based student response system into the teaching process improved students' perception of certain concepts in social science teaching, increased their active participation in the lesson, and motivated them towards learning in a more interactive and stimulating environment.

Pinter et.al (2020) Virtual Learning Environments and Learning Management Systems are commonly used for the implementation of gamification in education. To understand gamification, it is necessary to understand the core concepts of games. The game elements are also referred to as mechanics and dynamics. There are four equally important game elements: mechanics, story, aesthetics and technology. In this article, the gamification had been described as Course goal should be treated as game goals and course activities as game activities. The gamification technique could also be implemented in order to track the attendance of the students and them by their engagement in the classroom. The gamification module of the system is used to improve student engagement, motivation, attendance, and academic performance. Based on the research results, it is evident that the tested gamification module motivated students to attend classes more regularly. This research article emphasizes on the electronic tracking of attendance enables the teacher to quickly generate

an attendance report for an individual student on a given course and their by finding the root cause for the absenteeism

Istvan Varannai et al. (2017) Gamification has increased considerably over the past decades as video games have become more colorful and lifelike. The researcher had undergone research on the implementation of gamification through Kahoot! by filling out a survey in the Evasys online system from IT and non-IT students. The research is based on the Davis's TAM Model (Technology Acceptance Model) of which main components are: use, utility, experience, attitude, intention and availability. Based on the research results its understood that IT students didn't find impressive in the implementation of gamification in classroom teaching as IT students used mobile applications to connect to the game. With respect to non-IT students' gamification had clear success, however the assumption that the simple use of the game influences the approach to the game in a positive way, was refuted.

Mercedes Grijalvo et.al (2022) This study evaluates a framework developed for the use of computer-based business games in higher education, with the aim of developing specific knowledge and competencies within financial teaching at the Polytechnic University of Madrid. The experiment has been conducted through the introduction of two simulators, Gestionet, in the undergraduate classroom, and Global Management Challenge (GMC), in the master's degree classroom. The researcher found out that the feelings and self-competences of the students due to learning process and the impact on the career development are the prime focus to improve earning techniques and value for future professional generations.

Luís Filipe Rodrigues et.al (2019) Gamification involves incorporating elements of online games, such as points, leaderboards, and badges into non-game contexts, in order to improve engagement with both employees and consumers. The researcher conducted a study using Leximancer software to identify eight themes (gamification; game; use; users; business; points; engagement; learning) and twenty-eight related concepts. It also highlights how gamification can be applied to e-business, contributing to the user engagement. The study offered a window on conceptions of gamification design and development, considering studies and contexts in which games design and features are explored and discussed.

Jihan Rabah et.al (2018) Gamification of learning– the application of game design elements to learning activities– is currently a hot, if controversial, trend in education. The researcher observed that the Gamification reinforces important skills in education such as problem-solving, collaboration, and communication which results in increasing student engagement in online forums, projects, and other learning activities. Detractors of gamification, argue that it derails the comprehension of concepts with aimless distractions. Hence, the researcher conducted a second-order review to examine the evidence-based discourse on this aspect of gamification. The researcher concluded the relation between game design principles and game mechanics is

important as well as the relation between game design elements and learning design elements is important.

Kasper Welbers et.al (2019) New technologies offer exciting opportunities to engage student learning in new ways. One of the new-technology potentials for motivating students to learn is gamification, which can be defined as “the use of game-design elements in non-game contexts”. In the past decade, the popularity of gamification increased rapidly, and various cases are known in which businesses, web designers, and education workers used gamification in order to engage and motivate a target group with successful outcomes. However, more systematic research is needed to know when and how gamification can be used to the greatest benefit in an education setting. Many different gamification options exist and usage varies widely, which we briefly review in the contextualize the study.

