

# Transfer Of Learning: The Role Of Feedback Of Peer Groups In Academic Performance

Shayla Tazminur<sup>1</sup>, Md. Yousuf Ahammed<sup>2</sup>

<sup>1</sup>(Department Of Business Administration, Bangladesh Army International University Of Science And Technology, Bangladesh)

<sup>2</sup>(Department Of Business Administration, Bangladesh Army International University Of Science And Technology, Bangladesh)

---

## Abstract:

**Background:** Transfer of learning is stated as the application of skills, knowledge, and other attributes that a person learns in one situation and then in another situation. Students in academia learn new things in their day-to-day lives. In their classroom lectures, workgroup discussions, informal meetings, senior-junior groups, and extracurricular activities. All these learnings have feedback, which can modify our next action. The positive and negative feedback can impact the academic performance of the students.

**Materials and Methods:** In this study students' CGPA is taken as a dependent variable and participation in informal groups, active in social groups, discussion about studies via social media, note collection, and career-related discussion as independent variables. Mean, standard deviation, person correlation coefficient, and regression analysis are done.

**Results:** Two hypotheses were taken. The null hypothesis stated, there exists no relationship between transfer of learning and students' academic performance. On the other hand, the alternative hypothesis stated, that there exists a relationship between the transfer of learning and students' academic performance. After analysis with several dimensions, the alternative hypothesis was proven.

**Conclusion:** We concluded in this study that; transfer of learning has a positive effect on students' academic performance.

**Key Word:** Transfer of learning; feedback; academic performance; positive transfer; descriptive study.

---

Date of Submission: 23-03-2024

Date of Acceptance: 03-04-2024

---

## I. Introduction

The main goal of education is to implement what has been learned. Students who have been taught how to build a building or cure a patient are supposed to implement the knowledge in a practical sense. And from the point of view of learning, it is not only what has been theoretical experiences, but also from different situations, observations, and social groups. Our knowledge is getting updated with the emergence of continuous innovations and technologies. In the case of higher education, transfer of learning is not only occurring through subjective courses but also through peer or social group feedback that stimulates it differently. Transfer of learning is recognized as a tool to gain a competitive advantage in a professional domain (Argote & Ingram, 2000). Transfer of learning is greatly aligned with the feedback process. Feedback refers to the information of comparison of current and desired behavior. Transfer of learning can have positive or negative feedback (DeNisi & Kluger, 2000). Our current research wants to identify the impact of the transfer of learning and the following feedback on their academic outcome.

## II. Literature Review

An enduring goal of education and learning is, that it will continue and give feedback for a long period. Learning is stated as a process that contributes to change, which happens as an output of change and makes an increment in the potential for improved performance and future learning opportunities (Ambrose et al., 2010). Bransford et al., (1999), stated that transfer of learning is the ability to convert what a person has learned in one circumstance to apply that knowledge in a new situation. According to Chauhan et al., (2016), the term transfer of learning as it relates to workplace training, where the trainees will apply their learned knowledge to the actual work situations. The transfer can also be run between the social peer groups. In terms of the workplace, it can flow from senior to junior, in academic circumstances the transfer can flow from teachers to students, students communicating in other social groups or works groups. Feedback is the Process in which the effect or output of an action or behavior is 'returned' (fed-back) to modify the next actions (Vargas et al., 2015). Feedback (both positive and negative) may occur among the peer groups within an organization. There have been many studies on the effects of feedback or transfer of learning on the behavior or performances of others. Social learning

theory indicates that peers (Social groups, Colleagues, Classmates) may also play a critical role (Young, 2009). This transition of learning can be the result of conscious learning or subconscious learning.

Empirical studies have stated that transfer of learning is the effect of learning one activity and executing the learning in another activity. The activity here refers to the application of knowledge, skills, and attitudes that are learned from the source (where the knowledge is learned) and applied to the target context. The outcome of the transfer can be studied with three different spectrums, one is the similarities of the source, the significance of general strategies for transfer, and the last one is support of transfer. (Leuven & Tuijnman, 1996).

