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Games in Education: Exploring the Perception of School Teachers

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Abstract

Games make learning experiences more realistic for learners. A child learns about teamwork, values, and the blending of a variety of skills through playing games. There has been a rapid shift away from more traditional games towards digital or online options. The inclusion of these digital games in education has both advantages and disadvantages. A good teacher in the twenty-first century needs to know how these games can be used in the classroom. As a result, it is of utmost importance to investigate how teachers make use of games for instructional purposes. The main objective of this study was to investigate how teachers use games in the classroom and how they see the role of games in the educational process. The sample for this study consisted of 48 teachers from government and private schools in Delhi, Uttar Pradesh, Uttarakhand, Rajasthan, and West Bengal. An online questionnaire was used to collect data from elementary, middle, and high school teachers. Additionally, the issues and difficulties associated with games in education were discussed. Despite the study's limitations (such as its small sample size and other factors), its findings are interesting and may be useful to teachers, teacher educators, curriculum designers, and other stakeholders.

INTRODUCTION

As explained by psychology, the environment affects a child's development in various ways. The psychological significance of a child's developmental stages suggests that when a child first enters the world of senses, they experiences joy through their voice and gestures in the early stages of cognitive

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development. As a child grows and becomes more mobile, they can explore their environment, learn how things are connected, and take control of it. His cognitive abilities develop towards the establishment of object permanence. A child enjoys playing with toys, such as a pull-push toy, blocks, balls, picture books, baby dolls, large pegged-top puzzles, etc.

For a preschool child, socialisation plays an important role. As motor tasks get harder, he gets better at both big and small motor skills. At this stage, a child enjoys interlocking building toys, art tools including markers, paint, scissors, glue, and blank paper of various colours and textures, simple musical instruments and noisemakers, and outside activities like playing with pebbles, sticks, and leaves. When a child comes to school, he learns how to work with other people and solve problems— group skills, cooperation, conflict resolution, etc., develops. He follows the rules made by others, like in board games and sports. A child also makes his own rules for himself and his peers to follow. A child's love for play never diminishes, no matter how old he or she becomes. At first, a child's psychomotor actions are not rule-based or logical, but as they grows older, there become more social, purposeful, and rule-based.

Games make learning experiences more realistic for learners. It seems to be of utmost importance for a teacher to incorporate learning into the learner's environment through games to enhance natural learning. Through the play of games, students develop an understanding of collaboration, values, and the integration of their strengths. Patrick, Elaine, and Shane (2017) emphasised students' beliefs that games kept them interested owing to their novelty and enhanced their motivation by giving them competition and incentives in their studies. Teachers value the use of games in the classroom because it piques students' curiosity and motivate them to study. Subhas, Suresh and Ram (2010) also emphasised that games stimulate the cognitive, intellectual, physical, emotional, and social development of children. In another study, the researchers also found that students' motivation to study was boosted by the element of competition in games. Games helped pupils improve subject-specific and broad cognitive skills (Huizenga, Ten Dam, Voogt & Admiraal, 2017).

According to Kaushik (2018), using games, especially in language classes can make foreign or second language teaching-learning more exciting, interactive, and relevant. Games assist youngsters to build conversational skills, alleviate fear, and motivate them. However, to attain the desired learning outcomes, teachers must employ games optimally and strategically. When teachers used their game creations in the classroom, both learning outcomes and student

motivation improved. According to research, games can help create a dynamic learning environment that encourages questions and fun (Frossard, Barajas & Trifonova, 2012, cited in Ucus, 2015). When games are incorporated into instruction, it is obvious that children enjoy them and spend the majority of their time with them; thus, incorporating such an important method into their training would be beneficial (Ucus, 2015). Yadav (2021)asserted that for children playing is learning and games are an important means for education. Games are also important for the physical, social, cognitive, creative and language development of children. Game based learning enhances students' academic performances, and in many instances, simple online games produce efficacious outcomes (Vu & Feinstein, 2017).

While it is true that games can be an effective teaching tool in some contexts, many factors—including student motivation, teacher experience, and the perceived value of the material at stake—can limit the games' utility in the classroom (Buckley, Doyle & Doyle, 2017). Jabbar and Felica (2015) identified that game-based learning does not follow any specific rule and that the effectiveness of games depends upon gaming proficiency, personality, preferences, and emotional state of learners. For making game-based learning effective multiple learning tools, learning activities, a proper feedback system, and scaffolding should be provided. Pinder (2021) revealed that "game-based learning is an effective strategy for assessing primary students' skills," "can be used in any phase of the instructional process," and "should be increased over time." Soni (2021) stressed upon the games integration into the teaching learning process as it enhances the creativity, skills, and imagination power of children.