Nadia Azzouz Boudadi et.al (2020) This paper focuses on a fairly new motivational technique, the so-called Gamification, which consists of introducing game mechanics in non-game environments to promote motivation and engagement. By the turn of the 21st century, Gamification took off in the business field and soon after became an attractive concept for researchers and professionals in education as it appears to be an increasingly popular method to motivate learners. Nevertheless, it is still a nascent field in terms of empirical evidence available to firmly support its educational benefits.

3. Research Gap:

From the above reviews regarding research on gamification highlights about training outcomes as a measure of gamification, motivational factor, gamification in social sciences and gamification in improving the attendance of the students. This research emphasis on the student engagement through pragmatic approach which will help the students to have a better concentration, comprehension about the concepts through well designed games like leader board, rewards, pointers, quiz, storytelling, classroom activities etc.

4. Statement of Problem:

It is evident from the review of literature that the students of higher education lack in the concentration and understanding the concepts which is directly affecting the educational system in India. In this study, the researcher found that the students’ engagement in the class is deteriorating over a period of time due to conventional method of teaching. Hence, the researcher focuses on increase the student engagement through gamification in learning environment.

5. Objectives of the study:

1. To study the importance of gamification as one of the teaching pedagogy in the higher educational institutions.

2. To identify the gamification as a tool to improve the attendance, confidence and student engagement in the class.
3. To understand the gamification platform in pursuit of positive experience in the learning process.
4. To analyze the gamification techniques for the pragmatic approach of the concepts in the educational system.

6. Limitations of the study:

1. The study is purely based on the 200 responses from the respondents.
2. Due to time constrain only few techniques under gamification has been considered for the study.
3. The study is restricted to UG students for the B. Com and BBA programmes.
4. The research has been conducted only in the urban area of Bangalore city.

7. Research Methodology:

The research methodology as applicable to the research like types of research design, sampling method & size, source of data, instruments for data collection and tools for data analysis. The same order of research methodology has been followed here.

7.1. Research Design:

Researcher has adopted descriptive research and presented the research work in a descriptive manner.

7.2. Sampling Method and Size:

Convenient sampling method has been used by researcher to collect the responses from the target respondent.

Watson Jeff in his article titled how to determine sample size, has given procedure to select the sample size, accordingly the researcher has taken 200 as a sample size for study purpose assuming 95% confidence level with a three percent margin of error and 100000 as the estimated population size.

7.3. Sampling Frame & Units:

Faculties and Students of Higher Education Institutions. Each one of the student and faculty from the Higher Education Institutions.

7.4. Sources of data:

Sources of data for the present research has been collected from primary source.

7.5. Instruments for Data Collection:

Researcher has collected information from respondent using the Google form based structured questionnaire.

7.6. Tools for Data Analysis:

Tools for data analysis are descriptive analysis and weighted average ranking score method.

8. Data Analysis and Interpretation:

Table No. 8.1-Demographic Profile of the Respondents

Gender	No.of.Respondents	Percentage
Male	117	58.5
Female	83	41.5
Total	200	100
Age	No.of.Respondents	Percentage
18-21 Years	140	70
22-24 Years	26	13
25-28 Years	9	4.5
28-31 Years	6	3
32-35 Years	7	3.5
36 & above	12	6
Total	200	100
Area of Residence	No.of.Respondents	Percentage
Urban	138	69
Semi Urban	20	10
Rural	42	21
Total	200	100
Role in the Gamification	No.of.Respondents	Percentage
UG Student	154	77
PG Student	14	7
Diploma Student	2	1
Assistant Professor	21	10.5
Associate Professor	6	3
Ph.D Degree Holder	3	1.5
Total	200	100

Source of Data : Primary Data

Interpretation:It is evident from the study that 58 % of them are male respondents and 32 are female respondents.

It is found from the study that age groups of the respondents are from 18-21 years till 36 & above years. There were 70% of the respondents belongs to 18-21 years, 26% of the respondents belongs to 22-24 years and 12% of the respondents belongs to 36 years & above.

It is found that 69% respondents belongs to Urban area, 10% of the respondents are from Semi-urban area and 21% of them are from rural area.

