



## Effect Of Feedback On Students' Learning At Primary Level: An Analysis

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### ABSTRACT

The study entitled, "Effect of Feedback in Students' Learning at Primary Level in Tehsil Rahim Yar Khan". The research was descriptive in nature and relied on surveys. Both the quantitative and qualitative (QUAN-qual.) methods were used. The method applied was the explanatory sequential technique. The study's population consisted of: Head teachers, secondary school teachers and students of secondary classes. The method of simple random sampling was used. 10 head teachers, 50 primary school instructors, and 100 primary school pupils from public primary schools made up the study's sample. There were 160 people in the sample overall, including primary school teachers, head teachers, and primary class pupils. The questionnaire was created to collect quantitative information from primary school teachers, pupils, and head teachers. Professional judgments were used to verify the validity, while SPSS-24 Chronbach Alpha was used to compute the reliability. Findings of study were 84% (56%+28%) of respondents agreed that promoting motor skills through instructional technology. Mean score 4.06 and standard deviation 0.759 supported. The study concluded that majority of teachers promote motor skills in students through instructional technology. The study recommended that instructional technology may be provided to secondary school teachers to promote motor skills among students.

**Keywords:** Gamification, Student Learning, Primary school teachers, Public sector, Chronbach Alpha

### Introduction

#### What is Gamification?

Are you wondering, "What is gamification?" Well, it is a method that utilizes fun and games to make learning more pleasant. It includes learning through exercises that look like games, with the goal of making studying more exciting and engaging.

This strategy urges students to play an active role in their education. It transforms tedious assignments into fun and adventurous exercises that keep them interested and anxious to learn.

Gamification is the incorporation of game designs and mechanisms into non-game environments, like education, to improve engagement, participation, motivation, and learning outcomes.

The primary objective of this research is to achieve level of engagement corresponding to those commonly observed in gaming environments. The core goals of game-based learning are to improve particular abilities, offer objectives. Furthermore, it provides learning a significance meaning, actively involve students, optimize the learning process, facilitate behavioral changes, and promote social interaction (Zafar et al., 2022; Rasheed et al., 2024). This research aims to evaluate the impact of gamification on learning outcomes, engagement, and motivation among primary school students. Gamification of education is a strategy for increasing engagement by incorporating game elements into an educational environment (Dichev and Dicheva, 2017; Mumtaz et al., 2024; Zafar et al., 2023). The goal is to generate levels of involvement equal to

what games can usually produce (Fardo, 2014). The main goals of gamification are to enhance certain abilities, introduce objectives that give learning a purpose, engage students, optimize learning, support behavior change, and socialize (Knutas et al. 2014; Krause et al. 2015; Dichev and Dicheva 2017; Borges et al. 2013).

#### **Here are 7 ways in which student engagement can be enhanced by using gamification:**

- 1. Incorporate game elements:** Adding points, badges, leaderboards, and progress bars can make learning more interactive and fun.
- 2. Set clear goals and objectives:** By setting clear goals and objectives, students are motivated to achieve them and are more engaged in learning.
- 3. Make learning interactive:** Use interactive activities such as quizzes, simulations, and challenges to make learning more interactive and engaging.
- 4. Build a sense of community:** Promote students to work collaboratively and compete against each other to foster a sense of community and motivation.
- 5. Provide instant feedback:** Provide immediate feedback on student progress and performance to encourage them to continue learning.
- 6. Make learning challenging:** Incorporate challenges and puzzles to make learning more challenging and engaging.
- 7. Personalize the learning experience:** Tailor the learning experience to individual students by providing personalized feedback, challenges, and activities.

#### **Benefits of Gamification**

Setting gamification into hybrid learning conditions can benefit students in multiple ways. The primary goal is to improve individual student engagement. Gamified learning and teaching methods will help to achieve this goal in the following ways:

- Improving student's desire to learn
- Growing knowledge retention
- Optimizing the learning experience
- Orienting new and more assorted types of learning material
- Influencing optimistic behaviors
- Boosting socialization to stimulate a sense of community

Promoting positive relationships and encouraging supportive interactions can help create a strong and vibrant student community. The community can become more connected and engaged by creating possibilities for learners to come together and interact. This can lead to greater collaboration, problem-solving, and overall well-being in the classroom Muhammad (Shafqat et al., 2024; Zafar, & Muhammad, 2023).

