ISSN: 2522-3224 (Print)
ISSN: 2523-109X (Online)

JOURNAL OF CONTEMPORARY TEACHER EDUCATION (JCTE)

Volume: 6

Secondary Teacher Education Department
Allama Iqbal Open University
Islamabad–Pakistan

JOURNAL OF CONTEMPORARY TEACHER EDUCATION

Journal of Contemporary Teacher Education is an annual publication of Secondary Teacher Education Department, Faculty of Education, Allama Iqbal Open University, Islamabad. Articles published in the journal are selected on the basis of quality. Views expressed in the journal are those of authors and do not necessarily reflect the views of the Journal of Contemporary Teacher Education.

SUBSCRIPTION

PAKISTAN	FOREIGN COUNTRIES
Single Copy: Rs. 500	Individuals: US $ 35.00
Libraries & Institutions:	Rs.2000
Libraries & Institutions:	US $ 100.00

COPYRIGHTS (2022)

Layout: Muhammad Hameed

Printed at: AIOU-Printing Press, H-8, Islamabad, Pakistan

EDITORIAL BOARD

TABLE OF CONTENTS

Journal of Contemporary Teacher Education
Volume: 6, 2022, 1–16

Assessing the Role of Public-School Council in Utilization of the Non-Salary Budget

M. Asif Nadeem[*]
Zaib Un Nisa[**]
Manzoor Husain Shah[***]

Abstract

The current quantitative study was designed to ascertain the utilization of the Non-Salary Budget (NSB) by engaging members of the School Council (SC) in the government schools of Punjab (Pakistan). The study's major aim was to identify the gap in the utilization of the problems such as transparency, and participation of members of school councils' problems regarding no salary budget (NSB) the public schools. This study's nature is descriptive. The population of this study comprised all rural and urban boys' and girls' public secondary schools situated in the District of Bahawalpur. A sample of 400 participants in 20 schools was chosen through a multistage sampling procedure. A self-prepared questionnaire was distributed among the randomly selected sample of 356 school heads, teachers, clerks, and school council members. Data were analyzed through statistical methods for frequency, percentage, mean of the data, Standard Deviation, and t-test. The results indicated that the school committee's role is to enhance educational facilities by using NSB. It faces a lack of parents' support regarding children's academic progress. It is recommended that regular pieces of training for school heads and school council committee members may be conducted after short periods. Orientation training about the role, responsibilities, and authorities of members of the school council must be conducted at the stage of composing a new school council committee at the Tehsil level.

Keywords: School, council, budget, non-salary, committee, role, head teachers, teachers, school plant, administration, drawing and dispersing officer.

[*] Associate Professor, Department of Education, IUB. asif.nadeem@iub.edu.pk
[**] Ph.D Scholar, Department of Education, HU.nisa.rasheed17@gmail.com
[***] Pro VC, HOD, Department of Education, HU. drmhshaah@gmail.com

Introduction

The non-salary budget (NSB) in the public schools of Punjab is the main role of the DDEO office and, in some cases, is used to compensate utility bills of schools (Nadeem 2021). Deputy District Education Officers (DDEOs) maintain a separate bank account where non–salary budgets are disbursed by the district account office. It is utilized in schools to deliver basic facilities for teaching and learning (The World Bank Survey Report, 2015). (Saleem and Farooqi 2021) stated that the major utility of the school budget in a school is divided into two basic elements which are the provision of basic facilities and infrastructure development. Both of these elements deal with the utilization of the non-salary budget. As both of these factors deal with the financial proponents of the budgetary sources so, they are quite significant for the progress of the school plant and for the stakeholders (Akhter, Khan, et al.). Both factors are considered to be the foremost as they act as an amphoteric ally. These two-way actions can be seen as; a) operationalization of the funds, b) monitorial allocations of the school funds. Operationalization usages of the NSB dealt with the teaching resources for the teachers and learning resources mostly linked with the learners. It enables the schools to procure operational and education-related consumables financial requirements in a given year. Purchases included in the said budget are relating to teaching and learning, repair and maintenance of school buildings, provision of basic facilities such as drinking water and electricity, co-curricular activities, utility bills, medical supplies, photocopying and printing, cleaning, laboratory equipment, refreshments, ground, and grassy plots maintenance, planting, etc. These needs may vary by type, size, and location of a public school. The presence of these resources enables the Heads; to develop a conducive learning environment for the stakeholders (Nadeem 2021). Major provisions of expenditures are deemed to be spent on the safety of students, the production of a home-like environment for the learners, and the purchase of equipment for the delivery of quality education in the school (Naviwala 2016).

However, a non-salary budget is used to develop teaching and learning resources that last longer than a few years. In the Pakistani context, this budget is mostly used for the purchase of science lab equipment and mainly for providing free course books to students. Some of its portions are also suffixed for the professional capacity development of the teachers. If a school is unable to expend the complete budget it will lapse in the next year (Al-Khafajiy, Baker, et al. 2019).

Non-salary budget utilization is considered to maximize the value of the product and amount while the implementation of the budget to the monetary resources of the school is called expenditure management. This runs with the School Council (SC) which has a definite role in the utilization of NSB. It has a very important position in the public school's wing. It is wholly responsible for school management and utilization of the non-salary budget (NSB) in public secondary schools (Tariq, Asim, et al. 2019).

The present study aimed to analyze the effectiveness of the school council committee in solving the school budget. Six aspects related to the school council committee were utilization of non-salary budget (NSB) through engagement school council regarding transparency/ fairness. These were the role of the non-salary budget, utilization of non-salary budget, transparency in the appliance of non-salary budget, duties of the school council committee regarding non-salary budget, problems faced by school council committee regarding non-salary budget, and strength of school council committee.

Study Objectives

Identifying the gaps ensuing in the utilization of the budget in the government schools.

Evaluating transparency in budget utilization by Members of the school council as per statuaries.

To review problems faced by Members of the school council' regarding the non-salary budget.

Research Questions

What type of finance Source allocation availability is provided in the GSS?

What procedure do the school bodies adopt for the allocation of the budget?

To what extent is transparency observed utilization of the budget through the engagement of the school council in the public schools of the Bahawalpur district?

Literature Review

The education system is said to be is a big industry that involved a large number of personnel (Beech 2018). This system developed programs in a

country and used materials and resources in a state. Due to this, a large proportion of the non-salary budget (NSB) is spent on the education system in Pakistan (Bari, Malik, et al. 2018). A handsome amount of the budget has been allocated to meet the educational needs of the government institutes and to serve their purposes. Educational Researchers like (Muhammad, Ziarab, et al. 2021) glorified this system in words "finances spent for education should be spent fairly, effectively and suitably to promote quality of education (MoE, 1994). A sufficient amount of money is allocated to the education sector in terms of the non-salary budget by the provincial government. This allocation was helpful to promote monetary benefits and bring improvisation in the present standards of future generations (Asim 2019). Nevertheless, such allocation of finance seemed less in a real sense as the increasing demands of the school sector in the province of Punjab. The only escape from this situation may be endorsed is the proper utilization of the designated budgetary outlets in proper and allocated slots (Saleem and Farooqi 2021).

It is a common practice in Pakistan that the allocated slots are not given proper placement in the financial matters of the school sector as there is no check and balance and proper audit reporting to observe pellucidity in the disbursement of budget (Fatima, Shahzadi, et al. 2017). The present research suggests that there should be a transparent implication of budget in the public schools as improper utilization of the monetary outlets may cause the low quality of education and standards of literacy. This seemed to have enough budgets to create capacity for the utilization of non-salary budgets for the school students and educational facilities related to the teaching and learning process. The practice of financial management states budget role and utilization through the engagement of the community in public schools of the Bahawalpur district. However, the utilization of a non-salary budget (NSB) is significant for improving schools' conditions in teaching and learning mode (Kaguri, Ibuathu, et al. 2014). Make school heads aware of the ways of the utilization of budget resources transparently and properly for achieving local goals. This achievement of national goals would directly speed up teaching and learning in the schools generally and help to improve literacy overall in the country lock stock and barrel.

To achieve these goals, the literature identified in this study deciphered that the provincial government revised its 2019-2021 policy and introduced Education Support Program (ESP) in the education sector (Chohan 2019). These reforms seemed to help the cause of financial constraints and its utilization from a broader perspective. Acquisition of these goals can seriously enhance the level of financial capability and its

effective usage on the school side (Borrelli, Alewell, et al. 2020). The reason behind this enhancement has been to provide self-sufficiency to the government sector schools and to improvise planning for quality education. If resource allocation is proper in a sector, then progress would be unbound in that sector (McDonald 2012). These policy objectives seemed applicable in theory but practically they seemed quite tough to apply in the setting (Porignon 2019). The red tape, bureaucracy, and self-benefits of heads act as a hurdle in the achievement of the set goals. The solution to such barriers may be endorsed by decentralization of the designated powers of heads and more involvement of the community in the financial sector may improve the situation and help in attaining the impartiality and equivalent distribution of the resource in the school sector can be easily achieved (Ahmad 2014). In the past, a formula for equal distribution of funds was formulated in the year 2014 by the government which seemed to act upon the rules of suitability, imparity, adeptness, and parity. This formula induced that the distribution of the non-salary budget would be made based on several students (Kazmi and Quran 2005).

This feature brought competency among school heads to raise their enrollment and keep the learners intact in the school. The learning capacity of the learners increased due to this segment. More funds were allocated to the heads that can use these funds smartly, aptly, and in time (Atif, Ahmad, et al. 2017). The preference was given to those schools whose heads were able to spend money on their school properly and a report of such heads was developed on yearly basis. The present government raise the budget from 1.3 billion to 14 billion which seemed quite sufficient to meet the financial needs of the schools. To keep transparency third-party validation process has been introduced. The system has emerged to counter leaking of the money from the budget. No cut-purse issues seemed to prevail during these years (Sulisworo, Nasir, et al. 2017).

There is no doubt that in the present age education is the only panacea to the ailments of developing nations. Nations that have strong educational sets up seemed to sustain their development and can provide a better standard of life to their citizens. There is no place for the nations who are having low literacy rates. There is a thriving situation in the field of technological development and those nations who are opting for and adopting this technological surge can survive in the committee of nations others will fall. The only thing which can make enterprise in a society can be gained through proper education and there is a reciprocate in education which can be achieved only through spending more on education. Most of the resources should be allocated to the development of education. More and more allocation of finance may be invested in schools, colleges, and universities.

Research Design

This study is descriptive with mix method research approach. Qualitative data collection was attained through a survey to collect data from stakeholders, and an observation checklist was used to collect quantitative data from the principals/Heads and teachers of the secondary. The study was confined to District Bahawalpur. All public secondary schools were the population of the study (Boom & Johnson 2017). The questionnaire consisted of two parts. The first part was related to the demographic information of respondents and schools included in the sample of the study. The second part included a list of items along with a checklist on a two-point scale that was related to the status of physical facilities in the school. The checklist was developed related to the school facilities. It was the same as was included in the second part of the questionnaire. So, using this checklist provided data by the school heads could be verified for cross-checking. The researchers conducted pilot testing among the samples of three Government secondary schools. This pilot testing was carried out to identify the weakness of the self-developed tool and to perceive the efficacy of the tool in controlled conditions. After distributing a questionnaire to the sample, the reliability of the tool was calculated statistically by applying the formulae of Cronbach Alpha Value. The Cronbach's Alpha value was recorded as 0.796 which explained a good level of reliability.

Research Rationale

The present study was designed to work out the real situation prevailing in the School Education Department on planning to decide on the utilization of a non-salary budget with a transparent process. It may be helpful to upsurge the required expectations of a student and parents. It may be important in developing schools, according to the basic priorities regarding situations. It may be important in helping to create a learning and teaching environment for students in public schools. The research was designed to observe the special attention given to the expenditure of funds allocated in the non-salary budget. This research would sort out the issues which are faced in the allocation of non-salary budget. If Pakistan needs to enroll 100% of secondary school children in schools, then an increase in school access and resources are required abundantly.

Interpretation of Data and Analysis

Table 1

Role of Non-Salary Budget (NSB)

Factor 1: Role of Non-Salary Budget (NSB)		SA	A	UD	DA	SDA	Mean	Std.	t	sig.
1. Non-Salary budget plays a role to increase school level financial efficiency in your school	*f*	89	161	24	43	39	3.61	1.281	53.208	.000
	%	25.0	45.2	6.7	12.1	11.0				
2. The role of NSB makes independent of the school management committee in your school	*f*	63	163	36	42	52	3.40	1.308	49.061	.000
	%	17.7	45.8	10.1	11.8	14.6				
3. NSB improves learning environment, according to Government policy in your school	*f*	83	173	35	36	29	3.69	1.173	59.329	.000
	%	23.3	48.6	9.8	10.1	8.1				
4. NSB plays a role in increase and maintains student enrollment in your school	*f*	70	190	45	24	27	3.71	1.092	64.044	.000
	%	19.7	53.4	12.6	6.7	7.6				
5. NSB empowers school council for developing school needs in your school.	*f*	74	192	22	35	33	3.67	1.180	58.690	.000
	%	20.8	53.9	6.2	9.8	9.3				
6. NSB is a powerful formula /policy of the government to ensure equity in resource distribution in your school	*f*	86	175	33	29	33	3.71	1.189	58.854	.000
	%	24.2	49.2	9.3	8.1	9.3				
7. NSB formula consolidated principles of fairness	*f*	53	177	42	28	56	3.40	1.282	50.060	.000
	%	14.9	49.7	11.8	7.9	15.7				
8. NSB fund stimulated to school council for impartiality in your school	*f*	49	198	50	31	28	3.59	1.080	62.650	.000
	%	13.8	55.6	14.0	8.7	7.9				
Overall	*f*	567	1429	287	268	297	3.59	1.198	78.333	.000
	%	19.9	50.2	10	9.4	10.5				

**Note.* 1-SA = Strongly Agree, 2-A = Agree, 3-UD = Undecided, 4-DA = Disagree, 5-SDA= Strongly Disagree

The above Table identified that teachers were asked to give their opinion about the role of non-salary budget. Most of the teachers, 45.2 percent agreed with the statement that a non-salary budget plays a role to increase school-level financial efficiency in their school, 25 out of hundred participants in the research did not agree while 12.1 in every hundred teachers at secondary schools opined that they do not think it so. 11% of the sample disregarded the statement while 6.7% were not able to give their decision about the statement. The mean score of the first statement remained at 3.61 which showed an affirmative inclination in the curve. The value of the figures for the standard deviation remained at 1.281 which indicated that there is an agreement of value with the statement. The score of t-value 53.208 revealed significance at 0.00 showing that it was a bent towards statistical connotation from respondents' positivity towards opinion.