It is found that 77% of respondents are UG students, 14% are of PG students, 21% of them are Assistant Professors and 6% are of Associate Professors.

Table No. 8.2 -Respondents Feeling about Playing Game, instead of just attending a regular course

Respondents Feeling About Playing Game, instead of just attending a regular course	No.of.Respondents	Percentage
Happy	117	58.5
Unhappy	11	5.5
Excited	66	33
Annoyed	6	3
Total	200	100

Soure of Data : Primary Data

Interpretation:

The above chart implies the perception towards the role of gamification in educational institution in which 58.5% respondents felt happy, 33% of them are excited and 6.5% were not happy towards the role of gamification.

Table No. 8.3 - Repondents Opinion on which mode will be suitable to access the gamification

Repondents Opinion on which mode will be suitable to access the gamification	No.of.Respondents	Percentage
Smart Phones	103	51.5
Laptops	47	23.5
Tablets	14	7
Projector	23	11.5

Chalk-Board	13	6.5
Total	200	100

Source of Data : Primary Data

It is found that to access the mode for gamification, 51.5% respondents felt smart phone would be ideal, 47% felt laptops will be convenient, 7% felt tablets could be a better option and 6.5% felt chalk-board is enough to access.

Table No. 8.4 - Respondents opinion about whether the gamification system improves the attendance, confidence and student involvement in the class

Respondents opinion about whether the gamification system improves the attendance, confidence and student involvement in the class	No.of.Respondents	Percentage
Agree	111	55.5
Strongly Agree	61	30.5
Disagree	11	5.5
Strongly Disagree	4	2
Neutral	13	6.5
Total	200	100

Source of Data : Primary Data

Interpretation:

It is found that 55.5% respondents agree that gamification improves attendance, confidence and student involvement, 30.5% strongly agrees, 5.5% disagree that Gamification will not help to increase attendance percentage in the class.

Table No. 8.5 - Whether gamification make the concepts more understandable

Whether gamification make the concepts more understandable	No.of.Respondents	Percentage
Sure	133	66.5
Not Sure	21	10.5
May Be	46	23

Total	200	100
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Source of Data : Primary Data

Interpretation:

It is observed that 66.5% respondents are sure that Gamification techniques make them understand the concepts more efficiently and effectively but 10.5% felt they are not sure whether it will make an impact or not in comprehension of concepts.

Table No. 8.6 - Whether gamification helps the students for better career approach

Whether gamification helps the students for better career approach	No.of.Respondents	Percentage
Agree	130	65
Strongly Agree	42	21
Disagree	7	3.5
Strongly Disagree	4	2
Neutral	17	8.5
Total	200	100

Source of Data : Primary Data

Interpretation:

It is evident that 65% of the respondents believe that Gamification helps the students for better career approach, 21% strongly agree and 2% strongly disagree that it won't help for shaping the better career.

Table No. 8.7 - Whether gamification improve the students in technical way and enhance the knowledge

Whether gamification improve the students in technical way and enhance the knowledge	No.of.Respondents	Percentage
cultivate interest towards the subject.	99	49.5
can fulfil learners' desire.	27	13.5
can improve the performance.	33	16.5
enable the students to be more focused.	41	20.5
Total	200	100

Source of Data : Primary Data

Interpretation:

It is found that Gamification improve the students in technical way and enhance the knowledge through cultivate interest towards the subject for which 49.5% of them agrees. Others felt it will fulfill learners' desire and can improve the performance of the students and also enable the students to be more focused.

Table No. 8.8 - Implementation of Augmented Reality and Virtual Reality Tech will empower future gamification platform

Implementation of Augmented Reality and Virtual Reality Tech will empower future gamification platform	No.of.Respondents	Percentage
Agree	112	56
Strongly Agree	66	33
Disagree	7	3.5
Strongly Disagree	2	1
Neutral	13	6.5
Total	200	100

Source of Data : Primary Data

Interpretation:

It is evident that 56% of the respondents agreed for the implementation of augmented reality and virtual reality to empower future gamification platform while 33% respondents strongly agreed for the same and 3.5% respondents disagree for the implementation.