### **Research objectives**

#### ***Research objectives of this study were:***

- To analyze the effect of feedback on students' learning at primary level
- To compare the male and female teachers' feedback at primary school level
- To compare the urban and rural teachers' feedback at primary school level

#### **Research questions**

#### ***Research questions of the study were:***

1. What is the effect of feedback on students' learning at primary level?
2. Is there any difference between male and female teachers' feedback at primary school level?
3. Is there any difference between urban and rural teachers' feedback at primary school level?

### **Research Methodology**

"The methodical procedure used for data collection to resolve the problem is called research methodology; its function is to provide systematic structure of the research study, moreover its part of study in which the researcher give account of the research methods used in research" (Ahmad et al., 2024). The study was survey and descriptive in nature. The quantitative as well as qualitative (QUAN-qual) method was adopted. The explanatory sequential approach was used. Population is defined as a set of individuals or data or items from which statistical sample is taken for data collection (Jalbani et al., 2023; Sadaf et al., 2024). Population of the study comprised; ten(10) head teachers, fifty (50) primary school teachers, one hundred (100) students of primary schools. <https://sis.punjab.gov.pk/>. Sample refers to a subset of individuals from larger population also known as target population (Rao et al., 2023). The random sample approach was applied for data collection. Instrument perform vital role in every research to compose data from the participants

(Rasheed et al., 2024). The researchers developed questionnaire for data collection from the sampled respondents. The questionnaire was based; Part.1: Demographic, Part.2: Closed-Ended, Part 3: Open-Ended. The validity of questionnaire was ensured through experts' opinion and reliability of the questionnaire was calculated through SPSS-24 using Cronbach Alpha. The collected data was arranged properly and feed into data sheet.

### Data Analysis

**Table.1: Factor-1: Feedback**

Items	Stat.	Responses						SD	Mean
		SDA	DA	UD	A	SA	Total		
Item.1	F	0	0	4	48	108	160	0.414	0.414
	%	0	0	2.66%	54.6%	42.6%	100%		
Item.2	F	0	0	6	41	108	160	0.45	4.41
	%	0	0	3.6 %	51%	45.33%	100%		
Itme.3	F	0	0	7	48	105	160	0.851	3.45
	%	0	0	6.66%	49%	44.33%	100%		
Item.4	F	0	0	1	46	113	160	0.41	4.51
	%	0	0	0.33%	47.66%	52.6%	100%		
Total	F	0	0	18	183	436	640	0.53	3.19
	%	0	0	3.3%	50.25%	45.75%	100%		

Table 1 present the Indicator: Feedback. Data analysis presents that 100% of head teachers, primary school teachers and students agreed that teachers promote social interaction in students through games, while 50.25% of head teachers, primary school teachers and students were strongly agreed, 3.3% of head teachers, primary school teachers and students were undecided and 0% of head teachers, primary school teachers and students were disagreed with the given statement. Collectively, majority of head teachers, primary school teachers and students agreed that Teachers promote social interaction in students through games. Mean 3.19 and S.D 0.53 supported.

**Table.2: T-Test Data Analysis-Gender Analysis of Factor: Feedback**

Items	Gender	N	Statistics				
			Mean	SD	t-value	df	Sig.
Item.1	Male	90	4.54	.649	-1.728	158	.001
	Female	70	4.71	.485	-1.787	157.94	
Item.2	Male	90	4.60	.561	-1.051	158	.246
	Female	70	4.67	.557	-1.052	148.82	
Item.3	Male	90	3.04	1.24	1.190	158	.004
	Female	70	2.85	1.12	1.212	156.18	
Item.4	Male	90	4.63	.483	-1.351	158	.023
	Female	70	4.75	.464	-1.356	150.39	
Total	Male	90	4.20	0.73	1.33	158	0.068
	Female	70	4.24	0.65	1.35	152.7	

Table.2: Gender-based Analysis: Indicator: Feedback:

Item.1 data analysis reflects that mean value of male is 4.54 and female is 4.71 that reflects that female's teachers gave quick response to students during game than males. The standard deviation .649, T-value 1.78, df 158 and Sig. .001 also supported.