Technology has changed gaming in the same way that it has changed other cultural phenomena. There has been a rapid shift away from more traditional games towards digital or online options. The inclusion of digital games in education has both pros and cons. Even though game-based learning is widely used, Ariffin, Oxley, and Sulaiman (2014) state that there are still questions about how well it works as a teaching method or strategy. A teacher in the twenty-first century needs to be aware of and understand the use of these games in education. As a result, it is vital to study how teachers use games for educational purposes. The primary goal of this study is to determine how teachers value games in the learning process and what types of educational games they use in their classrooms.

OBJECTIVES OF THE STUDY

The objective of this research were to study:

1. teachers' knowledge of games and their importance in school;

2. various types of educational games used by teachers in school;

3. the issues and challenges faced by teachers while using the games in the teaching learning process.

METHODOLOGY

The sample of the study comprised 48 teachers from 22 schools out of which 12 were government and 10 were private schools, from the following Indian states: Bihar, Uttar Pradesh, Delhi, Jharkhand, West Bengal, and Rajasthan. Approximately 40.90 per cent of teachers taught Classes VI–X, while the remaining teachers taught Classes I–V. The data was gathered using a survey method and a questionnaire mailed to respondents.

FINDINGS OF THE STUDY

The findings of the study are analysed under each objective of this study.

1. Teachers' Knowledge of Games and their Importance in School

The purpose of this research was to study how well-versed teachers were when it came to using games in the school.

Meaning of games

The teachers were posed the question, "What do you mean by the term 'game' in the context of education?" There is a wide variety of responses regarding teachers' knowledge of games at school, as shown in Table 1. The majority of respondents (72.7%) reported that games are physical activities designed to promote health, skill development, etc. About 50per cent of the respondents said that games are outdoor activities played in playgrounds, while about 36.4 per cent said that games are also indoor activities. Approximately 31.8 per cent of respondents said that games require teamwork and joint efforts, which promote cooperation and collaboration. About 22.7 per cent said that games are also used as a strategy in schools to engage students in the teaching and learning process.

Considering that a large number of teachers (72.7%) said that games are physical activities designed to improve students' health and skills at
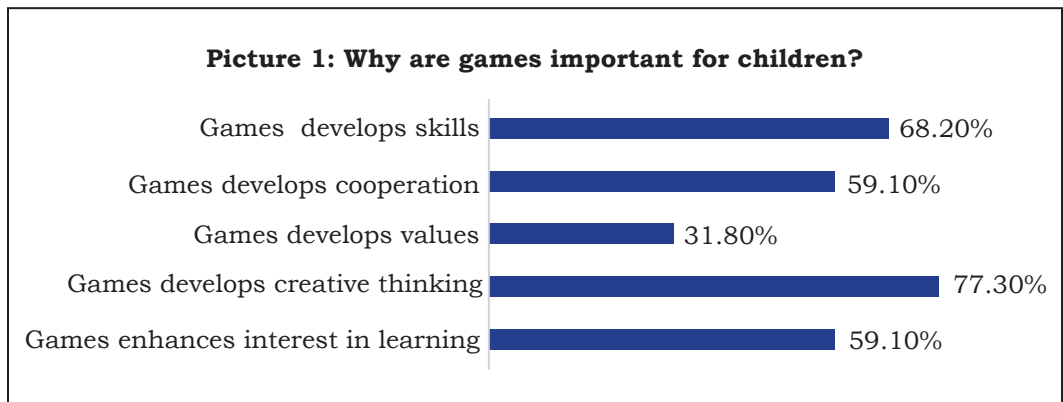
Table 1
Teachers' Knowledge of Games

Keywords	%
Physical activities, improvement of skills, health,	72.7
Outdoor activities, in the play ground, outside of the classroom	50
Indoor activities, inside the classroom	36.4
Team work, cooperation, unity, group work, shared work	31.8
Method of teaching, strategy for students involvement in the learning process	22.7

school, it seems likely that teachers were aware that the primary goal of games in schools is to help students develop physically. The percentage of respondents, who were aware that games are also used in schools as teaching tools to engage students, develop cognition, and foster social development, was low (22.7%).