45.8% of teachers selected from the random sample exhibited their settlement with the question raised to them that role of non-salary budget makes independent of the school management committee in their school, 17.7% of the plaintiffs replied positively about the statement while 11.8% of the replies discarded the statement. 14.6% of the teachers strongly disagreed with the statement and 10.1% of them remained undecided on this point. The mean score of the statements remained at 3.40. There was a standard deviation value of 1.308 which showed an agreement with the statement and the t-value of this statement was given as 49.061 which is significant at 0.000. This positive inclination showed that the statement is statistically significant.

The statement inscribed on the use of NSB for the learning environment improvement found that 71.9% of the teachers were of the view that it holds an impact on the users on the other hand 18.2% thought that they do not agree with the statement. 9.8% of the candidates did not show any consent to the opinion. The mean score was 3.69, S.D. remained at 1.17 and the t-value was 59.33 showing that the data is significant.

The majority of the teachers, 72.1 percent agreed with the statement that a non-salary budget plays a role in increasing enrollment and acts as a factor to keep students in schools as their parents are poor and cannot fulfill the educational needs of learners; so, they take their sons and daughter away and put them to some workshop for earning bread and butter. Along with this agreement, other segments of society averted the opinion though their number was insignificant that is 14.2 percent of them opined that the non-salary budget amount is too low and scholarship or help provided to the students is not enough while 12.6 percent of the respondents did not give their opinion on the matter. In the light of the opinions educed from the respondents it was obvious from the Mean score which was 3.71that tilt of the responses had been positive in its origin and it seemed that the diffident might agree that non-salary budget plays a role in increasing and maintaining student enrollment in their school. The standard deviation of

the values remained at 1.09 which indicated agreement with the produced statement. The t-value of the responses was 64.04 which is also significant and illustrates that there is an inclination found in the statements of the respondents. This value of 0.00 signposted that there was an agreement ensued in the statement given by the respondents.

74.7 percent of the respondents which is the majority of the participants recorded their consent to the inquiry with the statement that the non-salary budget is a source of empowerment for the school management committee. On the other hand, 9.8 respondents out of hundred disapproved of the queries while 6.2 percent of the plaintiffs did not disclose their opinion. The collective mean score attained for this statement was 3.67 which as per the five Likert scale measures defined positivity in its inclination which seemed to specify statistical significance towards the statement and approve the statement as positive in its origin. Similarly, the value reduced from S.D. is 1.18 pointing towards the positivity of the statement as the majority of the perpetrators showed their covenant with the statement. Two tail test (t-test) value acquired 58.69 which is greater than the value of 0.000 so statistically, it is proven that the statement inquired from the research inclusive is substantial in its creation.

64.9 percent of the respondents gave their verdict to the statement asked them that was about the principle of fairness for the consolidation of the NSB. 23.6 percent of them did not seem to agree with the fair consolidation of the non-salary budget allocated for the school and 11.8 percent of the users of the NSB did not par-take the opinion pool. As the respondents were asked on a five Likert scale the calculated mean value of the responses remained at 3.40 which showed a positive inclination towards the statement (non-salary budget formula consolidated principles of fairness). The value of standard deviation was calculated at 1.28 which showed agreement towards the statement and seemed to imply that the statement was validated by the respondents. The t-value for the statement remained significant which is 50.060 also shows a preference toward an agreement is statistically significant.

It was observed while assessing the retrieved data that 69.4 percent of the teachers agreed with the statement of the question and agreed impartiality factor was being used while spending the budget. There were very few 16.6% of the school budget management members who said that the partiality factor prevailed while the distribution of the budget above ale salaries while the remaining percent of the members did not say anything about this factor. The mean score of the statements remained at 3.59 which is significant and S.D. stands at 1.080. t-value attained 62.50. all these statistical inferences showed that the majority of the respondents agreed with the accuracy of the statement and an impartiality factor is considered in the lock stock and barrels of the school salary excepted budget given by the government.

Teachers' Judgment about the Non-Salary Budget (NSB) Consumption

Table 2

Consumption of Non-Salary Budget (NSB)

Factor 2: Utilization of Non-Salary Budget (NSB)		SA	A	UD	DA	SDA	Mean	Std.	t	Sig.
9A. Provide free uniforms from (NSB) to poor students, according to weather in your school.	*f*	92	123	74	36	31	3.59	1.220	55.480	.000
	%	25.8	34.6	20.8	10.1	8.7				
9B. Provide free bags to needy students from the NSB fund in your school	*f*	112	91	82	33	38	3.58	1.305	51.731	.000
	%	31.5	25.6	23.0	9.3	10.7				
9C. Print pamphlets for students' awareness about infectious diseases in your school	*f*	79	105	74	42	56	3.31	1.357	45.973	.000
	%	22.2	29.5	20.8	11.8	15.7				
9D. Provide free shoes to poor students(brick kiln) children in your school	*f*	92	122	72	33	37	3.56	1.256	53.477	.000
	%	25.8	34.3	20.2	9.3	10.4				
9E. Provide free educational/instructional stationary for student activities from (NSB) budget	*f*	87	135	67	30	37	3.58	1.237	54.555	.000
	%	24.4	37.9	18.8	8.4	10.4				
10. Maintain school building, including classrooms and washrooms according to required students' facilities	*f*	82	108	47	34	85	3.19	1.498	40.182	.000
	%	23.0	30.3	13.2	9.6	23.9				
11. Maintain school playgrounds, grassy plots, and plants	*f*	76	115	98	41	26	3.49	1.162	56.671	.000
	%	21.3	32.3	27.5	11.5	7.3				
12. Repaired /Buy furniture, chairs, tables for students	*f*	93	140	70	27	26	3.69	1.153	60.467	.000
	%	26.1	39.3	19.7	7.6	7.3				
13. The school building is painted from NSB fund	*f*	96	136	62	29	33	3.65	1.220	56.512	.000
	%	27.0	38.2	17.4	8.1	9.3				
14. Purchase of machinery and equipment in your school	*f*	88	108	68	26	66	3.35	1.410	44.893	.000
	%	24.7	30.3	19.1	7.3	18.5				
15. Maintain computer and science labs regularly in your school	*f*	87	107	67	33	62	3.35	1.397	45.223	.000
	%	24.4	30.1	18.8	9.3	17.4				
16. Maintain library including books and newspapers in your school	*f*	67	136	66	31	56	3.36	1.315	48.171	.000
	%	18.8	38.2	18.5	8.7	15.7				
17. Provide facility filtered water students in your school	*f*	89	131	69	37	30	3.60	1.208	56.174	.000
	%	25.0	36.8	19.4	10.4	8.4				
18. Electric fans, water coolers, and lights are functional in your school from the NSB fund in your school	*f*	97	133	59	33	34	3.63	1.241	55.274	.000
	%	27.2	37.4	16.6	9.3	9.6				
Overall	*f*	1237	1690	975	465	617	3.49	1.284	71.963	.000
	%	24.8	33.9	19.5	9.3	12.5				

**Note*. 1-SA = Strongly Agree, 2-A = Agree, 3-UD = Undecided, 4-DA = Disagree, 5-SDA= Strongly Disagree

It was answered by the teachers (60.4%) that this utilization is not made properly and heads use this slot of the budget as per their whim and vigor. This slot was produced keeping in mind that the learners belonging to low-earning families may be provided uniforms according to the weather. It was found that there has been misuse of this budgetary clause. 40.6 percent of the teachers agreed with the statement.

Table 3

Observation check list for school visit

Statement	Option	Yes	No
Is NSB budget transfer in school for two times per year?	*f*	8	2
	%	80.0%	20.0%
Is NSB budget according to student enrollment	*f*	7	3
	%	70.0%	30.0%
Did Paint and repair school building on need base regularly?	*f*	6	4
	%	60.0%	40.0%
Are Furniture and classrooms maintain and enough for teachers?	*f*	7	3
	%	70.0%	30.0%
Are Cashbook and meeting register matching with school condition?	*f*	8	2
	%	80.0%	20.0%
School council committee is active in this school	*f*	9	1
	%	90.0%	10.0%
Do School Council members visit school and checked school development work regularly?	*f*	4	6
	%	40.0%	60.0%
Are School Council members satisfied with the utilization of budget in this school?	*f*	7	3
	%	70.0%	30.0%
Has this school difficulty in educational environment for students?	*f*	5	5
	%	50.0%	50.0%
Is Students enrollment increasing day to day in this school?	*f*	2	8
	%	20.0%	80.0%
Was Satisfaction present according NSB sources in this school?	*f*	9	1
	%	90.0%	10.0%

Table 3 shows a summative view of the observation checklist for school visits. According to Table, 80% of respondents responded about non-salary budget transfers in school two times per year, and 20% did not respond to the statement. 70% non-salary budget according to student enrollment, 60% did paint and repairing school building on a need base regularly, 70% furniture and classrooms maintaining and enough for teachers, 80% cashbook and meeting register matching with school condition, 90% school management committee was active in this school, 60% no response about school council members satisfy on the utilization of budget in this school 50% this school difficulty in an educational environment for students, 80% are no response about students enrollment increasing day to day in this school and 90% satisfaction present according to non-salary budget sources in this schools.

Findings

The maximum amount of non-salary budget transferred to public schools' accounts for basic needs and facilities in public schools. But its utilization is not shown transparently. The budget is applied by the school council committee.

There are fewer funds allocated to the schools and common practice in this regard is that the funds are given as per the number of students enrolled in the school. In other words, the budget is directly related to the school populace. There is another issue in this sense is that allocated funds many times did not reach at all. If they reach somehow there is no surety that this will be spent entirely. Annual financial reports about school expenses found that there was embezzlement in the usage of funds in Pakistan. The annual Public Education Financing reports identified the educational sector as 4th most corrupt zone. It seemed quite awe-full to hear that story spreading all around declaring wide corruption cases in the use of budgeting. This happened due to factors such as unknowing the laws about the expenditure, intricate process of spending budgets, and vague procedures stated to spend this money. All these factors are prevailing increasing the problems for the heads and all the stakeholders. The condition of our public schools seemed to get low and standing at the end of the closure. Only a particular class that is middle and lower-middle-class children are attending schools due to the deteriorating situation of school infrastructure.

Discussion

From the data and personal experiences of the researcher, it may be concluded that the heads of the schools are aware of the process of non-salary budget preparation, demonstration of the budget, and record-keeping process. Similarly, the school heads are aware of the process that needs to be taken in the planning of finance. Other researchers like Lai, Origa, et al. 2013 also advocated the conviction that most school heads must face trials in keeping ledgers and schemes for the implementation of the NSB. They remain terrified of spending the finances for the betterment of the school (Lai, Origa, et al. 2013). The school council seemed inert, and the members of this council do not show any interest in the expenditure of NSB due to its lengthy and intricate process (Ogbonnaya, Halloran, et al. 2005).

There is a very simple method of implementation in this regard, which is developing the school committee, but the staff is not ready to coincide with the heads to be part of the school development committee. They do not want to be removed from service as the censure in such cases had been removed from service or PEDA act. Much research enacted in this regard identified that the youth induction in the schools as heads enables them to work hard and spend finances honestly and they take initiatives to develop the infrastructure of the school.

Conclusion

It is a quite discussable point keeping in mind the situation prevailing in Pakistan regarding the expenditure of school non-salary budget that the non-salary budget upbraided the school management committee for impartiality in their relevant schools. In light of the statistics attained in this research, it is quite evident that the stakeholders seemed quite satisfied with the role played in the utilization of the non-salary budget in their schools. Due to this role, they found it fit to improvise the school's efficiency observation and the checklist showed an optimistic slope indicating that there is a decisive role a non-salary budget had to play which declares these stakeholders independent of the school management committee. Data also indicated that the respondents were in favor that the NSB helping in the improvisation of the learning environment. Due to this financial and fiscal aid, the school heads were able to fulfill their needs in the development of schools. In light of these opinions, it seemed quite clear that sampled population seemed to agree with the statement that NSB is a source of help for the development of the school. Overall, it is assumed that the non-salary budget was essential to overcome the school requirements and developments in all facets. The discussion identified the situation being faced by the stakeholders on impartiality in the school council while spending a non-salary budget. The end users in this regard were the teachers who were members of the council and maintain budgetary expenses.

Recommendations

In light of the conclusions, the following recommendations have been made to improve the role of the school council committee to solve school issues. The school council committee should be accountable to the director of education for the school's overall performance. School heads must have to assume collective responsibility for the management of the school. Orientation training about the role, responsibilities, and authorities of members of the school council must be conducted at the stage of composing a new school council committee at the Tehsil level. For better learning outcomes and literacy ratio, there is a need to spend on capacity-building programs. To reduce the dropout rates and increase school completion rates, funds should be spent on the betterment of infrastructure and adding basic facilities such as (i) boundary walls, (ii) drinking water, (iii) toilets, (iv) transportation, etc. to ensure a better quality of education, funds should be spent on areas such as (i) curriculum (ii) teacher development, (iii) student engagement and (iv) availability of supplementary learning materials.

References

Ahmad, I. (2014). "Critical Analysis of the Problems of Education in Pakistan: Possible Solutions." International Journal of Evaluation and Research in Education 3(2): 79-84.

Akhter, N., et al. "Efficient Management of Financial Resource and Constraints in Implementation of Budget at Secondary Schools."

Al-Khafajiy, M., et al. (2019). "Remote health monitoring of elderly through wearable sensors." Multimedia Tools and Applications 78(17): 24681-24706.

Asim, M. (2019). "Can Information Strengthen Local Governance of Schools? Evidence from Pakistan." INFORMATION TO ALL USERS The quality of this reproduction is dependent on the quality of the copy submitted. In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion. 1001: 1.

Atif, M., et al. (2017). Pharmaceutical policy in Pakistan. Pharmaceutical Policy in Countries with Developing Healthcare Systems, Springer: 25-44.

Bari, F., et al. (2018). "Revision of the Non-Salary Budget Formula Report."

Beech, S. E. (2018). "Adapting to change in the higher education system: International student mobility as a migration industry." Journal of Ethnic and Migration Studies 44(4): 610-625.

Borrelli, P., et al. (2020). "Soil erosion modeling: A global review and statistical analysis."

Chohan, U. W. (2019). "Fiscal Sustainability: A Historical Analysis of Pakistan's Debt Conundrum."

Fatima, Z., et al. (2017). "Financial Management Competence of Selected and Promoted School Heads: A Demographic Comparison." Global Social Sciences Review (GSSR) 4(4).