Dixon and Brown (2012) in their study stated that several factors influence the transfer of learning. Those factors can be, whether the students want to memorize the learning or not, the amount of time that has been spent on that transfer, the amount of practice put into acquiring that knowledge, the problem representation, and the transfer condition.

Eraut (2004) stated that in informal learning, there is the situation of freedom of learning from a wide variety of sources, colleagues, and peer groups. It can also be considered as the complementary partner from the learning experience and turn to interpersonal learning. About active and group learning, Zacharia & Jennings (1998) stated that there is a possible opportunity for active learning in group participation and the outcome of that learning and feedback have long-run implications. Another media of learning is gaining popularity in this present world which is the use of social media. Mao (2014), in his study, stated that students show a positive attitude in learning from different sites of social media. He used the term social media for social networking sites such as Facebook, Messenger, YouTube, etc. These social networking sites currently gaining a lot of popularity as they are easily accessible, have more options, have a variety of sources, and most importantly can gain the attention of young stars with their interesting content. Rowold and Kauffeld (2008), in their study, stated that career-based discussion whether it is in a formal or informal setting can bring about a more concerned group of employees who are more conscious about their career and growth.

A study was conducted by Perkins and Salomon (1992) to compare the negative and positive transfer. They examined that transfer of learning happens when the learning in one context enhances/makes a positive transfer or undermines/makes a negative transfer an outcome in a different context. They elaborated that, when the performance improves in another context it will be a positive transfer. On the contrary, it will be a negative transfer. A study was conducted by (C Chaudron, 1984) to compare the differences in English as a second language learners' improvement in revision of their compositions depending on the method of evaluation, whether teacher comments or peer evaluations. Several factors are considered, including the level of learner (intermediate or advanced) and the degree of interest expressed by the learners in receiving evaluation and it was found that neither teacher nor peer feedback was superior in promoting improvement on revision. However, the results are limited because they are based on a small group of students. From these studies, we formulated a hypothesis.

H0: There exists no relationship between transfer of learning and students' academic performance.

Negative transfer occurs when learning in one context impacts negatively on performance in another. Empirical studies state that negative transfer generally happens in the early stage of learning a new thing. While getting experience, learners can correct themselves.

Another study was conducted by (S Zhang, 1995) to justify peer feedback. Which concluded that there is a positive advantage of peer feedback. With the previous references and studies. We have followed another hypothesis.

H1: There exists a relationship between the transfer of learning and students' academic performance.

### **III. Material And Methods**

Kothari (2004) stated research design as a term that holds the blueprint of the collection, measurement, and analysis of several data with which any firm, or researcher wants to find out a significant outcome. The quantitative approach is one of the research processes that gain information and involves a formal, objective, systematic process of research analysis (Burns & Grove, 2012). This study will adopt a descriptive research design using a structured questionnaire survey method. An accurate profile is portrayed by Descriptive research of persons, transactions/ events, or situations all the time (Robson & McCartan, 2016).

#### **Sampling Design**

An online sample survey using Google Docs has been conducted with over 365 students of undergrad level. The sample population consists of different private and public universities in Bangladesh. We have used random sampling for collecting information.

#### **Conceptual Framework**

Dependent variable: Students' CGPA

Independent Variables: Participation in informal groups, Active group work, discussion about studies via social media, Note collection, and Career-related discussion with peers.

**Table no 1: Name and Definition of Variables**

Dependent Variables	Indicators	Scale	Data Analytical Tools
Students CGPA	Increases through more efforts of study	Ordinal/ Categorical	Questionnaire/ Simple Linear Regression, Correlation, and F test (ANOVA)
Independent Variables			
Participation in an informal group	Increases the understanding and shares generalized knowledge	Ordinal/ Categorical	Questionnaire/ Simple Linear Regression, Correlation, and F test (ANOVA)
Active in group work	Practical Learning and gathering new ideas through brainstorming		
Discussion about studies via social media	Knowledge sharing and creating bonding		
Note collection	Share conceptualize knowledge		
Career-related discussion	Helps to select the right career path, reduces depression		

**Statistical analysis**

Data was analyzed using SPSS and Microsoft Excel. We used Pearson’s correlation analysis which determines the relationship between the independent and dependent variables. In linear regression analysis, we determine the statistical relationship between dependent and independent variables.