Importance of games

In response to the question, "Why are games important for children?" Teachers provided a wide range of responses, as shown in Picture 1. Games, according to approximately 68.20 per cent of teachers, are important for skill development because they improve motor skills. According to 59.10 per cent of teachers, games foster a sense of cooperation among students. One third of the sample (31.8%) of teachers said that games develop values. A good number of teachers (77.30%) considered that games are important because they develop creative thinking. It was revealed that games enhance interest in learning, as opined by 59.10 per cent of teachers.

Picture 1: Why are games important for children?

Games develops skills	68.20%
Games develops cooperation	59.10%
Games develops values	31.80%
Games develops creative thinking	77.30%
Games enhances interest in learning	59.10%

Purpose of games in teaching-learning process

In response to the question, "What is the purpose of using games in teaching-learning process?" Teachers provided a wide range of responses, as shown in Table 2. About 86.4 per cent teachers use games in teaching learning process for the holistic development of learners. Engagement of students in learning process is the aim of 31.8 per cent of teachers. It was found that 27.3 per cent of teachers use games in the classroom to provide students with thorough subject knowledge as well as to allow students to enjoy learning and make learning fun for them.

Table 2
Goals of Teachers for the Use of Games in Teaching-Learning Process

Teacher's aim	%
Holistic Development	86.4
Engagement of students in learning	31.8
Give them subject knowledge effectively	27.3
To let them enjoy learning and make learning a fun	27.3
To let them learn to play	22.7
Physical development of students	40

2. Educational games used by teachers in school

Types of games used by teachers

In responses to the question: What types of educational games are used by you in the classroom? The responses were divided into two categories as elementary level (I–V) and secondary level (VI–X) based on the level of teaching. Physical games are applied by teachers at both levels, but their frequency at the secondary level is higher (77.77%) in comparison to the elementary level (60%). When it comes to board games, the responses at both levels—secondary (33.33%) and elementary (20%) revealed that board games are rarely applied by them; this may be due to the unavailability of board games in school. Digital games are common for children, but the results are overwhelming in that teachers do not use or recommend digital games for learning purposes.

Activities provided the opportunities of learning by doing; at the elementary level activity based games were employed by all the teachers (100%) whereas at the secondary level half of them (55.55%) incorporated activity based games in the teaching learning process. Results indicate that at both levels, teachers apply different types of games in the teaching and learning process except for digital games.

Table 3
Types of Games Used by Teachers

Type of games	Level of teaching	
	Grade I–V	*Grade VI–X*
Physical games	60%	77.77%
Board games	20%	33.33%
Digital games	-	-
Activity based games	100%	55.55%

Frequency of educational games used by teachers

The results revealed that a large number of teachers (81.81%) sometimes used games in classroom teaching. Although 18.18 per cent of teachers revealed that they always used games in the teaching-learning process. There is not a single teacher who has never used games in the process of teaching.