Item.2 data analysis reflects that mean value of male 4.60 is and female is 4.67 that reflects that male teachers show immediate reaction to students while playing than female teachers. The standard deviation .561, T-value 1.051, df 158 and Sig. .246 also supported.

Item.3 data analysis reflects that mean value of male 3.04 is and female is 2.85 that reflects that male's teachers criticize students' performance at once during activity than female teachers. The standard deviation 1.24, T-value 1.21, df 158 and Sig. .004 also supported.

Item.4 data analysis reflects that mean value of male 4.63 is and female is 4.75 that reflects that female teachers give positive comments on students' individual contribution than male teachers. The standard deviation .483, T-value 1.35, df 158 and Sig. .023 also supported.

Collectively, data analysis reflects that mean value of male is 4.20 and female is 4.24 that reflects that female teachers feedback is well than male teachers. The standard deviation 0.73, T-value 1.35, df 158 and Sig. 0.068 also supported.

**Table.3: T-Test Locality-based Analysis of Factor: Feedback**

Items	Locality	N	Statistics				
			Mean	SD	T-value	df	Sig.
Item.1	Urban	94	4.56	.641	-1.318	158	.007
	Rural	66	4.69	.495	-1.374	155.96	
Item.2	Urban	94	4.62	.554	-.620	158	.589
	Rural	66	4.65	.568	-.617	137.96	
Item.3	Urban	94	3.09	1.23	1.740	158	.004
	Rural	66	2.78	1.11	1.783	150.67	
Item.4	Urban	94	4.65	.478	-.950	158	.127
	Rural	66	4.74	.474	-.949	139.76	
Total	Urban	94	4.23	0.725	1.157	158	0.181
	Rural	66	4.21	0.66	1.180	145.4	

Table.3: Locality-based Analysis: Indicator: Feedback:

Item.1 data analysis reflects that mean value of Urban is 4.56 and Rural is 4.69 that reflects that rural teachers give quick response to students during game than urban teachers. The standard deviation .641, t-value 1.37, df 158 and Sig. .007 also supported.

Item.2 data analysis reflects that mean value of Urban is 4.62 and Rural is 4.65 is that reflects that Rural teachers show immediate reaction to students while playing than Urban teachers. The standard deviation .568, t-value .620, df 158 and Sig.589 also supported.

Item.3 data analysis reflects that mean value of Urban is 3.09 and Rural is 2.78 that reflects that urban teachers criticize students' performance at once during activity than rural teachers. The standard deviation 1.23, t-value 1.78, df 158 and Sig.004 also supported.

Item.4 data analysis reflects that mean value of Urban is 4.65 and Rural is 4.74 that reflects that rural teachers give positive comments on students' individual contribution than urban teachers. The standard deviation .478, t-value 1.180, df 158 and Sig. 0.181 also supported.

Collectively, data analysis of all items reflects that mean value of urban is 4.23 and mean value of rural is 4.21 that reflects that urban teacher's feedback is well than rural teachers. The standard deviation 0.72, t-value 1.180, df 158 and Sig 0.181 also supported.