Kaguri, M., et al. (2014). "Financial management challenges facing the implementation of free day secondary education in Imenti North District, Kenya."

Kazmi, S. W. and H. Quran (2005). "Role of education in globalization: A case for Pakistan." SAARC journal of human resource development 1(1): 90-107.

Lai, M. E., et al. (2013). "Natural history of hepatitis C in thalassemia major: a long-term prospective study." European journal of hematology 90(6): 501-507.

McDonald, D. A. (2012). Electric capitalism: Recolonising Africa on the power grid, Routledge.

Muhammad, R., et al. (2021). "Contribution Of Leadership Training In Improving Financial Aspects Of Schools Heads In Punjab." Multicultural Education 7(5).

Nadeem, M. T. (2021). "An Exploration of Administrative Operations and Quality Measures at Primary Level: Perceptions of the Head Teachers

in the Rural Area Primary Schools in Punjab." Psychology and Education Journal 58(4): 429-439.

Naviwala, N. (2016). "Pakistan's Education Crisis: The Real Story." Woodrow Wilson International Center for Scholars.

Ogbonnaya, F., et al. (2005). "D genome of wheat—60 years on from Kihara, Sears, and McFadden." Ed. K. Tsunewaki. Frontiers of Wheat BioScience.(Kihara Memorial Yokohama Foundation for the Advancement of Life Sciences). Yokohama, Japan.

Perignon, D. (2019). "Annual report 2018-Supporting policy dialogue on national health policies, strategies, and plans for universal health coverage."

Saleem, T. and M. T. K. Farooqi (2021). "Role of School Councils in School Administration: Exploring Performance, Opportunities, and Challenges." Ilkogretim Online 20(3).

Schoonenboom, J. and R. B. Johnson (2017). "How to construct a mixed methods research design." KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie 69(2): 107-131.

Sulisworo, D., et al. (2017). "Identification of teachers' problems in Indonesia on facing the global community." International Journal of Research Studies in Education 6(2): 81-90.

Tariq, N., et al. (2019). "The security of big data in fog-enabled IoT applications including blockchain: A survey." Sensors 19(8): 1788.

Journal of Contemporary Teacher Education
Volume: 6, 2022, 17–32

Assessment Practices of Practicum Supervisors

Samina Naseem*
Anam Iqbal**
Shafia Azam***

Abstract

Assessment, undoubtedly, plays a significant role, not only in helping students learn but also in improving instruction. Using assessment practices mentioned in the National Professional Standards for Teachers in Pakistan (2009) as an analytical framework, this qualitative study documented the assessment practices of practicum supervisors from three major teacher preparation programs (TPPs) in Rawalpindi and Islamabad. Faculty members who had served practicum twice and student teachers from the VIII semester were the participants. The main data sources - interviews and focused group discussion, were transcribed verbatim and coded using provisional themes. The analysis revealed that practicum supervisors from the three TPPs were not following NPSTP as a guide to assess student teachers' (STs) teaching. This study underscores the role of practicum supervisors in improving learning experiences for STs during practicum and identifies the current assessment practices to suggest focusing on all the aspects i.e., lesson planning, management, assessment, and teaching, and should use the NPSTP's assessment rubric for STs assessment to make practicum more beneficial and productive.

Keywords: Practicum supervisors; assessment practices; student teachers; National Professional Standards for Teachers in Pakistan

---

*Former Incharge/Assistant Professor, Department of Education, Fatima Jinnah Women University, Rawalpindi. Email: samina.naseem05@gmail.com
**M.Phil Scholar, Department of Education, Fatima Jinnah Women University, Rawalpindi. Email: anamsafder@yahoo.com
***Assistant Professor, Department of Anthropology, Fatima Jinnah Women University, Rawalpindi. Email: azam.shafia@gmail.com

Introduction

Assessments can be powerful tools to support students' learning, rather than using assessment data for "rank[ing]" schools and students (Guskey, 2003). Assessment, undoubtedly, plays a significant role, not only in helping students learn but also in improving instruction. In Pakistan, the National Education Policy Framework (Ministry of Federal Education & Professional Training [NEPF], 2018) identified assessments as one of the many aspects to be revisited and improved if we aspire to provide quality education to all children. The NEPF also maintains that the existing education system lacks "competency-based training" (considering the preparation of prospective teachers to be competent in using varied assessments) – thus lacks quality education. The National Professional Standards for Teachers in Pakistan (NPSTP, 2009) document very clearly states for Standard-5: Assessment that "Teachers assess students' learning using multiple assessment strategies and interpret results to evaluate and promote students' achievement and to modify instruction to foster the continuous development of students" (p.13).

To prepare student teachers (STs) to assess effectively and to use assessment data effectively, four national documents, (i) The National Education Policy (ii) The National Curriculum, (iii) NPSTP, and (iv) B.Ed Elementary Curriculum, provide pivotal guidelines. The national education policy, the NPSTP, and the national curriculum provide the base for the curriculum of B.Ed. or teacher preparation. The NPSTP, the NEPF, and the Single National Curriculum (National Curriculum Council, 2020) encourage using a wide range of assessments to support students in learning. The analysis of the B. Ed curriculum (2012), composed of national and international experts from teacher education, provides theoretical underpinnings of various types of assessment and ample opportunities for STs to implement their theoretical learning of classroom assessment in the actual classroom during four practica spread over four years of the degree program.

In Pakistan, existing professional literature (e.g., Huma & Akhtar, 2021; Fatima & Behlol, 2018; Shah, Ahmad, Bibi, Akhtar, Raza, Rauf, Ali, Reba, Khan & Khattak, 2021) on practicum mostly focuses on the views of teacher mentors and STs about practicum, problems, and challenges faced by teacher mentors and STs, learning opportunities for STs, etc. In the Pakistani context, little is known about the assessment practices of practicum supervisors and their use of STs' assessment data. In another study, we examined whether three teacher education institutions, offering B. Ed Elementary Program in Rawalpindi and

Islamabad were implementing the practicum model as prescribed in the Practicum Guide III (USAID, 2012) and offering some research-based practices that can appraise the existing practices – making practicum a significant learning experience for STs (Iqbal, Naseem, & Azam, 2020). The study shows that one of the three institutions (Institution C [I-C]) outperformed the other two in following the Practicum model in letter and spirit. A closer look at the analysis showed that STs were not observed as the Practicum Model suggested and the NPSTP was completely overlooked by all three TPPs, even though the Practicum Guide III (2012) provides a rubric for using the NPSTP to assess STs' teaching performance. Therefore, if practicum supervisors were not observing STs as suggested and were not using the NPSTP as an assessment tool, then what are they using for assessing STs' teaching and learning during practicum? Using "Knowledge and Understanding and Performance and Skills" (NPSTP, 2009, pp. 13-14) as an analytical framework, this paper focuses on the following central research question.

What are the assessment practices of practicum supervisors to assess STs in three teacher preparation programs (TPPs) in Rawalpindi and Islamabad? To answer this central question, we further ask, (i) What is the purpose of assessing STs during practicum according to the practicum supervisors? (ii) What assessment tools do practicum supervisors use to assess STs? (iii) What is the focus of practicum supervisors' assessment? We then discuss the findings in light of NPSTP.

The *Knowledge and Understanding* component mentioned in NPSTP (2009) is considered theoretical, and the *Performance and Skills* is the practical component practiced during practicum. The major purpose of this paper is to document practicum supervisors' existing assessment practices and find out whether their practices are aligned with NPSTPs. Performance and skills (see Table 2) are closely related to international assessment standards (Kitchen, Bethell, Fordham, Henderson, & Li, 2019). In addition, these components suggest three substantial learning opportunities for STs. First, opportunities to gain knowledge and understanding of different assessment types and their uses. These opportunities are provided during their coursework. Second, teacher educators and practicum supervisors must be experts in using and modeling several assessment types to assess STs' learning in courses and practicum. We maintain that STs should be given the experience of using assessment (in the form of feedback) for their own learning (Muirhead, 2018). Third, opportunities encourage STs to apply assessment types in real classrooms and discuss issues they face during practicum with their practicum supervisors.

Literature Review

Since TPPs are significant for producing high-quality teachers who subsequently ensure effective teaching (Manzar-Abbas & Lu, 2013; Huma & Akhtar, 2021), these programs have been an issue of national concern in recent years. Over the last few years, a huge focus has shifted toward the TPPs aimed at improving student learning outcomes. It is established that teaching is becoming more and more challenging with the rapid changes and advancements in society in terms of economy, knowledge, technology, etc. Therefore, it is imperative to re-examine the methods and techniques used in TPPs to produce quality teachers.

Practicum is the most important component of teacher preparation programs (TPPs) around the globe. However, STs' learning outcomes have been a neglected aspect of teacher preparation in Pakistan (e.g., Huma & Akhtar, 2021; Iqbal, Naseem, & Azam, 2020). Different terms such as field experiences, practice teaching, and internship have been used in the literature for practicum (Sulistiyo, Mukminin, Abdurrahman, & Haryanto, 2017). Whichever term researchers use to describe practicum, they all agree that the time STs spend in the actual classroom offers them opportunities to apply their learning and explore their teaching styles and try out assessments (Chimhenga, 2017; Guskey, 2003; Kitchen, Bethell, Fordham, Henderson, & Li, 2019). Practicum, a part of TPPs, offers a strong basis for future teachers providing an opportunity to practice the art of teaching in real school settings.

The two individuals who play a significant role in preparing STs and converting practicum into a successful learning experience for STs are practicum supervisors and teacher mentors (CTs) (Huma & Akhtar, 2021). Practicum supervisors are faculty members serving in TPPs, and teacher mentors are usually experienced teachers serving in schools. Practicum supervisors, who are also teachers of STs, influence the quality of learning experiences and opportunities of STs – such as observing STs' teaching and giving them feedback (Chimhenga, 2017), facilitating STs to reflect on their teaching (Foong, 2018) and helping them navigate their learning about aspects such as planning, teaching methods, management strategies, and assessment.

According to the Practicum Guide III (the Guide), a practicum supervisor, besides being a liaison between cooperating schools and the TPP, must provide feedback on at least two lesson plans through classroom observations, conferences, and the weekly seminar. Practicum supervisors must also "guide entry into the profession through discussion with the Student Teacher of professional practice issues, providing a

guided seminar experience, conferring with the Student Teacher before and after classroom observations, and giving feedback on teaching to the Student Teacher (p. 19)." In the Pakistani Context, different aspects of practicum have been studied – assessment practices of teacher educators (Huma & Akhtar, 2021); overall evaluation of practicum (Gujjar, Rizwan, & Bajwa, 2011), views of STs and challenges faced during practicum (Bashir, Malik, Fatima & Bashir, 2014). Other researchers (such as Murtaza, Iqbal, & Khaleeq, 2016) studied portfolios, reflective writing, and lack of constructive feedback from CTs as different ways to assess STs' performance during practicum. CTs are mainly responsible for guiding and mentoring STs, overlooking the role of practicum supervisors during practicum. We argue that in-service teachers who lack knowledge about instructional planning and strategies (Rizwan & Masrur, 2018), may not possess updated knowledge about assessment practices. Therefore, in such a scenario, the role of practicum supervisors becomes even more significant.

Contrary to the aspects focused on in the existing literature in the Pakistani context, this study particularly focused on what assessment practices practicum supervisors used and whether those practices are aligned with the proposed NPSTPs. Therefore, it is vitally important to study, document, and reflect on what we, as teacher educators/practicum supervisors, do in the contemplation of finding areas of improvement within TPPs.

Research Methodology

Research Design. This paper is a part of a larger concurrent mixed-method study in which researchers adopted a sequential explanatory design (for quantitative results, please see Iqbal, Naseem, & Azam, 2020). This paper presents findings from the qualitative phase of the study.

Selection of participants. Practicum supervisors and STs of three public institutions offering

B. Ed Elementary Program in Rawalpindi and Islamabad participated in the study. I-C permitted Author 2 to interact with STs and practicum supervisors from the female campus only. A request for interviewing practicum supervisors who satisfied the criterion of supervising practicum twice was disseminated via concerned departments. Only four practicum supervisors out of six responded and agreed to participate (see Table 1). The setting criterion for supervision two times was crucial. First-timers are usually learning their own way around, while second-timers being experienced and proficient, can provide useful insights about the

implementation process and their practices. The details of the participants are as under.

Table 1
Participants' information

Institution (all public)	University Supervisors	Highest degree (at the time of study)	STs (Focus group discussion)
I- A (single gender University)	Participant C	MPhil	10
I- B (single gender College)	Participant A & B	MPhil	10
I- C (University – male/female campuses)	Participant D	MPhil	08

Data collection. This study is grounded in four in-depth semi-structured interviews conducted individually by the second author with practicum supervisors in 2017. To maintain anonymity, the participants were renamed in order of their acceptance to participate. During interviews, the practicum supervisors were asked about their practices with reference to lesson planning, assessment, and feedback while conducting teaching practicum. One-to-one interviews lasted for 30-50 minutes. The participants had very little to share. Three focus group discussions (FGDs) with STs were conducted for triangulation. Eight to ten STs from each of the three institutions participated in FDGs. Participation of STs was voluntary. Each of the FDGs lasted from 20 to 25 minutes. The focus of FDGs was on tasks assigned to STs during practicum and practices of their practicum supervisors related to lesson planning, assessment, and feedback that STs received. Both interviews and FDGs were audio recorded and transcribed verbatim.

Data analysis. Authors 1 and 2 coded individually and then discussed to reach a consensus. Analysis of interviews and FGDs was done in two phases (Saldana, 2016). During the first phase, interviews and FGDs transcripts were read and re-read several times to understand the gist of practicum supervisors' views and STs' views about assessment. In the second phase, interview transcripts were coded manually in two cycles using three provisional sub-themes based on the sub-questions – purpose of assessment, tools used for assessment, and focus of assessment to

document practicum supervisors' assessment practices. In the first cycle, initial coding was used to break down data for examining and comparing similarities and differences among participants. Codes were narrative and descriptive in nature. For example, one of the provisional sub-theme was the purpose of assessment. In the first cycle, one of the codes used was '*ST changes plan according to the class needs*.' In the second cycle, using focused coding, frequently used codes were categorized based on the provisional sub-themes, all such codes were coded as *documenting STs' improvement in planning and delivering lessons*. Once all four interviews were coded, the FGDs were analyzed using the same coding scheme to corroborate the findings. We used the quotes from the practicum supervisors that described the findings.