Picture 2: Educational games used by teachers

- Sometimes
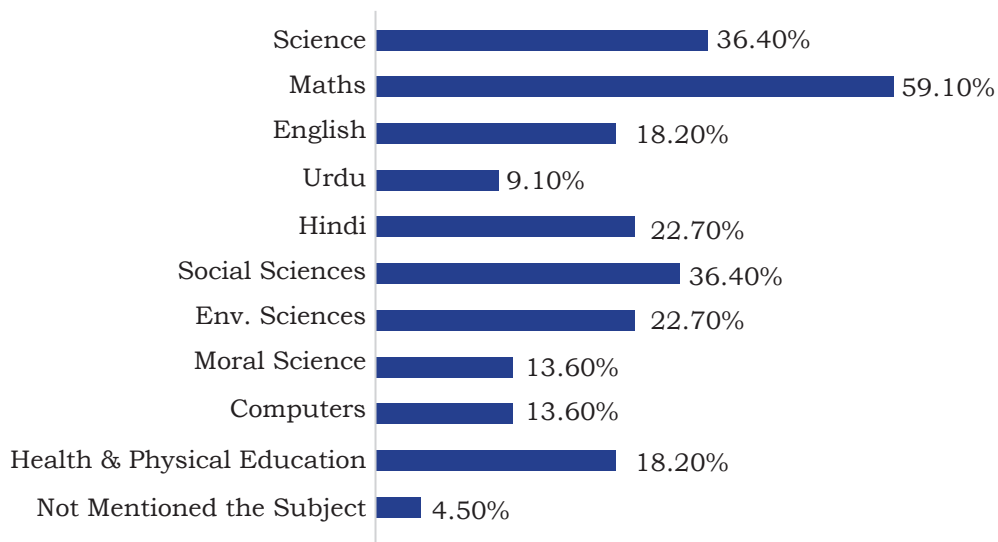- Always

32.80%

68.20%
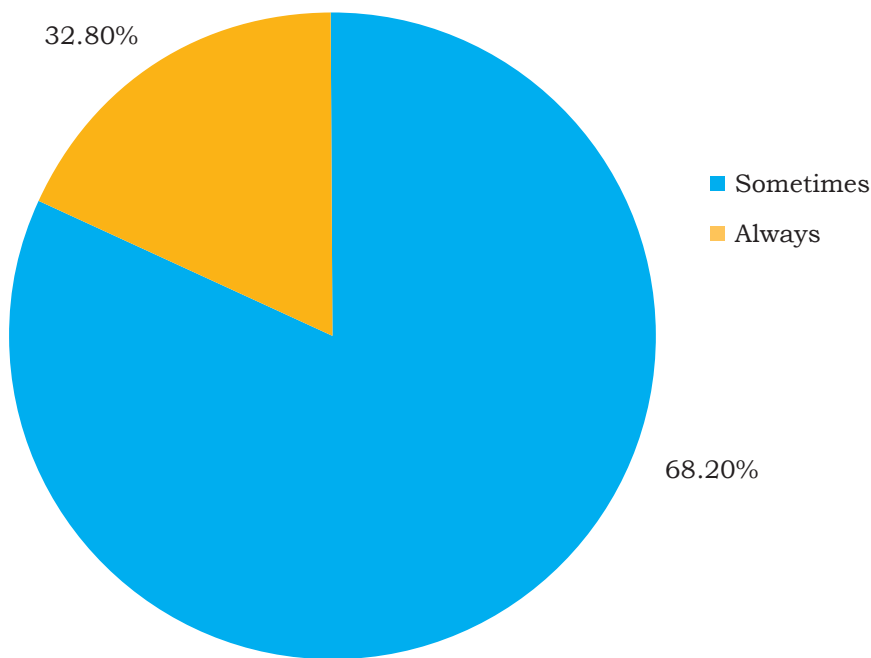
Educational games used by teachers in different subjects

Games are important for the learning of students. In the present study, results revealed that in the teaching of mathematics (59.10%), science (36.40%), social sciences (36.40%), English (18.20%), Urdu (9.10%), environmental education (22.72%), moral science and computers (13.63%), and health and physical education (18.20%), teachers employed games in the teaching and learning process. However, a very few (4.50%) did not mention subjects in which they employed games.

Picture 3: Educational Games used by teachers in different subjects

Subject	Percentage
Science	36.40%
Maths	59.10%
English	18.20%
Urdu	9.10%
Hindi	22.70%
Social Sciences	36.40%
Env. Sciences	22.70%
Moral Science	13.60%
Computers	13.60%
Health & Physical Education	18.20%
Not Mentioned the Subject	4.50%

Issues and challenges faced by teachers while using the games in teaching-learning process.

Issues and challenges are identified by the teachers while using the games in the teaching and learning process are depicted in Table 4. About 50 per cent of teachers revealed that using games in the teaching learning process takes time. Approximately (50%) of teachers perceived a lack of games equipment in schools for carrying out activities. In addition, 25 per cent of teachers reported a lack of training in the use of games in learning. 12.5 per cent of teachers face the problem that students do not take an interest in learning while using games, and it is very difficult for them to connect content with games.

Table 4
Issues and Challenges Identified by Teachers while Using the Games in Teaching-Learning Process

Issues and Challenges	(%)
Time consuming	50
Lack of games equipments for activities	50
Lack of training in games	25
Lack of sports equipments in schools	25
Lack of interest in games from the side of students	12.5
It is not easy to relate games with content/subject	12.5

CONCLUSION

The purpose of this study was to investigate how well-versed teachers were when it came to using games in the teaching and learning process. The majority of teachers (72.7%) responded that games are physical activities designed to improve health, skills, and so on. However, only a small number of respondents said that games are also used in the classroom to keep students interested in learning, to help them think more deeply, and to help them grow socially. There was a wide range of responses from educators to the question, "What is the purpose of using games in the teaching-learning process?" 86.4 per cent of teachers said they used games for the holistic development of learners; 31.8 per cent said they used games to engage students; 27.3 per cent said they used games to teach students content; and 33.33 per cent said they used board games. This study found that 81.81 per cent of educators use educational games in the classroom. The teachers have identified several issues and challenges while using educational games, some of which are as follows: time consumption; a lack of game equipment; a lack of training; a lack of sports equipment; a lack of interest in games on the part of students; and difficulty connecting content with games.