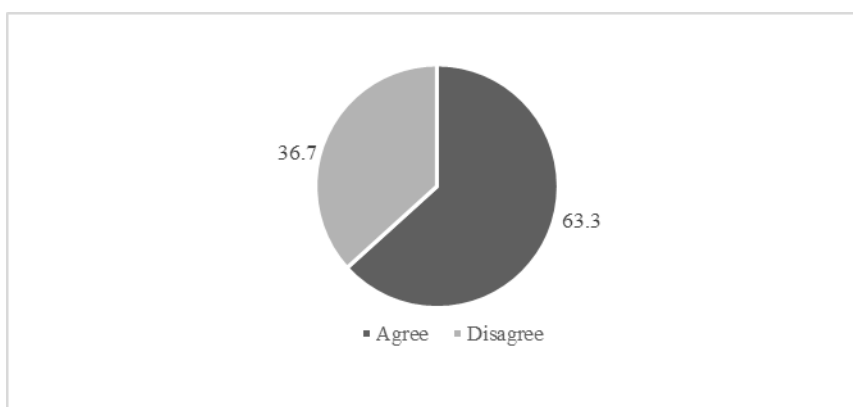
**IV. Analysis and Result**

**Descriptive Study of Survey Data**

Some factors impact the academic outcome such as getting good results. Among these respondents, 63% of them agree that Review/ Discussion with seniors/ juniors/ Classmates impacts their academic results. They also agree that class lectures, course materials, the internet, and motivational seminars impact their academic outcome. So, among all these factors they put the nearest equal importance in case of Review/ Discussion with seniors/ juniors/ Classmates. Through these reviews or discussions, learning can be transferred.

**Table no 2 : Factors Impact on study hard**

Particulars	Frequency	%
Review/ Discussion with seniors/ Juniors/ Classmates	231	63.3
Class lecture	216	59.2
Course materials	218	59.7
Internet	213	58.4
Motivational seminars	181	49.6



**Figure no 1: Review/ Discussion with seniors/ Juniors/ Classmates**

In the case of academic performance, 46% of the students (respondents) got a CGPA between 3.0-3.5 which indicates a good sign. The nearest 39% got a result in between 3.5-4.00. We may categorize the CGPA into four groups, 1. Excellent (3.5-4.00), 2. Good (3.0-3.5), 3. Medium (2.5-3.00), 4. Poor (2.0-2.5).

**Table no 3:** Academic Performance

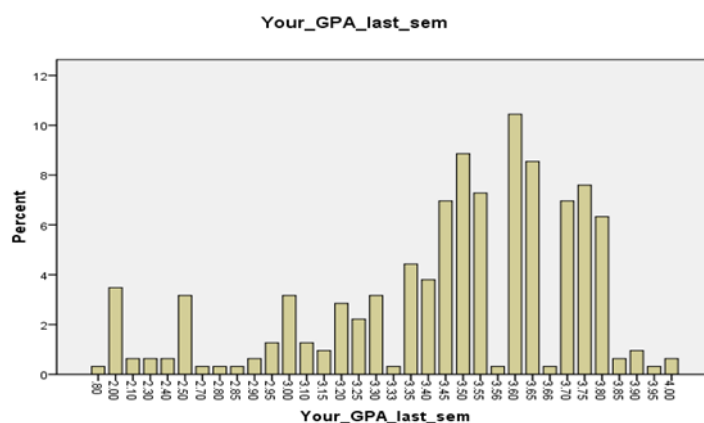
CGPA Range	Frequency	Percent	Mean	1.8137
3.5-4	142	38.9	Median	2.0000
3.0-3.5	168	46.0	Mode	2.00
2.5-3.0	36	9.9	Std. Deviation	.81425
2.0-2.5	19	5.2	Skewness	.938
Total	365	100.0	Std. Error of Skewness	.128

As the mean value indicates the nearest 2 that means the average academic performance is equal to 2 which indicates CGPA 3.0-3.5. We categorize it as a good performer.