Ethical considerations. The participants were informed that data would be used only for research purposes and that they could quit at any stage. All participants were given a signed copy of their consent forms. Names of institutions and individuals have been changed for confidentiality purposes.

Results and Discussion

Data analysis revealed that practicum supervisors viewed practicum as "beneficial" because it provides STs with opportunities to apply their learning from teacher preparation coursework and to have first-hand teaching experiences in real classroom settings. These findings are supported by the existing national and international research (Andreasen, Bjorndal, & Kovac, 2019; Bashir, Malik, Fatima, & Bashir, 2014; Murtaza, Iqbal, & Khaleeq, 2016). Only I-C had a "proper practicum supervision team" consisting of the program director, a senior professor, and a practicum supervisor, as opposed to the other two TPPs, where practicum supervisors were solely responsible.

The major findings are discussed under the three provisional sub-themes. Table 2 briefs practicum supervisors' assessment practices compared to *Performance and Skills* (NPSTP, 2009).

Table 2

Practicum supervisors' assessment practices in comparison with assessment Performance & Skills identified by NPSTP (2009)

Performance & Skills (NPSTP, 2009)	**Assessment Practices**	**Institutions**			
		I-A	**I-B**		**I-C**
		Participant C	***Participant A***	***Participant B***	***Participant D***
1. Develop and use teacher made tests for continuous internal evaluation of student performance and skills. *2. Analyze student performance using multiple data sources and to modify future plans and instructional techniques that promote desired students learning outcomes.* *3. Provide students with constructive feedback on their learning and encourage them to use data and self-assessment strategies to monitor their progress toward achieving personal goals.* *4. Accurately document and report assessment data and ongoing student achievement to parents and professional staff,* *5. Enhance their knowledge of learners and evaluate students' progress and performance using a variety of formal and informal; assessment techniques to modify teaching and learning strategies.* ***6.** Help students engage in objective self-assessment.* *7. Develop and use objective assessment tools to measure student progress.* *8. Promote opportunities for students to engage in self-assessment activities.*	**Tools used**	*Performa* for observations by practicum supervisor, & cooperative teacher *Portfolio* (lesson plans) *Team teaching* *Seminar* *Feedback*	*Performa* for observations by practicum supervisor, & peers *Presentations* *Individual feedback* – oral & written	*Performa* for observations by practicum supervisor, cooperative teacher, principal, & peers *Presentations* *Team teaching* *Feedback* – oral & written	*Performa* for observations by practicum supervisor, cooperative teacher, and principal *Portfolio* (lesson plans) *On-campus daily reflection* *Feedback*
	Focus of the assessment	Teaching skills, Communication skills, Interaction with staff & parents, Professionalism	Classroom management, sitting arrangement, personal affects (facial expressions & body movement), voice (pitch, volume)	Classroom management, confidence	Reflection, communication skills, writing skills, intercommunication skills, pedagogy, professional ethics & code of conduct
	i.Skills to be learned during practicum				
	i.Aspects assessed during practicum	Teaching skills, handling students, communication	Lesson continuation after introductions, student involvement in activities, student assessment, all the aspects in the performa	STs' behavior, blackboard writing, classroom management, confidence	STs' behavior, classroom management, interaction with students, teaching methodology

Purpose of assessment during practicum. Data analysis revealed that all four practicum supervisors inherently believed that the purpose of assessment during practicum is to assess whether STs were able to apply their learning in real classroom settings along with lesson planning and implementation, managing students, and assessing their learning. Except for Participant A, none of the other practicum supervisors explicitly elaborated on the purpose of the assessment. She said, "When they go to school, our focus is on whether students can teach and change their lesson plans according to the situation and the environment in which they are teaching." Participant D shared, "a sort of internship… students are assigned different tasks and activities related to their content courses, and they can apply their pedagogical knowledge in true situations." STs from all three TPPs shared similar views about the purpose of assessment as their practicum supervisors.

Tools used for assessment. Practicum supervisors used varied tools to assess STs' teaching and learning (see Table 2). However, the analysis of their responses revealed that the tools mentioned were not used to provide an in-depth assessment and feedback to STs. We conjecture that with the limited use, STs received surface-level assessments that did not help in meeting the performance and skills criteria set by the NPSTP (Wisniewski, Zierer & Hattie, 2020). When inquired about the tools used to assess STs' teaching and learning, practicum supervisors said they used an "evaluation performa" to observe STs. A performa refers to a form with statements regarding three main aspects of teaching – lesson delivery, classroom management, and professionalism. Practicum supervisors and CTs check aspects that they observe (such as the ST checks the background knowledge of students). Besides practicum supervisors, STs were observed by CTs, principals, and peers. This finding is consistent with the research done by Merc (2015). When asked what is included in their performas, practicum supervisors said the "skills mentioned in the Practicum Guide." While talking about assessment methods, participant D shared.

There are different ways for long term and short term but basically we use their portfolios plus there are observations for which we visit the classroom randomly without informing them. We observe their lessons by ourselves plus their cooperating teachers and principals also evaluate them so there are four people who evaluate their performance. There is also a structured performa on the basis of which we evaluate their performance.

The number of lessons observed by practicum supervisors in the three TPPs were from 1-3. The suggested number of lesson observations by the Practicum Guide is two. Participant B shared, "We take short visits to the

classes twice a day… this time we have planned… [to] observe at least two complete lessons for assessing students' performance, one … in the beginning… and the other will be observed later."

Participants A and B being from the same TPP, were using different tools. For instance, Participant B did not involve STs to assess their peers and Participant A used team teaching. Team teaching is an approach of co-teaching (Friend & Cook, 2017) and is considered a powerful learning experience for both STs and students in the classroom (Mathea & Marlies, 2016). Participant B stated, "We also ask students for team teaching if one of them is performing well and the other is not so. Each of them is being assessed individually based on one's own performance…" Like many other terms in education, *team teaching* is also misinterpreted. The approach to team teaching used by Participant C does not fall under the approach of co-teaching. She shared, "We assess team teaching in a sense that if one of the students is teaching in one period, so in the next period, the other student will teach, and they are assessed on the base of individual performance." In addition, team teaching cannot be assessed with performas in practice. There are specific tools to assess team teaching, such as teacher team self-assessments or "self-reflection tools" (Lorio-Barsetn & Stowe, 2018), that are not used by the practicum supervisor.

One of the major roles of practicum supervisors is to give critical and constructive feedback to STs to improve their lessons and teaching skills, including lesson planning, management, and assessment (Vertemara & Flushman, 2017). Peer feedback is usually not comprehensive to help STs improve their teaching skills (Astrid, et al., 2019). Therefore, the practicum supervisors are responsible for providing " effective " feedback (Muirhead, 2018; Vertemara & Flushman, 2017). Participant A shared her practice and said, "…Written feedback is given with the help of performas, we also take their presentations relating to teaching practicum in which they have to prepare a lesson and teach it, and during the presentations, we give our feedback orally." Participant B underscored the time available for practicum supervisors to give written feedback and shared, "We give oral feedback because by the time we will prepare written feedback, the students will have repeated their mistakes again." This quote highlights an important issue of lack of time to give feedback. Vertemara and Flushman (2017) also identified lack of "enough time" to spend observing STs in the classroom as one of issues practicum supervisors face. We also conjecture that practicum supervisors may not be well-prepared to give feedback that could support the development of assessment skills expected in NPSTP (Vertemara & Flushman, 2017). Furthermore, both participants (A & B) did not elaborate much about the focus of feedback during presentations.

Likewise, when probed, Participant C did not provide any clear response to the feedback she gave on STs' performas, portfolios, in class, and seminars. Writing daily reflections was another tool used by the practicum supervisors. Daily reflections are powerful and can move the notion of reflective practice from the realm of abstraction to that of the tangible (Cherian, 2007, p. 40). However, how reflections were used to assess STs' performance was not detailed in the participants' responses.

Aspects assessed during practicum. When asked about the aspects they assessed during practicum, all four supervisors mentioned unanimously said, "criteria mentioned in the performa." When probed, Participant A mentioned, "It includes the aspects from the movement to the starting of the lesson, its development, recapitulating. We have assigned separate marks to each section. It also includes students' personality, their vocal delivery, and their movement." However, none of these aspects are mentioned in the Practicum Guide.

Data analysis (see Table 2) showed that all practicum supervisors neither focused on nor provided feedback that supported Performance and Skills mentioned in the NPSTP (2009). Their written and oral feedback focused on a) technical aspects such as voice, blackboard writing, etc., and b) only "weak points" and was "directive" in nature, thus highlighting specific aspects (Muirhead, 2018). Participant C said, "students' assessment is based on their teaching skills, their way of handling students, communication in class etc." By handling students, she meant general classroom management. One of the STs from I-C shared, "In the practicum, we have learned the skill of management." Another ST from I-A mentioned, "The skills that we have developed in our practicum include classroom management and time management". Authors (2020) reported that the use of NPSTP as a criterion to assess STs' performance was largely missing from all three TPPs, which is one of the most significant features of the four-year B. Ed Elementary Program. The "performa' used was provided by their departments – hence no one asked questions regarding the usefulness of the performa in assessing STs' performance. Table 2 shows the similarities and differences between what practicum supervisors thought about skills to be learned and STs' skills they assessed during practicum.

The focus of the assessment of all practicum supervisors was mainly on "management" and delivery of lessons to some extent. None of the practicum supervisors mentioned how STs assessed students in their classrooms and what kind of assessments they used. While discussing the focus of her assessment, Participant A mentioned, "We inform student-teachers that we will be observing their way of delivering the

lesson…involvement of students in the class and activities that student-teachers have designed" and how STs end their lesson. Our analysis of focus of assessment echoed the findings of the research done by Vertemara and Flushman (2017), who found that "the prioritized skills that received a majority of growth feedback included managing student behaviors and engaging student learning (p.48)." As stated earlier, STs also responded very similar to their practicum supervisors and shared more about general aspects of management and nothing about their lesson plans, or their use of learning about assessment types, or clarity about the feedback they received from practicum supervisors.

Conclusions

Based on the findings, we conclude that though practicum supervisors were using different assessment tools to assess STs' performance during practicum, however, the depth required to use those assessment tools in ways to help STs learn and develop as teachers was missing with reference to the *Performance and Skills* identified in NPSTP. The assessment practices of practicum supervisors from three contextually different TPPs were very similar. The feedback provided by them was mainly oral. The performa used by all three TPPs was not aligned with NPSTP. The feedback was focused on managerial and general components of teaching, such as STs' voice, management, their overall behavior/attitude, blackboard writing etc. We also conclude that practicum supervisors' assessment practices with respect to *Performance and Skills* (NPSTP, 2009) is that they were using themselves skills number 2, 3, and 7 to some extent, but were not assessing STs' performance on the scale.

There are implications for teacher education programs. TPPs must consult the NPSTP document to revisit their performas and set their expectations for STs' teaching and learning accordingly. The expectations must be shared with all stakeholders including STs, CTs, school principals, and practicum supervisors. Furthermore, being a part of a renowned TPP, we know that neither faculty nor CTs receives any kind of PD on giving feedback or any aspect of teaching practicum. TPPs may organize workshops, especially for their faculty, cooperative teachers, and STs focusing on how to give three C's feedback - constructive, critical, and comprehensive covering all aspects of three teaching skills, which are lesson planning, management, and assessment given in the Practicum Guide.

References

Andreasen, J., Bjorndal, C., & Kovac, V. (2019). Being a teacher and teacher educator: The antecedents of teacher educator identity among mentor teachers. *Teaching and Teacher Education, 85*, 281–291.

Astrid, A., Marzulina, L., Erlina, D., Harto, K., Habibi, A., & Mukminin, A. (2019). Teaching Writing to EFL student teachers: Teachers' intervention and no teachers' intervention through peer feedback writing techniques. *Universal Journal of Educational Research, 7*(9), 1901–1908.

Bashir, S., Malik, M., Fatima, G., & Bashir, S. (2014). Effectiveness of practicum component of B. Ed program at University of Education Lahore, Pakistan. *Educational Research International, 3*(4), 89–98.

Cherian, F. (2007). Learning to teach: Teacher Candidates reflect on the relational, conceptual, and contextual influences of responsive mentorship. *Canadian Journal of Education, 30*(1), 25-46.

Chimhenga, S. (2017). The Student Teachers' Perceptions On Teaching Practice Supervision in Zimbabwe: Is It a Process of Grading or Improvement of Teaching Skills? *International Journal of Scientific and Technology Research, 6*(7), 1–5.

Fatima, F. M., & Behlol, M. G. (2018). Mentoring prospective teachers at teaching practicum in B. Ed (Hons) 4 years program. *4th International Conference on Advances in Education and Social Sciences* (pp. 739-744). Istanbul: ADVED. Retrieved from http://www.ocerints.org/adved18_e-publication/papers/46.pdf

Foong, L. (2018). The influence of practicum supervisors' facilitation styles on student teachers' reflective thinking during collective reflection. Reflective Practice: *International and Multidisciplinary Perspectives, 19*(2), 225-242.

Friend, M., & Cook, L. (2017). *Interactions: Collaboration skills for school professionals* (8th ed.). Boston: PEARSON.

Gujjar, A. A., Ramzan, M., & Bajwa, M. J. (2011). An evaluation of teaching practice: practicum. *Pakistan Journal of Commerce and Social Sciences* (PJCSS), *5*(2), 302–318.

Guskey, R. T. (2003). How classroom assessments improve learning. *Educational Leadership, 60*(5), 6–11.

Huma, A., & Akhtar, A. (2021). Assessment practices in four years teacher education programs. *Pakistan Journal of Educational Research*, *4*(1), 381-398.

Iqbal, A., Naseem, S., & Azam, S. (2020). A critical appraisal of the existing practices during practicum in Pakistani teacher education programmes. *International Journal of Innovation in Teaching and Learning.6*(2), 17–31.

Kitchen, H., Bethell, G., Fordham, E., Henderson, K., & Li, R. R. (2019). OECD reviews of evaluation and assessment in Education: Student assessment in Turkey. In *OECD reviews of evaluation and assessment in Education.* Paris: OECD Publishing.

Lorio-Barsetn, D., & Stowe, M. M. (2018). *T/TAC Link Lines*. Retrieved from T/TAC: http://ttacwm.blogs.wm.edu/self-reflection-tool-facilitate-growth-co-teaching-team-podcast/

Manzar-Abbas, S. S., Lu, L. (2013). Collaboration problems during practicum in preservice teacher education in Pakistan. *Social Sciences and Humanities*, *4*(3), 379–393.