Table No. 8.9 - Whether gamification motivate the students to learn the concepts effectively

Whether gamification motivate the students to learn the concepts effectively	No.of.Respondents	Percentage
Yes	191	95.5
No	9	4.5
Total	200	100

Source of Data : Primary Data

Interpretation:

It is inferred that the Gamification motivates the students to learn the concepts effectively for which 95.5% respondents feels yes and remaining 4.5% feels no.

Table No. 8.10 - Component that you suggest for students to implement at the classroom

Component that you suggest for students to implement at the classroom	No.of.Respondents	Percentage
Gaming Component	126	63
Gamified Component	74	37
Total	200	100

Source of Data : Primary Data

Interpretation:

It is evident that 63% of the respondents would like to suggest gaming component to be implement in the classroom while 37% of them required gamified component.

Table No. 8.11 - Agreement Level on Extention of Gamification to Educational Institution

Agreement Level on Extention of Gamification to Educational Institution	No.of.Respondents	Percentage
Completely Agree	129	64.5
Slightly agree	65	32.5
Completely Disagree	1	0.5
Slightly Disagree	5	2.5
Total	200	100

Source of Data : Primary Data

Interpretation:

It is found that the idea of gamification to implement in gamification has been completely agreed by 64.5% of respondents and 0.5% have completely disagreed for the implementation.

Table No. 8.12- Introduce gamified features in E-learning platforms

Introduce gamified features in E-learning platforms	No.of.Respondents	Percentage
Frequently	103	51.5
Often	72	36
Rarely	18	9
Never	7	3.5
Total	200	100

Source of Data : Primary Data

Interpretation:

Table No. 8.13- Agreement Level on gamified features whether enhance students performance

Agreement Level on gamified features whether enhance students performance	No.of.Respondents	Percentage
Agree	140	70
Strongly Agree	43	21.5
Disagree	5	2.5
Strongly Disagree	0	0
Neutral	12	6
Total	200	100

Source of Data : Primary Data

Interpretation:

It is evident that 70% of the respondents agree that gamified features enhance the students' performance, 21.5% of the respondents strongly agree the same while the 2.5% respondents disagree that it will not enhance the students' performance.

Table No. 8.14- Gamification platform whether give positive experience in the learning process

Gamification platform whether give positive experience in the learning process	No.of.Respondents	Percentage
Agree	135	67.5
Strongly Agree	49	24.5
Disagree	5	2.5

Strongly Disagree	0	0
Neutral	11	5.5
Total	200	100

Source of Data : Primary Data

Interpretation:

It is found that 67.5% of the respondents agree that gamification platforms give positive experience in the learning process, 24.5% of respondents strongly agree for the same while 2.5% totally disagree that the above platform will not give positive experience in the learning process.

Table No. 8.15- Whether gamification help improve the overall learning experience

Whether gamification help improve the overall learning experience	No.of.Respondents	Percentage
Agree	127	63.5
Strongly Agree	55	27.5
Disagree	4	2
Strongly Disagree	1	0.5
Neutral	13	6.5
Total	200	100

Source of Data : Primary Data

Interpretation:

It is evident that 63.5% of respondents agree that gamification help improve overall learning experience among students as well as faculties, 27.5% strongly agree for the same while 2% disagree that gamification is not the only teaching pedagogy which will give overall learning experience.

ANOVA

H0: Perception on Gamification is no significant difference across the Age group of the Respondents.

H1: Perception on Gamification is significantly difference across the Age group of the Respondents

ANOVA					
	Sum Squares	df	Mean Square	F	Sig.

Perception on Gamification	Between Groups	6.327	5	1.265	2.219	.054
	Within Groups	110.628	194	.570		
	Total	116.955	199			

Interpretation

Perception on Gamification is not significant difference across the age group of the respondents at 0.01 significance level $p=0.004<0.05$. ANOVA revealed that there is significant difference Perception on Gamification across the age group of the Respondents

ANOVA

H0: Learning Experience using Gamification is no significant difference across the age group of the respondents.