## Findings

### Factor-1: Feedback

- 100% of head teachers, primary school teachers and students agreed that teachers give quick response to students during game, while 54.6% of head teachers, primary school teachers and students were strongly agreed, 2.66% of head teachers, primary school teachers and students were undecided and 0% of head teachers, primary school teachers and students were disagreed with the given statement. As a whole majority of head teachers, primary school teachers and students agreed that teachers give quick response to students during game. Mean score 4.38 and standard deviation 0.414 supported the statement.
- 100% of head teachers, primary school teachers and students agreed that Teachers show immediate reactions to student while playing, while 45.3% of head teachers, primary school teachers and students were strongly agreed, 3.6% of head teachers, primary school teachers and students were undecided and 0% of head teachers, primary school teachers and students were disagreed with the given statement. As a whole majority of head teachers, primary school teachers and students agreed that Teachers show immediate reactions to student while playing. Mean score 4.41 and standard deviation 0.45 supported.
- 100% of head teachers, primary school teachers and students agreed that teachers' criticize student's performance at once during activity, while 49% of head teachers, primary school teachers and students were strongly agreed, 6.6% of head teachers, primary school teachers and students were undecided and 0% of head teachers, primary school teachers and students were disagreed with the given statement. As a whole majority of head teachers, primary school teachers and students agreed that teachers' criticize student's performance at once during activity. The mean score 3.45 and standard deviation 0.851 supported.
- 100% of head teachers, primary school teachers and students agreed that teachers' give positive comments on student's individual contribution. While 47.66% of head teachers, primary school teachers and students were strongly agreed, 0.3% of head teachers, primary school teachers and students were undecided and 0% of head teachers, primary school teachers and students were disagreed with the given statement. As a whole, majority of head teachers, primary school teachers and students agreed that teachers' give positive comments on student's individual contribution. Mean score 4.51 and standard deviation 0.41 supported.
- Collectively, gender-based data analysis reflects that mean value of male is 4.20 and female is 4.24 that reflects that female teachers feedback is well than male teachers. The standard deviation 0.73, t-value 1.35, df 158 and Sig. 0.068 also supported.

- Collectively, gender-based data analysis of all items reflects that mean value of urban is 4.23 and mean value of rural is 4.21 that reflects that urban teacher's feedback is well than rural teachers. The standard deviation 0.72, t-value 1.180, df 158 and Sig 0.181 also supported.

### Discussion

The major indicator of the study was related to Feedback in Gamification. The study inferred that majority of head teachers, primary school teachers and students were of the view that Teachers give quick response to students during game, majority of head teachers, primary school teachers and students were of the view that Teachers show immediate reactions to student while playing, majority of head teachers, primary school teachers and students were of the view that Teachers criticize student's performance at once during activity, majority of head teachers, primary school teachers and students were of the view that teachers give positive comments on students individual contribution. Overall the respondents were of the view that there is a positive effect of Feedback on students' learning at primary level. The gender-based collective data reflects that mean value of male and female reflects that female teacher's feedback well than male teachers. The standard deviation, T-value, df and Sig. also supported. The locality-based collective data reflects that mean value of urban and mean value of rural reflects that urban teacher's feedback well than urban. The standard deviation, T-value, df and Sig. also supported.

### Conclusions

First indicator of the study was related to Feedback in Gamification. The study concluded that majority of head teachers, primary school teachers and students were of the view that Teachers give quick response to students during game, majority of head teachers, primary school teachers and students were of the view that Teachers show immediate reactions to student while playing, majority of head teachers, primary school teachers and students were of the view that Teachers criticize student's performance at once during activity, majority of head teachers, primary school teachers and students were of the view that Teachers give positive comments on students individual contribution. Overall the respondents were of the view that there is a positive effect of Feedback on students' learning at primary level.

The study concluded that gender-based collective data reflects that mean value of male and female reflects that female teacher's feedback well than male teachers. The standard deviation, T-value, df and Sig. also supported. The study concluded that locality-based collective data reflects that mean value of urban and mean value of rural reflects that urban teacher's feedback well than rural. The standard deviation, T-value, df and Sig. also supported.

### Recommendations

- The study recommended that feedback may be taken during gamification to increase the interest of students at primary level. The role of gamification is very significant in students' learning.
- The study recommended that feedback in gamification change the attitudes of students towards the learning. That's why this method can be utilized to involve the students who are not interested in learning.
- The study recommended that feedback in gamification method fosters the engagement of students in learning. The curriculum developers may focus on using new trend and interventions in the curriculum.

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