Mathea, S., & Marlies, B. (2016). Student teachers' team teaching during field experiences: An evaluation by their mentors. *Mentoring and Tutoring: Partnership in Learning*, *24*(5), 415–440.

Merc, A. (2015). Assessing performance of EFL teaching practicum: Student teachers' views. *International Journal of Higher Education, 4*(2), 44-45.

Ministry of Education, (2009). *National Professional Standards for Teachers in Pakistan*. Islamabad: Government of Pakistan. Retrieved from http://unesco.org.pk/education/teachereducation/files/National%20Professional%20Stand ards%20for%20Teachers.pdf

Ministry of Federal Education and Professional Training. (2018). *National Education Policy Framework*. Islamabad: Government of Pakistan. Retrieved from https://aserpakistan.org/document/2018/National_Eductaion_Policy_Framework_2018_Final.pdf

Muirhead, F. (2018). Inside practice-based teacher education: A study of one teacher educator's practice. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 10265383).

Murtaza, A., Iqbal, J., & Khaleeq, A. R. (2016). Practicum portfolio assessment and professional development of pre-service teachers. *Pakistan International Journal of Humanities and Social Sciences, 6*(2), 194–202.

National Curriculum Council. (2020). Single National Curriculum. Ministry of Federal Education & Professional Training. Islamabad: Government of Pakistan.

Rizwan, S., & Masrur, R. (2018). Standard based three dimensional capacity development of in-service secondary school teachers. *Bulletin of Education and Research*, *40* (3), 31–44.

Saldana, J. (2016). The coding manual for qualitative researchers, (3rd Ed.). Los Angeles, CA: SAGE Publications Ltd.

Shah. M. A., Ahmad, S. M., Bibi, W., Akhtar, S., Raza, K. K., Rauf, M., Ali, A., Reba, A., Khan, J., & Khattak, U. R. (2021). An Overview of Prospective Teachers Teaching Practicum Challenges in District Peshawar, Pakistan. *International Journal of Innovation, Creativity and Change*, 15(8), 410–421.

Sulistiyo, U., Mukminin, A., Abdurrahman, K., & Haryanto, E. (2017). Learning to Teach: A Case Study of Student Teachers' Practicum and Policy Recommendation. *The Qualitative Report, 22*(3), 712–731.

USAID. (2012). Practicum guide. Teacher Education Project.

Vertemara, V., & Flushman, T. (2017). Emphasis of university supervisor feedback to teacher candidates. *Journal of Student Research, 6*(2), 45–55.

Wisniewski, B., Zierer, K., & Hattie, J. (2020). The power of feedback revisited: A meta-analysis of educational feedback research. *Frontiers in Psychology*, *10*, 1–14.

Journal of Contemporary Teacher Education
Volume: 6, 2022, 33–52

Effects of Motivational Orientation on Learning Drawing in students with Intellectually Disability in Lahore

Hina Noor[*]
Sehrish Riaz[**]
Sadia Batool[***]

Abstract

Motivation donates to a person's desire, need, or urge to perform any action. Motivational orientation defines the reasons working behind the motivation to perform that action or achieve the goal. The study was planned to explore the effects of motivational orientation on the learning of drawing in students with intellectual disabilities (ID). A stratified random sampling technique was used to select 200 students with ID (147 male, 53 female) from Lahore Division belonging to the age range 10 to 21 years. The Scale of Intrinsic versus Extrinsic Orientations in the classroom Questionnaire (IEO) developed by Harter (1981) containing 30 items (score 1 describes most extrinsic and score 4 describes most intrinsic) was used to identify the motivational orientation of the students with ID. Beery VMI 6th.ed (Beery, 2010) containing 24 drawing shapes were administered to explore the learning of drawing skills in the students with ID. Both scales were found to be reliable for the given population as the alpha reliability of IEO and Beery VMI were 0.953 and 0.950 respectively. Results obtained by using the statistical techniques of ANOVA, correlation, and regression analysis indicated that ID students with intrinsic motivation have a significant positive relationship with drawing learning whereas extrinsic motivation was found to be negatively correlated with the learning of drawing. It was recommended that intrinsic motivational orientation should be developed in students with ID so that their learning could be enhanced.

Keywords: Motivational orientation, intrinsic, extrinsic, intellectually disabled, drawing

[*] Assistant Professor, Department of Special Education, Allama Iqbal Open University, Islamabad, Pakistan. hina.noor@aiou.edu.pk
[**] M.Phil. Scholar, Department of Special Education, Allama Iqbal Open University, Islamabad, Pakistan. sehrishriaz431@gmail.com
[***] Assistant Professor, Department of Educational Development, Karakaram International University, Diamer Campus, Gilgit Baltistan. sadia.batool@kiu.edu.pk

List of Acronyms

IM	Intrinsic Motivation
VMI	Visual Motor Integration
EM	Extrinsic Motivation
SPSS	Statistical Package for Social Sciences
ID	Intellectual Disability
IDA	Intellectually Disabled Adolescents
IEO	Intrinsic / Extrinsic Orientation
SDT	Self-determination theory

Introduction

Motivation is said to be a cause for acting or working in a certain mode. Motivation is the cause of the result of which people set goals and get willing to do something or move for action. Motivation not only affects people in their everyday life but also has a very strong influence on the learning process of students. Intrinsic motivation is usually determined as "performing some action for its interest" as a child plays baseball without any reason, just because he wants to play it. On the contrary, extrinsic motivation is a quest for a contributory aim, playing baseball by a child is just because he wants to achieve a trophy or to please his parents.

Motivational orientation is defined as a cultured characteristic of personality that presents individuals in terms of enticements that are influencing in motivating their behaviors, whether intrinsic or extrinsic in a task. Students who satisfy with intrinsic factors of task (creativity, accountability, contest, learning chances, responsibilities, and goal achievements) are thought to be as motivated intrinsically (I.M). Students who resist displeasure by concentrating on task extrinsic factors (security, comfort, ease, and security) are known as extrinsically motivated. Intrinsic learners work harder on tasks than extrinsically motivated learners. IM are overachievers and EM is underachievers (Switzky, 2006).

Self-determination theory (SDT) introduced by Ryan & Deci (2000), is a motivational theory focusing on behavior growth and well-being. In explaining the reality of motivation, this theory emphasized the mental aspects of humans, i.e., cognition, perception, behavioral and experiential results (Ryan & Deci, 2000). SDT considers that it is useful to describe types of motivation while exploring motivation, and not studying the total amount of motivation the individuals have. The theory distinguishes motivation in autonomous and controlled motivation and stresses that autonomous motivation results in good quality and maintenance in learning (Deci & Ryan, 2010). Ryan & Deci (2016) are of the view that autonomous motivation results in more academic achievements than controlling motivation. They propose that autonomous motivation is the best representation of intrinsic motivation which is inner and natural motivation having interest and enjoyment (Ryan & Deci, 2016). Subsequently, the nature of IM is being described as a natural innate tendency (Ryan & Deci, 2000), and an example of self-determination and autonomous motivation (Ryan & Deci, 2016). Wang & Eccles (2013) suggest that although motives can be sensible, they are often thought to be hidden. IM is doing an activity without external reward, i.e., curiosity, participating, and working without external force or rewards. IM is also known as the opposite of extrinsic

motivation which emphasizes controlling behavior using punishments or rewards. Researchers argue for the importance and application of extrinsic motivation in the classroom (Cameron & Pierce, 2002). The issue is on the rewards which weaken the IM. However, well organization of extrinsic rewards seems useful for students with mild intellectual disabilities (Witzel & Mercer, 2003).

I.M. is generally defined as 'doing an activity for the sake of it' as a kid plays baseball, he plays not for any reason but because he wants to play it (Reiss, 2012). I.M. is known for engaging in an activity for its own sake (Linnenbrink & Pintrich, 2002). Personal interest reflects the interest of the individual in a specific topic (Gangolu, 2019). Personal and situational interests both have a big influence on academic achievements. Academic achievements, skills to study and interest can be enhanced by collapsing interests of students (Linnenbrink & Pintrich, 2002). Teachers should understand the factors that promote intrinsic motivation to cultivate intrinsic motivation in their students. These factors include:

Curiosity: It thrusts students to research and study merely for the pleasure of knowing and excelling in their field.

Challenge: When students are challenged with some tasks it helps them to work and achieve their goals by utilizing their optimal potential.

Control. When we are focused on goals, we try our best to control anything which may affect the outcome of the task.

Recognition: This is an innate desire of human beings to get appreciated and acknowledged by others for their efforts.

Cooperation: Cooperation is required for collaboration and teamwork to achieve common goals.

Competition: It is sometimes taken as a negative activity but to offer a challenge competition is necessary.

Fantasy: It is required to solve many problems of day to life.

Motivational constructs effects on achievements and learning of intellectually disabled adolescents. Motivation involves a personal interest in a subject or an action. Motivated learners are fascinated, and they learn and accomplish things because of their curiosity. A very vital component of motivation is self-efficacy which is the belief in the capabilities to do a job. Self-efficacy is related to a higher level of achievement and learning as well as academic outcomes. Students with higher self-efficacy are more persistent and higher in learning and continue difficult tasks. Self-efficacy is related to positive outcomes, persistence, cognitive engagement, and actual achievements (Ryan & Deci, 2020).

Intellectual disability is considered as limited intellectual functioning and poor adaptive behaviors which hinder the person from normal

functioning, and it manifests before the age of 18 (Schalock, 2014). Students with ID have a lower level of motivation to explore and get expertise in any new skill than students without intellectual disabilities. It is evident that today the living styles and opportunities to learn for students with intellectual disabilities are different from those of the children in the 1990s but, the notion of intellectually disabled students having less motivation has proven to be unchanged (Ryan & Deci, 2013; Harris & Greenspan, 2016). Several recent researchers have found the motivation to master new skills in students with intellectual disabilities while performing different tasks. The teachers planned the tasks with varying degrees of complexity so that every child may experience an appropriate level of challenge to improve the engagement of students to put sustained effort for its completion and mastery. It would not be astonishing if students with intellectual disabilities become discouraged by increasing disappointments, but few studies have found motivation in adolescents with intellectual disabilities (Gilmore & Cuskelly, 2014). Extrinsic and Intrinsic motivation has a strong impact on the learning of special needs students (Katz & Cohan, 2014; Cohen, 2015). Intrinsically motivated learners learn through struggle and that learning is long-lasting, contrary to extrinsically motivated learners' learning is short-term or not long-lasting. Pupils motivated intrinsically seem to be less dependent while the pupils motivated extrinsically are always dependent on others. Intrinsically motivated learners have high standards while extrinsic learners have low standards (Akin, 2009).

Healey (2008) theorized that some students exhibit intrinsic orientation in some subjects and extrinsic orientation in some other subjects. Within the literature, theoreticians (Markland, Ryan, Tobin & Rollnick, 2005) distinguished I.M &E.M, observing them as quite opposite which characterizes the student's orientation for school learning. So, the students are characterized as intrinsic or extrinsic in their style of learning. Expressions through drawing can define psychological moods and emotions (Picard & Gauthier, 2012). When children do draw on human and nonhuman topics then they portray the emotions in their drawings which also reflect their artistic, cognitive, and emotional development (Kapitan, 2012). Drawing, one of the beloved activities of children is being studied from various perspectives (e.g., motor skills, change in abstract knowledge, areas of cognitive development, emotional conditions, or personality characteristics), thus shedding light on different aspects of psychological functioning of children (i.e., emotional, cognitive, motor and perceptual). Lots of work has been done on the analysis of representative sides of drawing, especially of visual pragmatism with which the children portray

reality. As described by a researcher that drawing is much more than what it represents (Picard & Gauthier, 2012). Although it is commonly accepted that line drawings are an easier task for intellectually disabled students than abstract symbols (Slayton, D'Archer & Kaplan, 2010). Drawing allows intellectual disable students to demonstrate an age-appropriate developmental level (Smitheman-Brown & Church, 2015).

Persons with intellectual disabilities may have motivational orientations or systems which limit their academic learning, their problem-solving skills, and their adaptive behavior in performing social roles in various problem-solving situations. This motivational paradigm is an abandoned element of the description of intellectual disability and is particularly essential in an educational definition of mental retardation.

Motivation has always been an important factor in classroom learning. Intellectually disabled students are also found to have intrinsic or extrinsic motivation in them. Many intellectually disabled adolescents are prone to learn through intrinsic motivation, while some others learn through extrinsic motivation. Various learning variables are studied with intellectual disability but one variable which is more attractive for students with ID, and which is least studied in the research is 'Drawing'. Drawing is the subject in which intellectually disabled students show great interest, but this subject is slightly touched by researchers to motivation. So, the researcher feels the need for the study to find out the effects of motivational orientations on learning drawing in students with intellectual disabilities. Now the question is which kind of motivation affects more on learning of drawing in intellectually disabled adolescents. Can motivational orientation be used as a strong predictor of the learning of the children? So, the current study was designed to see the effects of motivational orientations on learning drawing in intellectually disabled adolescents and the possibility of considering motivational orientation as a predictor of learning.

Objectives of the Study

The following are the objectives of the study:

To explore the intrinsic and extrinsic motivational orientation of students with intellectual disabilities.

To explore the learning of drawing skills in students with intellectual disabilities.

To find out the effect of intrinsic and extrinsic motivation on learning drawing in students with intellectual disabilities.

Hypotheses

The following hypotheses were tested against their null hypothesis for this study.

H_1 There is a significant relationship between intrinsic motivation and learning drawing in students with intellectual disabilities.

H_2 There is a significant relationship between extrinsic motivation and learning drawing in students with intellectual disabilities.

H_3 There is a significant gender difference in the types of motivation of students with intellectual disabilities regarding the gender of students with intellectual disabilities.

H_4 There is a significant difference between types of motivation concerning the age range of students with intellectual disabilities.

H_5 There is a significant difference between types of motivation regarding the low, middle, and high socio-economic status of students with intellectual disabilities.

Methodology

A retrospective comparative research design of causal-comparative research was used, which involves investigating the research problem where the effects have already occurred. This type of research is conducted to determine whether a specific variable (cause) relates with another variable and does influence another variable (effect). A quantitative survey was used to collect information on types of motivation used for learning drawing of students with intellectual disabilities.

All 732 students with intellectual disabilities, enrolled in the 'Government Special Education Schools and Centers for intellectual Disabled Students of the Lahore division in 2020 were the population of the study. Two hundred intellectually disabled adolescents of the age range 10-21, studying in the Government Special Education Centers and Schools of Lahore division were selected through stratified random sampling as participants of the study.