H1: Learning Experience using Gamification is significantly difference across the age group of the respondents

		Sum of Squares	df	Mean Square	F	Sig.
16. Does gamified features enhance students performance?	Between Groups	17.061	5	3.412	3.541	.004
	Within Groups	186.934	194	.964		
	Total	203.995	199			
17. Does gamification platform give positive experience in the learning process?	Between Groups	10.913	5	2.183	2.339	.043
	Within Groups	181.042	194	.933		
	Total	191.955	199			
18. Does gamification help improve the learning experience overall?	Between Groups	7.861	5	1.572	1.449	.209
	Within Groups	210.519	194	1.085		
	Total	218.380	199			

Interpretation

Gamified features enhance the students' performance differs across the age group of respondents at 0.01 significance level $F^{5, 194} = 3.541 > 2.37$, $p=0.004 < 0.05$. ANOVA revealed that there is significant difference in Gamified features enhance the students' performance differs across the age group of respondents.

Gamification platform give positive experience in the learning process differs across the age group of respondents at 0.01 significance level $p=0.043<0.05$. ANOVA revealed that there is significant difference in Gamification platform give positive experience in the learning process across the age group of respondents

Gamification help improves the overall learning experience differs across the age group of respondents at 0.01 significance level $p=0.209>0.05$. ANOVA revealed that there is no significant difference Gamification help improves the overall learning experience across the age group of respondents

Correlation:

H0: Gamification do not improve overall learning process through Gamification Features and Positive Learning Experiences

H1: Gamification do improve overall learning process through Gamification Features and Positive Learning Experiences

	18. Does gamification help improve the learning experience overall?	16. Does gamified features enhance students' performance?	17. Does gamification platform give positive experience in the learning process?
18. Does gamification help improve the learning experience overall?	Pearson Correlation Sig. (2-tailed) N 200	.552** .000 200	.646** .000 200
16. Does gamified features enhance students performance?	.552** .000 200	Pearson Correlation Sig. (2-tailed) N 200	.707** .000 200
17. Does gamification platform give positive experience in the learning process?	.646** .000 200	.707** .000 200	Pearson Correlation Sig. (2-tailed) N 200

** . Correlation is significant at the 0.01 level (2-tailed).

Interpretation

Gamification help improve the overall learning experience is positively correlated with gamified features enhance students' performance ($p=0.000<0.01$; $r = 0.552$), gamification platform gives positive experience in the learning process ($p=0.000<0.01$; $r = 0.646$).

It is concluded that among the mentioned dimensions with respect to gamification help improve the overall learning experience, gamification platform gives positive experience in the learning process. Hence, H₀ is rejected and H₁ is accepted i.e., overall learning experience is positively correlated with gamified features enhance students' performance, gamification platform gives positive experience in the learning process.