The GPA of the selected students as a respondent indicates most of them got 3.60 as a mode in the last semester shown in table-4. Here the mean is 3.3976 ~3.40 indicating most of them got in average the category between 3.00-3.5 which is considered a good result. That means their result is consistent in most of the cases as we have taken into consideration the CGPA.

**Table no 4:** CGPA Last Semester.

Your CGPA last semester	
Mean	3.397
Median	3.5500
Mode	3.60
Std. Deviation	.44982



**Figure no 2:** Participants' last semester CGPA.

The different variables that affect the transfer of learning such as active group participation, active group work, collecting notes, and career discussion reduce stress. Among the respondents, the agreement regarding participation in informal groups the mean is 2.4 which means most of them agree that they participate in informal group discussions with a standard deviation of 1.15.

**Table no 5:** variables that affect the transfer of learning.

Particulars	1	2	3	4	5	Mean	Std. Deviation
I participate in informal group	25	33	20	16	6	2.4	0.95
I discuss about studies via social network	16	35	27	15	7	2.102	0.8099
I am active in Group about work	20	32	26	18	6	2.234	0.872

**Key-** (1) Strongly agree, (2) Agree, (3) Neutral, (4) Disagree, (5) Strongly Disagree

In the second statement related to discussing studies with peer groups 16% of the respondents strongly agree, 35% agree and only 7% disagree. The mean 2 (2.102~2) indicates that the majority of them agree with this statement. It implies that they discuss studies with peer groups with a variation in respondents' perception of 0.95 S.D. The third statement which indicates active in Group work, shows 20% strongly agree, 32% agree, 18% disagree and only 6% strongly disagree. The mean 2 (2.234~3), indicates that the majority of them agree that they are active in Group about work with a variation in respondents' perception 0.8099 S.D.

**Table no 6:** variables that affect the transfer of learning.

Particulars	1	2	3	4	5	Mean	Std. Deviation
I collect note from seniors	11	25	28	26	10	1.974	0.65402
I discuss with them about career plan	24	34	26	10	5	0.981	0.89955
I feel usefulness to discuss with seniors	20	33	29	13	5	2.195	0.78350
<b>Key-</b> (1) Strongly agree, (2) Agree, (3) Neutral, (4) Disagree, (5) Strongly Disagree							

In the first statement, 11% strongly agree, 34% agree, 19% disagree and 25% strongly disagree with the statement “I collect notes from seniors”. The mean 2 (1.974~2) and Standard Deviation 0.65402 indicate that most of them agree with this with variation in respondents' perception of the assertion.

In second and third statements show interconnectivity. At first, most of them strongly agreed as the mean is 0.981~1 with the variation in respondents' perception which is 0.89955. Then, most of them agree that it helps them in their studies.

In fine, as they agree that Review/ Discussion with seniors/ juniors/ Classmates has an impact on their motivation to study harder along with the other factors. The Review/ Discussion acts as a bearer of transfer of learning. So, the null hypothesis is rejected.

Another way, as we have seen the CGPA as an academic outcome average is in good condition and they agree that they actively participate in informal group, group work and collect notes from seniors and they discuss with seniors the career plan as well as they feel it useful. So, the null hypothesis is also rejected as those factors such as actively participating in informal groups, group work collecting notes from seniors, and discussing with seniors the career plan act as a useful factor in case of transfer of learning.

**Pearson’s Correlation Matrix**

Pearson’s correlation analysis is used to determine the relationship between each independent and dependent variable. The correlation can range from -1 to +1 where -1 indicates a perfect negative correlation, +1 indicates a perfect positive correlation, and 0 indicates no correlation at all (Kothari, 2014). The relationship between the dependent variable Academic outcome and independent variables is discussed based on the table value.

The Pearson Correlation coefficient of academic outcome and informal group discussion is computed as 0.207 which implies that there is a positive relationship among them with a significant level of 0.003. The Pearson Correlation coefficient of academic outcome and activity in group work is computed as 0.251 which implies that there is a positive relationship among them with a significant level of 0.0013.