Table 1
Sampling Framework

Division	Districts	Tehsils	Number of Schools/ Centre	Teachers	Students	
					Total	Students (10-21 years)
Lahore	Sheikhpura	5	5	13	164	102
	Kasur	4	4	10	176	146
	Nankana Sahib	3	3	8	142	94
	Lahore	7	7	41	477	390
	Total	19	19	72	959	732

Source: (Directorate of Special Education of Punjab).

The scale of Intrinsic vs. Extrinsic Orientation developed by Harter, 1981 was used. This is a teacher rating scale in which teachers select the intrinsic or extrinsic orientation according to students' motivational orientation. Harter described five dimensions of classroom learning which can be ascribed as having an intrinsic and extrinsic motivational pole:

Table 2
Subscales of IEO

Intrinsic Pole		Extrinsic Pole
A. Preference for Challenge	vs.	Preference for Easy Work Assigned
B. Curiosity/ Interest	vs	Pleasing the teacher/Getting Grades
C. Independent Mastery	vs	Dependence on Teacher
D. Independent Judgement	vs	Reliance on teacher's Judgement
E. Internal Criteria	vs	External Criteria

VMI 6th edition was used to measure the learning of drawing in result of their intrinsic or extrinsic motivation Beery.

Beery VMI 6th edition was used to measure the learning of drawing as a result of their intrinsic or extrinsic motivation. Beery VMI 6th Ed provides approximately 600 age-specific norms. This consists of basic gross motor, fine motor, visual, and visual-fine motor development. The full form of the test was used which is for 2-18 years old adolescents. The full form contains 24 drawing items consisting of single lines, single shapes, integration of lines, and shapes. The study was piloted on 20 intellectually disabled children for establishing reliability and validity who were not part of the study sample.

Table 3
Reliability of Beery VMI

Sr. No	Scale	Shapes	Alpha Coefficient
1.	Beery VMI	24	0.950

Table 3 indicates the value of the Coefficient of Alpha Reliability for Beery VMI was 0.950, showing it was a reliable instrument for this research sample.

Table 4
Reliability of IEO

Sr. No.	Sub-Scales	Items	Coefficient
1.	PC	06	0.863
2.	CL	06	0.726
3.	IM	06	0.695
4.	IJ	06	0.83
5.	IC	06	0.75
IEO (overall)		30	0.953

The value of the Coefficient of Alpha Reliability for IEO shows that it was a reliable instrument for this sample. The researcher used the instruments to get responses from the sampling population. The researcher asked the teachers about students with intellectual disabilities to fill out the questionnaire of motivation for their students. The researcher herself get the responses of the students with intellectual disabilities in drawing tests and noted the participants' response reliability. Data were analyzed by using SPSS with the help of means, standard deviations, and frequencies. For assessing the significant correlation between motivational orientations and learning drawing, correlation and regression were computed.

Results

Demographic Variables

Frequencies and percentages of demographic variables were presented in tabulated form.

Table 5

Frequencies and percentages of Demographic Variables including gender, age range, socioeconomic status (SES) and district wise frequencies of students

Sr. No	Variables	Categories	frequency	Percentage
1	Gender	**Male**	149	74.5
		Female	51	22.5
2	Age Range	**10-13 years**	92	46
		14-17 years	90	45
		18-21 years	18	09
3	SES	Low (10000-25000)	**95**	47.5
		Middle (26000-40000)	90	45
		High (above 40000)	15	7.5
4	No of ID students	Sheikhpura	**19**	9.5
		Kasur	49	24.5
		Nankana Sahib	39	19.5
		Lahore	93	46.5
	Total	19	19	72

Table 5 shows the gender of IDA which includes 149 (74.5%) males and 51 (25.5%) females with a diversity of age groups studying in special schools and centers for ID in the Lahore division. Of the majority of students with intellectual disabilities, 95 (47%) belonged to low and middle socio-economic status (SES) and only 7.5% belonged to high SES. From the total 200 samples, 19 students (9.5 %) belonged to schools of district sheikh Pura, 49 (24.5%) were from Kasur, 39 (19.5%) from Nankana-sahib, 93 (46.5%) were from district Lahore.

Descriptive Analysis of VMI

Table 6
Frequencies and percentages of VMI

Sr. No	VMI	Frequency	Percentage
1	Below average	74	37
2	Average	52	26
3	Above average	74	37

The above table shows that few students are on average range in performing the drawing test of VMI and most of the IDA perform above or below average in the drawing test of VMI.

Table 7
Mean, Range, Standard deviation, and variance of VMI

Sr. No	Mean	S.D	Variance	Range	
				Min	max
Total VMI Scores	50	10.0	100.0	28.28	69.23
Averages of VMI	02	0.862	0.744	1.0	3.0

The table above shows the mean as 50 and the Standard deviation as 10.0 for total VMI scores and mean as 2 and the standard deviation as 0.862 for averages of VMI scores.

Descriptive Results of IEO

Table 8
Frequencies and percentages of IEO

Sr. No	IEO	Frequency	Percentage
1	Intrinsic male	31	15
2	Intrinsic female	20	10
3	Extrinsic male	118	58
4	Extrinsic female	31	15
5	Total Intrinsic Orientation	51	25.5
6	Total Extrinsic Orientation	149	74.5

The above table shows that out of a total of 149 (74.5%) male IDA 31 (15%) are intrinsically motivated while 118 (58%) are found to be extrinsically motivated. Of the total female IDA 51 (25.5 %) there are 20 females (10%) who were intrinsically motivated and 31 (15%) were extrinsically motivated. It can be concluded that from a total IDA 200 IDA, 51students (25.5%) were intrinsically motivated 149 IDA (74.5%) were found to be extrinsically motivated, and that female IDA are found to be more intrinsically motivated, and males are found to be mostly extrinsic motivated which shows that most of the overall IDA are extrinsically motivated.

Table 9

Mean, Range, Standard deviation and variance of subscales of IEO

Sr. No		Mean	S.D	Variance	Range	
					Min	max
1.	Preference for challenges	2.11	0.789	0.623	1	5
2.	Curiosity/Interest	2.24	0.946	0.895	1	9
3.	Internal Mastery	2.15	0.800	0.640	1	3.8
4.	Internal Judgement	2.15	0.826	0.682	1	4.83
5.	Internal Criteria	2.13	0.793	0.629	1	3.8
6.	Overall IEO	2.15	0.747	0.559	1	3.6

The mean scores of the sub-scale PC of IEO are 2.11 with SD 0.789 and a variance of 0.623. The mean score, SD, and variance of the CI sub-scale are 2.24, 0.946, and 0.895 respectively. The mean score of the IM sub-scale is 2.1 with an SD of .800 and variance of .640. The mean, SD, and variance of the subscale of IJ are 2.1, 0.826, and 0.682. The mean, SD, and variance of the subscale of IC are 2.1, 0.793, and 0.629. The mean score, SD, and Variance of overall IEO are 2.159, 0.747, and 0.559.

Table 10

Independent sample t-test on difference in IEO between male and female.

S. No	Gender	N	Mean	SD	T-value	p-value
1	Male	149	2.07	0.714	-2.7	0.036
2	Female	51	2.40	0.792		

The Mean IEO of male ID adolescents (2.07) is lower than female ID adolescents (2.40). The higher mean of female IDA on the motivation scale shows that intrinsic motivation is high in females and is statistically significant. Therefore, the third hypothesis is accepted as there is a significant gender difference in types of motivation in students with intellectual disabilities.

Means of three types of SES (i.e., low, middle, and high) were compared with IEO scores of ID adolescents through ANOVA and the results were tabulated and analyzed.

Table 11

ANOVA comparison of IEO and Different Socioeconomic status.

Variance	Sum of Squares	df	Mean Squares	F	Sig
Between Groups	39.94	92	0.412	1.102	0.314
Within Groups	40.05	107	0.374		
Total	78.00	199			

Table 11 represents an ANOVA comparison, which indicates the calculated f-value (f=1.102) with a significance of (0.314) which shows that there is no significant difference in motivational orientations in students with intellectual disabilities belonging to different socioeconomic statuses. Therefore, null hypothesis 5 is accepted.

Table 12

ANOVA comparison of IEO and Different Age Groups

Variance	Sum of Squares	df	Mean Squares	F	Sig
Between Groups	39.32	92	0.427	1.05	0.391
Within Groups	43.29	107	0.405		
Total	82.62	199			

Table 12 represents an ANOVA comparison, which indicates the calculated f-value (f=1.05) with a significance of (0.391) which shows that there is no

significant difference in motivational orientations in students with intellectual disabilities belonging to different age groups. Therefore, hypothesis 4 is rejected.

Analysis of Correlation and Regression

Table 13

Correlation between Motivational Orientations and drawing scores on VMI (N=200)

	Intrinsic Orientation	Extrinsic Orientation
Pearson Correlation	0.332	-0.332

** P< 0.01

Table 13 shows that Intrinsic motivational orientation has a significant (p< 0.01) positive correlation with the learning of drawing (r = 0.332). Whereas the extrinsic motivational orientation has a significant (p< 0.01) negative correlation (r=-0.332). The results revealed that with the increase of intrinsic motivation drawing learning improves and with the increase of extrinsic motivation the learning of drawing decreases.

Table 14

Summary of Regression Analysis of Extrinsic Motivation on Learning Drawing

	R	R. Sq.	Adj. R. Sq
Extrinsic Motivation	0.332	0.110	0.106

Standard multiple regression analysis was carried out to find out whether extrinsic orientation could significantly predict the learning drawing of students with intellectual disabilities. Results indicated that only 11.1% of the variance in the data can be explained by the predictor variable i.e., extrinsic motivational orientation. Therefore, it is the intrinsic motivation that is mainly responsible for enhancing learning drawing in intellectually disabled children.

Table 15
ANOVA in regression analysis showing the influence of extrinsic motivation on learning drawing

Model	Sum of Squares	df	Mean Squares	F	Sig
Regression	2191.111	1	2191.111	24.498	0.000
Residual	17708.889	198	89.439		
Total	19900.000	199			

The above table indicates results of ANOVA in regression analysis where extrinsic motivation (overall) was a negatively significant predictor of learning drawing of students with intellectual disability as significant level is smaller than 0.05.

Table 16
Coefficient in regression analysis to predict extrinsic motivation on learning drawing

Variable	Beta	Std. Error	T	Sig
Extrinsic	-.332	1.534	-4.950	0.000

The results of regression analysis in table 16 revealed that extrinsic motivational orientation negatively and significantly predicts (β= -.332; $p<$ 0.05) drawing learning in students with intellectual disabilities. Additionally, a negative t-value (t= -4.950) also indicates a reversal in direction of the effect so extrinsic motivation can negatively predict drawing learning.

The study aimed to explore the types of motivation in students with intellectual disabilities. The study revealed that out of 149 males, 31 had intrinsic motivation and 118 had extrinsic motivation. whereas out of 51 females, 20 had intrinsic motivation and 31 had extrinsic motivation which shows that females had more intrinsic motivation than males as the mean of the female is 2.40 which is higher than the male mean score of 2.07. The finding is similar to the results of Boggiano, Main & Katz (2011) who conclude that girls are more intrinsically motivated than boys.

The study aimed to explore the effects of motivational orientations on learning drawing. For analyzing the effects, t-test, ANOVA, and correlation were computed. The results supported the first three alternative hypotheses as statistically significant differences were found between intrinsic motivation, extrinsic motivation on learning drawing, and significant differences in types of motivation and gender. On the contrary, no

significant difference was found between types of motivation on age and socioeconomic status of students with intellectual disabilities therefore fourth and fifth null hypotheses are accepted. Contrary to the results of Switzky (2007) who found that with increasing chronological age and increasing social class intrinsic motivation increases.

It was also found that the intrinsic motivational orientation and the drawing scores were significantly positively correlated (r= 0.332) which indicates that with the increase of intrinsic motivation drawing learning increases. This is similar to the research conducted by Fischer, Malycha & Scharfmann (2019) who found a significant positive relationship between intrinsic motivation and creativity and concluded that increasing intrinsic motivation increases creativity in students. The extrinsic motivational orientation and the drawing scores were significantly negatively correlated (r= -0.332) which shows that the increase of extrinsic motivation decreases drawing learning, supported by the findings from Areepattamannil, Freemann & Klinger (2011) which concluded that adolescents with increased extrinsic motivation had poor school performance than adolescents with intrinsic motivation.

The results of the present study indicated that learning drawing has a statistically negative correlation (t = -0.332) with extrinsic motivation. Regression analysis revealed that extrinsic motivation negatively (t=-4.950, β = -0.332) and significantly predicted learning drawing in students with intellectual disabilities. This means that with the decrease of extrinsic motivation, drawing learning of students with intellectual disabilities could increase. Dom (2017) has also found that intrinsic motivation is significant for academic achievements.

In sum, the results of the present study depict that although most of the students with intellectual disabilities (149) were found to have extrinsic motivational orientation, few students with intellectual disabilities (51) had intrinsic motivational orientation. But the results show that those who have intrinsic motivation seemed to have good learning of drawing while those who had extrinsic motivation were not good at drawing learning. Frieling, Schuengel, & Embregts (2017) also concluded that intrinsic motivation is the positive predictor for academic achievements and that extrinsic motivation had a negative predictive effect on the academic achievements of adolescents.

Conclusions

It was found that the intrinsic motivational orientation shows a positive relation with drawing learning. Intrinsic motivational orientation (overall)

has a statistically ($p < 0.01$) significant positive relationship with the learning of drawing in students with intellectual disabilities. While all the extrinsic motivational orientation has a significant negative correlation. The results of ANOVA in regression analysis indicated that extrinsic motivation was not a significant predictor of learning drawing of students with intellectual disabilities.

Recommendations

The following recommendations can be made based on the analysis of the study.

The research was conducted within the Lahore division and its results may not be generalized for the entire country. Therefore, it is suggested to replicate the research in other cities by increasing the target areas and sample size.

The study suggests the need to incorporate intrinsic motivation in students with intellectual disabilities so that the learning of drawing in IDA can be increased.

Studies are needed on the effects of intrinsic and extrinsic motivation on other learning areas of IDA, which can affect the levels of learning of students with intellectual disabilities.

References

Akin-Little, A., & Little, S. G. (2009). The true effects of extrinsic reinforcement on "intrinsic" motivation. Behavioral interventions in schools: Evidence-based Positive Strategies (pp.73-92). Washington, D.C: American Psychological Association

Areepattamannil, S., Freeman, J. G., & Klinger, D. A. (2011). Intrinsic motivation, extrinsic motivation, and academic achievement among Indian adolescents in Canada and India. Social Psychology of Education, 14(3), 427-439.