9. Summary of Findings, Suggestion and Conclusion

9.1. Findings

- The role of gamification study had been conducted among the students and faculties – 77% of them are UG students (exclusively B.com and BBA students), 7% of them are PG students, 1% of Diploma students, 10.5% of Assistant professors, 3% of Associate professors and 1.5% of Ph.D. degree holders.
- In this study, 69% of the respondents are from urban area, 10% of them are from Semi-urban area and 21% of them are from rural area. The respondents include both the genders in which 58.5% are male gender and 41.5% are female gender.
- The study comprises of respondents of age gap between 18 years to 36 & above years, out of which 70% are between the age group of 18-21 years, 13% between the age group of 22-24 years, 4.5% between the age group of 25-28 years, 3% between the age group of 28-31 years, 3.5% between the age group of 32-35 years and 6% between the age group of 36& above.
- Gamification is a technique used to make the learning environment more interactive for which 58.5% of the respondents are happy to indulge gamification as one of the teaching pedagogy, 33% are excited, 5.5% are not happy and 3% will be annoyed for learning the concepts through playing games in the classroom.
- The respondents have given suggestion in using electronic gadgets to facilitate in conduction of games for the learning concepts in which 51.5% of them are comfortable with the smartphones, 23.5% with the laptops, 7% with the tablets, 11.5 % with the projector and 6.5% with the chalk-board.
- The gamification improves the students' attendance, confidence and student engagement in the classroom for which 55.5% agree for it and 5.5% disagree that gamification is not only the factor to improvise the students' attendance and engagement in the class.
- The gamification technique helps the students in understanding the concepts more effectively and efficiently for which 66.5% are sure about it and 10.5% feels it will not work for them and 23% are confused about the gamification technique with respect to comprehension of concepts through games.
- The study analyzes that gamification improve students in technical way and enhance the applicability knowledge, 49.5 % felt – it creates interest towards the subject, 13.5% feels it fulfills learners' desire, 16.5% felt – it improves the performance of the students and 20.5% feels, enable students to be more attentive and focused the class.
- The introduction of augmented reality and virtual reality in the gamification will improvise the deliverables through gamification for which 56% agree and 3.5% disagree for the implementation of AR & VR.

- The implementation of gamification should happen in the educational institutions which will create positive experience in the learning process and give overall development of the students.
- Perception on Gamification is not significant difference across the age group of the respondents at 0.01 significance level $p=0.004<0.05$. ANOVA revealed that there is significant difference Perception on Gamification across the age group of the Respondents
- Gamified features enhance the students' performance differs across the age group of respondents at 0.01 significance level $F^5_{194} = 3.541 > 2.37$, $p=0.004 < 0.05$. ANOVA revealed that there is significant difference in Gamified features enhance the students' performance differs across the age group of respondents.
- Gamification platform give positive experience in the learning process differs across the age group of respondents at 0.01 significance level $p=0.043 < 0.05$. ANOVA revealed that there is significant difference in Gamification platform give positive experience in the learning process across the age group of respondents
- Gamification help improves the overall learning experience differs across the age group of respondents at 0.01 significance level $p=0.209 > 0.05$. ANOVA revealed that there is no significant difference Gamification help improves the overall learning experience across the age group of respondents
- Gamification help improve the overall learning experience is positively correlated with gamified features enhance students' performance ($p=0.000 < 0.01$; $r = 0.552$), gamification platform gives positive experience in the learning process ($p=0.000 < 0.01$; $r = 0.646$).
- It is concluded that among the mentioned dimensions with respect to gamification help improve the overall learning experience, gamification platform gives positive experience in the learning process. Hence, H_0 is rejected and H_1 is accepted i.e., overall learning experience is positively correlated with gamified features enhance students' performance, gamification platform gives positive experience in the learning process.

9.2. Suggestions

- It is suggested that Gamification is one of the technique which will enhance the students' attendance, confidence and student engagement through gaming components in the classroom which will be associated with the concepts delivered.
- It is suggested that ICT enabled classrooms with augmented reality and virtual reality facilitates the conduction of games which will enable the students to actively participate in learning the concepts more effectively and efficiently.
- It is also suggested that Gamification is an innovative teaching pedagogy which will enable the faculties to upskill themselves to teach the concepts with more fun and activities and also facilitates for an interactive learning environment.
- It is suggested that Gamification enables the students towards pragmatic approach of the concepts which in turn helps them to apply the same knowledge gained as per the industry requirements.

9.3. Conclusion

Gamification has proved to be one of the effective tool to make the learning experience more fruitful and applicable as per the industry requirements. Gamification techniques is certainly boost confidence, student engagement, better performance, social relatedness and competence among students. The above analysis showed that Gamification is predominantly positive experience and also activity based learning which is need of the hour. The teaching of concepts through conventional method made students to show disinterest towards the subject, hence there is absolutely a need of more research to be conducted on Gamification and its technique to keep the education system updated in India.

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