**Table no 7:** Pearson’s Correlation Matrix between Dependent and Independent Variables.

Particulars		Student performance outcome	I participate in informal group	I am active in Group about work	I discuss about studies with peer groups	I collect note from seniors	I discuss with them about career plan
Student performance outcome	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	365					
I participate in informal group	Pearson Correlation	0.207	1				
	Sig. (2-tailed)	0.003					
	N	365	365				
I am active in Group about work	Pearson Correlation	0.215	0.687	1			
	Sig. (2-tailed)	0.0013	0.000				
	N	365	365	365			
I discuss about studies with peer groups	Pearson Correlation	0.172	0.533	.478	1		
	Sig. (2-tailed)	0.001	.000	.000			
	N	365	365	365	365		
I collect note from seniors	Pearson Correlation	0.016	.376	.272	.548	1	
	Sig. (2-tailed)	0.763	.000	.000	.000		
	N	365	365	365	365	365	
I discuss with them about career plan	Pearson Correlation	0.173	.488	.421	.632	.535	1
	Sig. (2-tailed)	0.001	.000	.000	.000	.000	
	N	365	365	365	365	365	365

The Pearson Correlation coefficient of academic outcome and discussion with seniors regarding studies work is computed as 0.172 which implies that there is a positive relationship among them with the significant level 0.001.

The Pearson Correlation coefficient of academic outcome and note collection work is computed as 0.016 which implies that there is a positive relationship among them with a significant level of 0.763. The Pearson Correlation coefficient of academic outcome and note collection work is computed as 0.173 which implies that there is a positive relationship among them with a significant level of 0.0013.

In fine, we can see certain variables are positively related to the academic outcome based on the above analysis. So, the alternative hypothesis is accepted that there is a positive correlation between the transfer of learning and academic outcomes. As the above independent variables are stimulated transfer of what students learned and generalized.

**Regression Analysis and Hypothesis Testing**

Regression analysis is the determination of a statistical relationship between two variables, one variable defined as independent is the cause of the change behavior of another one defined as a dependent variable (Kothari, 2014).

The linear regression in the table indicates that  $R = 0.207$  and  $R^2 = 0.040$ . This R-value 0.207, indicates that there is a linear relationship between Academic outcome and informal group participation. The  $R^2$  indicates that the independent variable is 0.040. This means that about 4 % of the variation in informal group participation is accountable for Academic outcomes.

**Table no 8: Model Summary (01)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.207 <sup>a</sup>	.043	.040	.79975

a. Predictors: (Constant), I participate in informal group

The ANOVA for the linear model presented in the table below has an F value = 16.081 which is significant with p-value = 0.056 of the test which is greater than 0.05 (0.056>0.05).

**Table no 9: ANOVA<sup>b</sup> (01)**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.285	1	10.285	16.081	.056 <sup>a</sup>
	Residual	228.978	358	.640		
	Total	239.264	359			

a. Predictors: (Constant), I participate in informal group

b. Dependent Variable: student performance outcome

The linear regression shows that  $R = 0.215$  and  $R^2 = 0.046$ . This R value 0.215, indicates that there is a strong linear relationship between Academic outcome and activity in group work.

**Table no 10: Model Summary (02)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.215 <sup>a</sup>	.046	.043	.79616

a. Predictors: (Constant), I am active in Group about work

The ANOVA for the linear model is presented in the table below, significance F is the P-value 0.065 of the test which is greater than 0.05, so, accept that relationship.

**Table no 11: ANOVA<sup>b</sup> (02)**

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	11.057	1	11.057	17.444	.065 <sup>a</sup>
	Residual	228.827	361	.634		
	Total	239.884	362			

a. Predictors: (Constant), I am active in Group about work

b. Dependent Variable: student performance outcome

The linear regression shows that  $R = 0.172$  and  $R^2 = 0.030$ . This R-value 0.172, indicates that there is a linear relationship between Academic outcomes and discussions with seniors about studies. The  $R^2$  value indicates that discussion with seniors about studies is accountable for a 3% change in Academic outcome.