Beery, K. E., & Beery, N. A. (2010). The Beery-Buktenica developmental test of visual-motor integration (Beery VMI) with supplemental developmental tests of visual perception and motor coordination and stepping stones age norms: Administration, scoring and teaching manual. Minneapolis, MN: NCS Pearson.

Boggiano, A. K., Main, D. S., & Katz, P. (2011). Mastery motivation in boys and girls: The role of intrinsic versus extrinsic motivation. Sex Roles, 25(9), 511-520.

Cameron, J., & Pierce, W. D. (2002). Rewards and intrinsic motivation: Resolving the controversy. Bergin & Garvey.

Deci, E. L., & Ryan, R. M. (2002). Overview of self-determination theory: An organismic dialectical perspective. Handbook of self-determination research (pp. 3-33). University of Rochester Press.

Deci, E. L., & Ryan, R. M. (2010). Intrinsic motivation. The Corsini encyclopedia of psychology, 1-2.

Dom, E.E. (2017). Intrinsic Motivation: Impact on Learning Disabilities Literature. The International Journal of Academic Research in Business and Social Sciences, 7, 46-52.

Fischer, C., Malycha, C. P., & Schafmann, E. (2019). The Influence of Intrinsic Motivation and Synergistic Extrinsic Motivators on Creativity and Innovation. Frontiers in Psychology, 10(4), 137-145.

Frielink, N., Schuengel, C., & Embregts, P. J. C. M. (2017). Distinguishing subtypes of extrinsic motivation among people with mild to borderline intellectual disability. Journal of Intellectual Disability Research, 61(7), 625-636.Gangolu, K. R. (2019). Academic Motivation and Adjustment as Predictors of Academic Achievement Among Adolescents. Journal of Psychosocial Research, 14(2).

Gilmore, L., & Cuskelly, M. (2014). Mastery motivation in children with Down syndrome: Promoting and sustaining interest in learning. In R. Faragher & B Clarke (Eds.) Educating learners with Down syndrome: Research, theory, and practice with children and adolescents (pp. 60 – 82). Routledge/ Taylor & Francis Group.

Harris, J. C., & Greenspan, S. (2016). Definition and nature of the intellectual disability. In: Singh N (Eds.), Handbook of evidence-based practices in intellectual and developmental disabilities (pp. 11-39). Springer, Cham.

Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. Developmental Psychology, 17(3), 300–312.

Healey, J. B. (2008). Extrinsic reinforcers as a critical component of education for motivating students with special needs. In Motivation and Practice for the Classroom (pp. 143-163). University of Western Sydney, Australia: Brill Sense.

Kapitan, L. (2012). Does art therapy work? Identifying the active ingredients of art therapy efficacy. Art Therapy, 29(2), 48-49.

Linnenbrink, E. A., & Pintrich, P. R. (2002). Motivation as an enabler for academic success. School Psychology Review, 31(3), 313-327.

Picard, D., & Gauthier, C. (2012). The development of expressive drawing abilities during childhood and into adolescence. Child Development Research, Article 925063. HTTP:// doi.10.1155/2012/ 925063

Reiss, S. (2012). Intrinsic and extrinsic motivation. Teaching of Psychology, 39(2), 152-156.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American psychologist, 55(1), 68.

Ryan, R. M., & Deci, E. L. (2013). Toward a Social Psychology of Assimilation: Self-Determination Theory in Cognitive. Self-regulation and autonomy: Social and developmental dimensions of human conduct, 40, 191.

Ryan, R. M., & Deci, E. L. (2016). Facilitating and hindering motivation, learning, and well-being in schools: Research and observations from self-determination theory. Handbook of motivation at school (pp.96-119). Routledge.

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. Contemporary Educational Psychology, 61, 101860.

Schalock, R. L. (2014). Intellectual disability. The Encyclopedia of Clinical Psychology, 1-7.

Slayton, S. C., D'Archer, J., & Kaplan, F. (2010). Outcome studies on the efficacy of art therapy: A review of findings. Art Therapy, 27(3), 108-118.

Smitheman-Brown, V., & Church, R. R. (2015). Mandala drawing: Facilitating creative growth in children with ADD or ADHD. Art Therapy, 13(4), 252-260.

Switzky, H. N. (2007). The educational meaning of mental retardation: Toward a more helpful construct. Mental Retardation and the Neglected Construct of Motivation. In Paper presented at the Annual Convention of the Council for Exceptional Children, Salt Lake City, UT.

Switzky, H. N., & Schultz, G. F. (2010). Intrinsic motivation and learning performance: Implications for individual educational programming for learners with mild handicaps. Remedial and Special Education, 9(4), 7-14.

Wang, M. T., & Eccles, J. S. (2013). School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective. Learning and Instruction, 28, 12-23.

Witzel, B. S., & Mercer, C. D. (2003). Using rewards to teach students with disabilities: Implications for motivation. Remedial and Special Education, 24(2), 88-96.

Journal of Contemporary Teacher Education
Volume: 6, 2022, 53–68

Effects of the Cooperative Learning-based Flipped Classroom Model on Chinese Students' English Proficiency in the EFL Context

Meixiao Lin*

Abstract

This study investigates how the cooperative learning-based flipped classroom paradigm affects the English language ability of Chinese university students in an EFL (English as a Foreign Language) setting. It was decided to use a quasi-experimental study approach. In an integrated skills course, the experimental group engaged in flipped classroom activities based on cooperative learning (CL) for 80 minutes over the course of 24 sessions. Only standard whole-class instruction was given to the control class. The students' spoken English proficiency was evaluated using an oral pre- and post-test before and after the intervention. The national written CET4 (College English Test Band 4) scores were adopted for comparing their general proficiency. The quantitative results revealed that the experimental class made greater gains in oral proficiency than the control class. Despite the fact that there was no significant difference in the written CET4 scores (general proficiency) between the two classes, the experimental class had a greater pass rate than the control class. The deployment of the CL-based flipped classroom paradigm in the EFL environment is further examined in connection to the results.

Keywords: College English; Cooperative Learning; Flipped Classroom; English Proficiency

* Associate Professor of English at College English Department of Foshan University, Guangdong, China. Email 462665471@qq.com

Introduction

At present, large classes are generally common in the College English courses in universities in China, and the desired results are difficult to achieve with classroom communicative activities. Many college students have passed the national written CET4 (College English Test Band 4) and CET6 (College English Test Band 6), but they are not fluent enough to communicate orally with native English speakers face to face in real life. The path towards realizing the goal of cultivating students' English ability stipulated in the College English Teaching Guide (2020) needs to be further explored.

Following the student-centered teaching philosophy, the flipped classroom style of instruction engages a mixed learning mode in which students' study inside and outside a classroom setting. Before class the students learn via instructional videos, completing "knowledge absorption". In class they interact with their teachers and peers, achieving "knowledge internalization". In China, like other subjects, to motivate students to become active learners, the application of the flipped classroom model in the College English classroom has gradually been developed. Chinese researchers have constructed and explored different types of flipped classroom models, such as the ones based on APPs (Dou & Wen, 2015), micro-class videos (Lu, 2014), MOOC (Hu & Wu, 2014) and electronic archives (Xu & Li, 2014). These studies mainly explored the effects of the different forms of flipped classrooms on English proficiency of university students in China. The flipped classroom paradigm hasn't, however, been extensively used and researched in EFL classrooms. There aren't many scientific studies that directly address the use of the flipped classroom model to structure students' interaction and maximize their oral output to develop their English proficiency.

This research seeks to develop a flipped classroom model based on cooperative learning (CL) in the College English classroom in an effort to enhance the current College English teaching situation in China. With the integration of information technology into teaching, CL will be structured for students to carry out communicative tasks so that they could have sufficient and effective language output, which would promote the deep internalization of the input. Therefore, this paper explores whether this model has a positive effect on improving college students' oral English as well as general competence (the combined level of listening, reading, writing) through the following research question.

What impact does the CL-based flipped classroom model have on the Chinese university students' oral proficiency and general proficiency in the EFL Context?

Second Language Acquisition, Flipped Classroom and CL

According to second language acquisition theories (Krashen,1985; Long,1996; Swain,1995), when emphasizing the role of comprehensible input, comprehensible input itself is not enough to ensure language acquisition. Learners should not only listen, but also interact and negotiate the language input they receive, and generate output. Language output gives students the chance to try out the language and adjust their utterances, which is helpful for language acquisition. It can also show them the difference between what they want to say and what they can convey. Based on second language acquisition theories, the Chinese scholar Qiufang Wen (2020) and some other scholars constructed the production-oriented approach with Chinese features, in which Chinese students should be given more opportunities to produce language output. College English teaching should create the best language communication environment for students, and help them use the language knowledge they have mastered to complete communicative tasks.

A flipped classroom is the reverse of the traditional style of instruction. Before class, students complete direct instruction by themselves, such as viewing a lecture online, and they can learn the material at their own pace. In class they focus on the discussion of the material. The teacher is better able to help the students engage in active learning by debates, group discussions or presentations. By doing so, the students can have more time to participate in class activities and become much more involved during the lesson. The teacher serves as a coach and supports the students when needed. It is generally argued Deng, 2016; Zhang, Feng & Liu, 2014) that in the EFL context, when utilized properly, the flipped classroom model can provide many benefits to the students, such as enabling them to take charge of their learning process and having more interaction with their peers and the teacher. However, there are a number of challenges in this model such as inadequate student preparation before class, and higher workload for the student and the teacher (Akçayır & Akçayır, 2018).

CL means that to complete common tasks, students actively participate in the learning process, have a clear division of responsibilities, and encourage each other to learn together. Different from the traditional group activities, there are obvious differences in group formation, division of labor, interaction structures, cooperation principles and teachers' roles

(Jacobs,1998). During the CL process, teachers first design interactive tasks, require group members to take turns to play relevant roles, and follow certain principles of cooperation and interactive forms to carry out communicative activities. At the end of the event, group feedback and suggestions are offered for improvement.

Previous studies have shown that CL activities can provide students with the opportunity of generating language input and output, which is helpful in promoting communication among members (Crandall,1999; McCafferty et al, 2006; Masoud, et al., 2013; Lin, 2014;). With the flipped classroom style of instruction, whether CL can better improve the students' English level, especially their oral ability, will become a new angle to explore in the EFL context.

The Framework of the CL-based flipped classroom model

In order to develop students' English application skills, the flipped classroom model views learning as a series of communicative tasks that are directly tied to the teaching objectives. This model operates both within and outside of the classroom, as indicated in the accompanying picture. How does this teaching model runs before class, in class and after class are presented as follows:

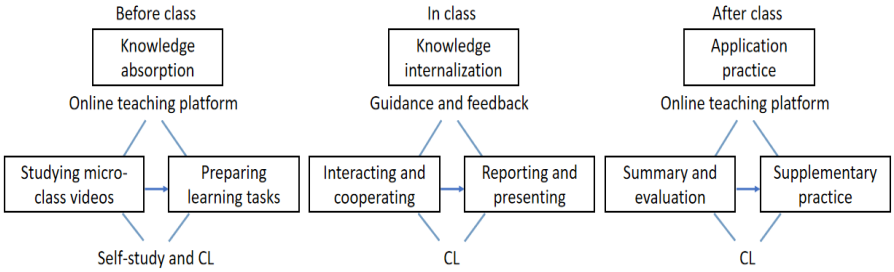


Figure 1: The Framework of the CL-based flipped classroom model

Before Class

Before class the teacher makes clear learning tasks, summarizes learning points, makes related micro-class videos and designs CL tasks. Based on the texts of Book One (Li, 2014) and Book Two (Li, 2014) of the new editions of *College English Integrated Skills Course* published by Shanghai Foreign Language Education Press, learning contents include text ideas and

structures, vocabulary, difficult sentences, grammar and cultural knowledge. At the same time, some extracurricular English learning resources are integrated into the learning contents. According to the English level of the students in class and the text content, related PPT, micro-class videos and learning task lists are developed. These learning materials are uploaded to the Black-board Teaching Platform of the university (https://bb.fosu.edu.cn) and the course website (https://www.fscollegeenglish.com/). After receiving the teacher's notice, the students learn independently the micro-class video to get familiar with the new knowledge points and complete the unit exercises according to the learning task list. At the same time, the students in groups of four discuss and communicate with their members, work together, implement personal responsibilities and prepare classroom group activities. In this process, the teacher and the students communicate and answer questions in the class Wechat Group. As a result, the students complete the absorption of the language knowledge before class.

In Class

Communication is vital for developing the language. Apart from answering the students' questions, CL-based communicative activities are organized to help students complete the internalization of the language knowledge. Mainly based on such forms of CL as Jigsaw, Think-Pair-Share, Group Discussion, Roundrobin and Group Project, communicative activities are carried out in class. Jigsaw is used to play the role of the teacher, summarizing the text information, making PPT and presenting the main ideas of some designated paragraphs, key vocabulary and cultural knowledge. Jigsaw is also used to retell part of the text in groups, forming a general idea. Think-Pair-Share and Group Discussion are used to exchange personal views on topics related to the texts. Roundrobin is used to write meaningful paragraphs about the new words and phrases just learnt; Group Project is for recording their group discussions related to unit topics and making videos. During the process of the CL activities, the teacher is an organizer, facilitator and guide. To guide students to make full use of the language knowledge obtained through self-study before class for interactive communication and presentations, vocabulary help and feedback are provided for the students when necessary. Each group has a group leader, a secretary, a timekeeper and an inspector. Each member plays his corresponding role in the activity to improve the group work efficiency.

After Class

At the end of each class, the group carries out self-assessment and peer evaluation according to a CL Evaluation Form, giving positive comments on what has been achieved and reflecting what needs to be improved. The teacher then comments on what the students have done, points out their problems in reading articles, language knowledge, CL activities and gives them feedback for improvement. Supplementary practice is the consolidation and extension of the knowledge learned in the classroom. In the form of Group Project, each group is required to create small argumentative papers or CET4 compositions together on the topic related to the unit theme.

Research Method

Sample of the Study

This project was carried out through a teaching experiment. In order not to affect the normal teaching schedule, two first-year classes majoring in business management and human resources management were chosen to participate in the research, with the human resources management class as the experimental class and the business management class as the control class. They were admitted to the university with the same National College Entrance Examination admission line. Before enrolling in this university, they were an average of 19 years old and had been learning English for 10 years. Both classes were housed on the same campus, exposed to the same surroundings, and made use of the same university resources. 56 people were in the experimental class and 55 people were in the control class out of a total of 111 participants. 5 students did not take CET4 written test due to personal reasons, and they were not included in the number of the participants in the investigation. A total of 106 students served as the statistics of all the scores of the project. The English scores ($t= 0.39$, $p= 0.70$) prior to treatment were calculated and compared using the Independent Samples Test. The findings revealed that there was no significant difference between the oral ratings. and the National College Entrance English Exam (NCEEE, $t= 0.87$, $p= 0.39$), indicating that the English level of the two classes were comparable.