The current study's findings help teachers and students understand the value of games in education. It develops a positive attitude towards games. The study also shows that teachers have a lack of understanding when it comes to incorporating activity-based games or educational games into their subject-matter instruction. Consequently, the findings suggest that topics such as gaming, educational games, etc., should be included in the programme for continuing professional development. Even pre-service teachers should be trained in this direction, and therefore the curriculum of teacher training programmes should include the concept of integrating or connecting games with the teaching-learning process. Nevertheless, the study has several limitations, the most notable of which are its limited resources and relatively small sample size. However, its findings may have implications for future research, particularly in school education and teacher education.

REFERENCES

ALLSOP, YASEMIN AND JESSEL, JOHN. 2015. 'Teachers' Experience and Reflections on Game–Based Learning the Primary Classroom: Views from England and Italy'. *International Journal of Game–Based Learning (IJGBL)*, Vol. 5, No. 1. pp. 1–17. DOI: 10.4018/ijgbl.2015010101.

ARIFFIN, MAZEYANTI MOHD., ALAN OXLEY AND SUZIAH SULAIMAN,. 2014. 'Evaluating Game Based Learning Effectiveness in Higher Education'. *Procedia–Social and Behavioral Sciences*. Vol. 123. pp. 20–27.

Buckley, Patrick., Elaine Doyle, and S. Doyle. 2017. 'Game on! Students' Perceptions of Gamified Learning'. *Journal of Educational Technology and Society*, Vol. 20. No. 3. pp. 1–10.

Huizenga, J. C., G. T. M. Ten Dam, J. M. Voogt, and W. F. Admiraal. 2017. 'Teacher Perceptions of the Value of Game–Based Learning in Secondary Education'. *Computers and Education.* Vol. 110. pp. 105–115. https://doi.org/10.1016/j.compedu.2017.03.008.

Jabbar, Azita Liiya Abdul and Patrick Felicia. 2015. 'Gameplay Engagement and Learning in Game–Based Learning: A Systematic Review'. *Review of Educational Research.* Vol. 85. No. 4. pp. 740–779.

Kaushik, Ruchi. 2018. 'Using Games to Develop English Speaking Skills in Children'. *The Primary Teacher.* Vol. XLIII. No.1. pp. 13–21.

Pastore, Raymond S, and David A. Falvo. 2010. 'Video Games in the Classroom: Pre–and in–Service Teachers' Perceptions of Games in the K–12 Classroom'. I*nternational Journal of Instructional Technology and Distance Learning.* Vol. 7. No. 12. pp. 49–57.

Pinder, Patrice Juliet. 2021. 'Teacher Perceptions of Game Based Learning in Trinidad and Tobago's Primary Schools'. I*nternational Journal of TESOL and Learning.* Vol. 10. No. 3–4. pp. 91–104.

Soni, Romila. 2021. *Khle aur Khilone: Baccho k Vikas tha Unke Sekhne ki Shelly, Prathmik Shikshak.* Vol. 45, No. 2. pp. 39.

Subhash, P. D., K. P. Suresh and Sulekha Ram. 2010. 'Role of Play in Enhancing Cognitive and Language Development of Children'. *The Primary Teacher.* Vol. 35. No. 3. and 4. pp. 12–17.

Ucus, Sukran. 2015. 'Elementary School Teachers Views on Game–Based Learning as a Teaching Method'. *Procedia–social and Behavioral Sciences.* Vol. 186. pp. 401–409. doi:10.1016/j.sbspro.2015.04.216

Vu, Phu and Sheryl. Feinstein. 2017. 'An Exploratory Multiple Case Study About Using Game–Based Learning in Stem Classrooms'. *International Journal of Research in Education and Science (IJRES).* Vol. 3. No. 2. pp. 582–588. DOI: 10.21890/ijres.328087.

Wu, Min Lun. 2015. Teachers' Experience, Attitudes, Self–Efficacy and Perceived Barriers to the Use of Digital Game–Based Learning: A Survey Study Through the Lens of A Typology of Educational Digital Games. Unpulished Dissertation, Michigan State University.

Yadav, P,. 2021. *Khilone Sikhne Ki Niew Viksit Krne Me Maddagar H., Prathmik Shikshak.* Vol. 45. No. 2. pp. 46–51.