**Table no 12: Model Summary (03)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3	.172 <sup>a</sup>	.030	.027	.80529

a. Predictors: (Constant), I discuss about studies with peer groups

The ANOVA for the linear model is presented in the table below, significance F is the P-value 0.05 of the test which is equal to 0.05, so, accept that relationship.

**Table no 13: ANOVA<sup>b</sup> (03)**

Model	Sum of Squares	df	Mean Square	F	Sig.
3	Regression	7.140	1	7.140	11.009
	Residual	233.460	360	.648	.005 <sup>a</sup>
	Total	240.599	361		

a. Predictors: (Constant), I discuss about studies with peer groups

b. Dependent Variable: student performance outcome

The linear regression shows that  $R = 0.016$  and  $R^2 = 0.010$ . This R-value 0.016, indicates that there is a linear relationship between Academic outcomes and collecting notes from seniors. The  $R^2$  value indicates that collecting notes from seniors is accountable for a 1% change in Academic outcome.

**Table no 14: Model Summary (04)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
4	.016 <sup>a</sup>	.010	-.003	.81507

a. Predictors: (Constant), I collect note from seniors

The ANOVA for the linear model is presented in the table below, significance F is the P-value 0.763 of the test which is greater than 0.05, so, accept that relationship.

**Table no 15: ANOVA<sup>b</sup> (04)**

Model	Sum of Squares	df	Mean Square	F	Sig.
4	Regression	.060	1	.060	.091
	Residual	237.171	357	.664	.763 <sup>a</sup>
	Total	237.231	358		

a. Predictors: (Constant), I collect note from seniors

b. Dependent Variable: student performance outcome

The linear regression shows that  $R = 0.173$  and  $R^2 = 0.030$ . This R value 0.173, indicates that there is a linear relationship between Academic outcome and career discussion with seniors. The  $R^2$  value indicates that collecting notes from seniors is accountable for a 3% change in Academic outcomes.

**Table no 16: Model Summary (05)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
5	.173 <sup>a</sup>	.030	.027	.80525

a. Predictors: (Constant), I discuss with them about career plan

The ANOVA for the linear model is presented in the table below, significance F is the P-value 0.760 of the test which is greater than 0.05, so, accept that relationship.

**Table no 17: ANOVA<sup>b</sup> (05)**

Model	Sum of Squares	df	Mean Square	F	Sig.
5	Regression	7.146	1	7.146	11.021
	Residual	232.787	359	.648	.076 <sup>a</sup>
	Total	239.934	360		

a. Predictors: (Constant), I discuss with them about career plan

b. Dependent Variable: student performance outcome

The transfer of learning is done through active group participation, active group work, collecting notes, and career discussions that reduce stress. All these stimulate positively to do better in gathering academic outcomes. Through the above analysis, we can reject the null hypothesis and accept the alternative hypothesis 'that there is positive impact of the transfer of learning on academic performance.

## V. Discussion

Transfer of learning has a clear and continuous implication in education and the workplace (Butler, 2010). In the educational and academic sectors, this holds the same annotation as our literature and analysis implies. Our analysis implies that most of the respondents agree that they participate in informal groups, collect notes from seniors, discuss studies via social media, and discuss with seniors regarding their career plans. They also feel these are useful to reduce stress and increase motivation to put in more effort. We had two hypotheses. The null hypothesis stated that there is no relation between the transfer of learning and students' academic performance. Here we reject the null hypothesis. The correlation and regression analysis support that there are positive correlations among the transfer of learning which is done through certain variables such as participation in informal groups, collecting notes from seniors, discussing studies via social media, and discussing with seniors regarding the career plan and academic performance.

## VI. Conclusion

Transfer of Learning is the application of skill, knowledge, and attitudes that were learned in one situation to another learning situation. We can learn things from different sources through communication, participating in informal groups, discussing on social media, and collecting course materials and notes from the seniors. Transfer feedback can be both positive and negative. Positive feedback helps us to increase our academic performance. Several factors act as a mediator between academic performance and the transfer of learning. In our research students, academic performance was in good condition with the several factors of knowledge transfer. As our respondents indicated, while many variables have impacts on students' academic performance but majority of the students agree that not only Review/ Discussion with seniors/ juniors/ Classmates but also class lectures, course materials, internet, and motivational seminars impact their academic outcome. There is a strong positive relationship between these variables with transfer of learning having an impact on students' academic performance.

## References

- [1]. Ambrose, S. A., Bridges, M. W., Dipietro, M., Lovett, M. C., & Norman, M. K. (2010). *Seven Research-Based Principles For Smart Teaching*. San Francisco: Jossey-B.
- [2]. Argote, L., P. Ingram. 2000. Knowledge Transfer: A Basis For Competitive Advantage In Firms. *Organ. Behav. Human Decision Processes* 82(1) 150-169.
- [3]. Bransford, J. D., Brown, A., & Cocking, R. (Eds.). (1999). *How People Learn: Brain, Mind, Experience, And School*. Washington, Dc: National Academies Press.
- [4]. Butler, A. C. (2010). Repeated Testing Produces A Superior Transfer Of Learning Relative To Repeated Studying. *Journal Of Experimental Psychology: Learning, Memory, And Cognition*, 36(5), 1118.
- [5]. Chaudron, C., (1984). The Effects Of Feedback On Students' Composition Revisions. *Relc Journal*, 15(2), Pp.1-14.
- [6]. Chauhan, R., Ghosh, P., Rai, A. And Shukla, D. (2016). The Impact Of Support At The Workplace On Transfer Of Training: A Study Of An Indian Manufacturing Unit. *International Journal Of Training And Development*, 20(3), Pp.200-213.
- [7]. Denisi, A. S., & Kluger, A. N. (2000). Feedback Effectiveness: Can 360-Degree Appraisals Be Improved?. *Academy Of Management Perspectives*, 14(1), 129-139.
- [8]. Dixon, R. A., & Brown, R. A. (2012). Transfer Of Learning: Connecting Concepts During Problem Solving. *Journal Of Technology Education*, 24(1), 2-17.
- [9]. Eraut\*, M. (2004). Informal Learning In The Workplace. *Studies In Continuing Education*, 26(2), 247-273
- [10]. Grove, S. K., Burns, N., & Gray, J. (2012). *The Practice Of Nursing Research: Appraisal, Synthesis, And Generation Of Evidence*. Elsevier Health Sciences.
- [11]. Kothari, C. R. (2004). *Research Methodology: Methods And Techniques*. New Age International.
- [12]. Leuven, E., & Tuijnman, A. (1996). Life-Long Learning: Who Pays?. *Organisation For Economic Cooperation And Development. The Oecd Observer*, (199), 10.
- [13]. Mao, J. (2014). Social Media For Learning: A Mixed Methods Study On High School Students' Technology Affordances And Perspectives. *Computers In Human Behavior*, 33, 213-223.
- [14]. Perkins, D. N., & Salomon, G. (1992). Transfer Of Learning. *International Encyclopedia Of Education*, 2, 6452-6457.
- [15]. Robson, C., & McCartan, K. (2016). *Real World Research*. John Wiley & Sons.
- [16]. Rowold, J., & Kauffeld, S. (2008). Effects Of Career-Related Continuous Learning On Competencies. *Personnel Review*, 38(1), 90-101.
- [17]. Vargas, A., Moreno, J. And Vande Wouwer, A. (2015). Super-Twisting Estimation Of A Virtual Output For Extremum-Seeking Output Feedback Control Of Bioreactors. *Journal Of Process Control*, 35, Pp.41-49.
- [18]. Young P (2009) Innovation Diffusion In Heterogeneous Populations: Contagion, Social Influence, And Social Learning. *The American Economic Review* 99: 1899-1924. Blume, B. D., Ford, J. K.,
- [19]. Zacharia, Z., & Jennings, B. (1998). Use Of Active Learning And Group Competition To Facilitate Training And Technology Transfer For Adult Learners. *Transportation Research Record*, 1637(1), 13-17.
- [20]. Zhang, S., (1995). Reexamining The Affective Advantage Of Peer Feedback In The Esl Writing Class. *Journal Of Second Language Writing*, 4(3), Pp.209-222.