Treatment

Both classes were offered comprehensive English courses, listening and speaking courses, using the same English textbooks. In this teaching experiment, Book One (Li, 2014) and Book Two (Li, 2014) were used as the teaching contents of *New College English Integrated Skills Course* published by Shanghai Foreign Language Education Press. According to the scores of NCEEE and the oral pre-test, the experimental class and control class were divided into low-, middle- and high-level learners, and then divided into 4-person groups with similar English level in each group. The teaching experiment was carried out in the participants' first academic year for 28 weeks and 24 sections, with an average of 80 minutes each section and a total of 32 hours. The experimental class conducted micro-class independent learning through the Black-board Teaching Platform, and carried out the CL-based flipped classroom model as presented above. However, the teacher-centred approach was adopted for the control class, and the teacher gave instruction on key words, text structures, cultural knowledge and related exercises. Students were asked to volunteer to share their ideas with the class or to respond to inquiries. Occasionally some communicative activities were carried out in random groups.

The experimental class and the control class had the same learning contents and teaching methods in the listening and speaking course. In class, the students logged on the coursebook teaching website (http://202.192.168.56/npels) to do listening exercises by themselves, submitting answers on the Internet and completing the test paper of each unit. Meanwhile, group discussions based on the unit topic were conducted and the students in groups took turns to speak in front of the teacher.

The CL-based flipped classroom model is an independent variable, and the students' English performance is a dependent variable. The teaching classroom environment is complex, and the experimental validity is affected by many factors. To improve the effectiveness of the experiments, it was ensured that the CL-based flipped classroom model was the only independent variable, that the two classes were not aware of their experimental or control condition, and that the two classes were taught by the same experienced teacher. Before the experiment, the students in the two classes were informed of its aim, and that the personal information they provided would be strictly confidential, and their names would not appear in the research report.

Instruments

The Oral Pre-test and Post-test

CET4 is a national examination chaired by the Ministry of Education of the Department of Higher Education, China, which can objectively and accurately reflect college students' English ability. It includes written and spoken English tests, and the written test is taken in mid-June and mid-December every year. Generally, all students take the written test, and only some of them take the spoken test. As only a few students in this study were willing to take the spoken test, in order to measure their oral skills, an oral test was designed for this study according to the format of the national spoken CET4. The same test questions were adopted for the pre-test and post-test (see the Appendix). The students' performances were assessed on the four aspects of the assessment scale of the spoken CET4: accuracy and range, utterance length and coherence, flexibility and appropriacy. Two qualified examiners were asked to listen to the recordings and evaluate the students' speaking abilities using an analytical scoring system. The students' test results were determined by the two assessors' average scores. The pre-test and post-test scores of 0.89 and 0.86, respectively, were utilised to calculate the credibility of the results using the Pearson correlation coefficient.

The Written CET4

Right after the one-year teaching experiment, the written CET4 was taken in mid-June. 106 students of the experimental class and the control class took this test, whose results were used to measure the changes of their general English level in listening, reading, writing and translating after the experiment.

Data Analysis and Results

To determine all English scores in this study, the Independent Sample Test was employed. The average and standard deviation were used to determine whether there was a significant difference between the experimental class and the control class in terms of speaking proficiency, T and P values will be reported and explained accordingly. Similarly, to explain whether the two classes had been significantly different in their general English level, the Independent Sample Test was also employed to analyze the scores of NCEEE and the written CET4.

Oral Proficiency

The average score of the oral pre-test for the experimental class was extremely similar to that of the control class, as can be seen in Table 1, according to the statistical findings of the independent sample T test. There was no discernible difference, according to T=0.39 and p=0.70 (> 0.05). In other words, the speaking level of the two classes was comparable prior to the experiment.

Table 1

Results obtained from the Independent Samples Test in the oral pre-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean	T	P
Oral Proficiency	EC	55	9.12	0.82	0.11	0.39	0.70
	CC	51	9.06	0.62	0.09		

According to the oral post-test findings in Table 2 below, the experimental class's average score is greater than the control class's (12.92>11.89), t=7.6 and p=0.00 (<0.05), showing that the two classes have significant differences in oral proficiency scores; on average, the experimental class reached B+ in four levels of the spoken CET4, while the control class was B (in the spoken CET4, 12.5-13.4 falls into B+, and 11-12.4 is B). It can be seen that the CL-based flipped classroom model had a positive effect on improving the students' oral proficiency.

Table 2

Results obtained from the Independent Samples Test in the oral post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean	T	P
Oral Proficiency	EC	55	12.92	0.68	0.09	7.60	0.00
	NC	51	11.89	0.70	0.10		

General English Proficiency

As shown in Table 3, the average score of the general proficiency in the National College Entrance English Exam (NCEEE) of the experimental class was very close to that of the control class. T= 0.87, P=0.39 (>0.05). This shows that there was no significant difference between the two classes before the intervention.

Table 3
Results obtained from the Independent Samples Test in NCEEE

	Groups	N	Mean	Std. Deviation	Std. Error Mean	T	P
NCEEE	EC	55	112.06	12.47	1.68	0.87	0.39
	CC	51	110.08	11.02	1.54		

As presented in Table 4, the mean score of the written CET4 in the experimental class was slightly higher than that of the control class (441.15>424.14), T=1.54, and P=0.13 (> 0.05), indicating that the two classes were not significantly different in the written CET4 results. Despite this, as shown in Table 5, 34 students, 61.8% in the experimental class reached the pass score (425 or over) of the written CET4, while only 26 students, 50.9% did in the control class, with the former at 10.9% higher.

Table 4
Results obtained from the Independent Samples Test in the written CET4

	Groups	N	Mean	Std. Deviation	Std. Error Mean	T	P
General English Proficiency	EC	55	441.15	53.90	7.27	1.54	0.13
	CC	51	424.14	59.28	8.30		

Table 5
The pass rate in the written CET4

	Groups	N	Pass number (425 or over)	Pass rate	Pass rate difference
Pass rate	EC	55	34	61.8%	10.9%
	CC	51	26	50.9%	

Discussion and Pedagogical Implications

Compared with the control class, the experimental class had made greater progress in the oral English level after the experiment. Although the written CET4 scores of the two classes were not significantly different, the pass rate in the experimental class was higher than that in the control class. That is to say, the CL-based flipped classroom model is conducive to improving the English level of college students. The students received formal language training before entering the university with certain vocabulary and language knowledge. In the form of CL, the flipped classroom model provided them

with opportunities to jointly complete communicative tasks inside and outside the classroom, thus promoting the internalization of their language input and output.

Firstly, the students had more opportunities to practice English and thus increased their oral output. Before class the students learned knowledge points independently and cooperated with their members to prepare for some tasks. This shortened the instruction time and increased the practice time in class. More importantly, CL activities were structured, and they could give each student opportunities to interact with their peers. For example, Jigsaw was used for each member in the group to be responsible for the recitation of a certain part of the text to form the main idea of the text. Each member must understand the text, get prepared for the required content, and communicate with the members to ensure that they could form the main idea of the text. In class the students retold the text in groups, and at the same period 25% students of the class were talking. That means that 100% students participated in language practice, and as a result, language output was much more than in the teacher-centred classroom. At present, large classes are common in the College English course, and the time spent on communicative activities is reduced after the teacher answers the students' questions in class. Even if the classroom is "flipped", the knowledge internalization process is difficult to meet the standards of personalized and deep learning (Lou & Chen, 2017). The CL-based teaching model in this study seemed to break the limitations of the flipped classroom language practice and create opportunities for each student to apply their language knowledge. Through cooperative communication and presentations, the students could fully participate in classroom activities and increase their oral output.

Secondly, all of the students with different English levels seemed to benefit from this teaching model. The Vygotsky (1978) Cognitive Development Theory emphasizes the importance of social interaction for individual learning and cognitive development, which has been extended and applied to the social-cultural theory of second language acquisition. As discussed by Shrum & Glisan (2000), when a learner receives help from experts (such as a teacher) or more capable peers, it facilitates second language acquisition. During the interaction with peers, the peers are either experts or beginners. Ellis (2003) argues that the Zone of Proximal Development is a major concept of the socio-cultural theory, noting that this concept can explain why learners cannot express some language structures by themselves, but can do it with the help from others. In this study, perhaps low-level learners gained guidance and help from peers with better English levels, and thus making progress. According to Cognitive

Elaboration Theory, if learners want to keep the information in memory and connect the existing information in memory, they must have some cognitive reorganization of the learning materials. The crucial strategy is to explain the course material to others. According to some research on the interactive elements of CL and conventional instruction, Cohen (1994) observed that the students' accomplishments in these studies were related to their thorough justifications. In this study, high-level learners seemed to have benefited from CL activities who were responsible for providing help and language interpretations for learners with low levels. Based on many empirical studies on language improvement due to interaction, Mackey (2007:100) notes that when learners have the opportunity to negotiate the meaning of intelligible input, accept feedback and modify their output, they will have a desirable result.

Thirdly, the students' interest in learning was somewhat sparked by the assessment procedure. The assessment strategy of combining summative evaluation (70%) and formative evaluation (30%) was implemented by both the experimental class and the control class. The formative evaluation of the control class included 30% for classroom performance, 20% for attendance and 50% for assignments. Different from the control class, the formative evaluation of the experimental class included 10% for independent learning, 20% for CL, 30% for classroom performance, 20% for tests and 20% for assignments. The two classes had the same summative evaluation including final oral English and written examinations. It is generally believed that there is a lack of motivation and interest in English learning among college students in China. The formative evaluation adopted in this experiment may have motivated the students to learn more actively on their own initiative.

Fourthly, learning was aided by group processing. Positive interdependence is specifically regarded as the first and most significant component of CL, enabling pupils to understand that individual goals can only be attained if all members' goals are attained (Johnson et al., 1994). Each participant must comprehend the assigned task in order to work toward the shared objective, and they must make an effort to guarantee that the rest of the group does as well. The individual growth of each group member is essential to its success. They are accountable to both the other members and their own studies. In this study, after CL activities were completed, group processing was conducted to summarize what had been done well and point out what needed to be improved to form a learning atmosphere of mutual support and cooperation.

However, with the CL-based flipped classroom style of instruction, some challenges arose due to traditional classroom culture, poor

independent learning ability, switch to Chinese, insufficient feedback, learning objectives and other classroom issues. Firstly, the National College Entrance Exams had generally exposed the students to the teacher-fronted format before they entered the university, whereas the CL-based flipped classroom model is a student-centered approach, requiring them to take charge of and be more autonomous in their own learning. It was likely that some students could have difficulty studying the learning material by themselves and preparing for the in-class CL activities. It took time for them to adjust themselves to such student-centred cooperative learning activities. Next, it is argued that students sharing a common first language tend to use it during pair/group work activities in the EFL context (e.g., Naughton, 2006). This would cause collaborative efforts to have unforeseen consequences. In this study, CL exercises were designed so that students would be expected to interact in English, but when they ran out of words to express themselves, they would instead converse in a kind of mixed English and native language that they could understand. Additionally, the CL communicative tasks allowed the students to communicate in groups while using the language. They unconsciously produced some incorrect linguistic elements. Due to the short class period, there wasn't enough time for timely corrective feedback or other forms of form-focused instruction to assist the students in increasing their accuracy. In addition, to pass CET4 was not a component of the assessment of their degree, and in their first year, it was not a pressing issue for them, which is likely why they did not put much effort into their English studies. These issues may help explain why the CL-based flipped classroom model did not generate a great impact on the students' general proficiency.

Concluding Remarks

The flipped classroom approach is novel. The flipped classroom style based on CL can encourage students to learn independently and provide them with more output opportunities, thus improving their English proficiency. It is hoped that this study will provide reference for the effective implementation of the current flipped classroom model in the EFL context.

Limitations and Further Studies

The study had certain constraints because it was conducted in an actual classroom, which is a usual practice for studies into second language interaction. The small sample size was one of its limitations. There were several uncontrollable external variables in this experiment with intact

classes. Because they are done in settings similar to those typically encountered in educational contexts, studies utilising intact classes are "more likely to have external validity" (Seliger & Shohamy, 1989:149). The results may only be extrapolated to comparable universities in China because the trial was limited to a single university.

Due to the fact that many factors affect language learning in actual classroom settings, data need to be collected from larger samples for analysis to confirm the trends reflected in the study. The participants were from Human Resources Management and Business Management. The features of English learning among students with different degrees vary, hence it is advised that in subsequent studies, students from different majors be selected to explore the effects of the CL-based flipped classroom model on English proficiency. Also, this teaching model encourages students to learn on their own initiative. This may help them enhance their independent learning ability and master their English learning strategies, which will have lifelong benefits. It would be worthwhile to investigate whether this teaching model has a positive effect on these aspects.

References

Akçayır, G. & Akçayır, M. (2018). The Flipped Classroom: A Review of its Advantages and Challenges. *Computers & Education*, *126*: 334-345.

Crandall, J. (1999). Cooperative Language Learning and Affective Factors. In Arnold, J. (Ed.), *Affect in Language Learning* (pp.226-309). Cambridge: Cambridge University Press.

Cohen, E.G. (1994). Restructuring the Classroom: Conditions for Productive Small Groups. *Review of Education Research*, *64 (1),* 31-35.

College English Teaching Guide issued by the Office of the Chinese Ministry of Education in 2020.

Deng, D. (2016). A Review on the Application of the Flipped Classroom Model in College English Teaching. *Foreign Language World*, *4*, 89-95.

Dou, J. H. & Wen, S. (2015). On the Flipped Classroom Teaching Reform of College English Based on APPs. *Heilongjiang Higher Education Research, 5,* 162-167.

Ellis, R. (2003). *The Study of Second Language Acquisition*. Oxford: Oxford University Press.

Hu, J. H. & Wu, Z. J. (2014). On the flipped classroom model of College English. *Technology Enhanced Foreign Languages, 6,* 40-45.

Jacobs, G. M. (1998). Cooperative Learning or Just Grouping Students: The Difference Makes a Difference. In Renandya, W. A. & Jacobs, G. M. (Eds.), *Learners and Language Learning*(pp.172-193). Singapore: SEAMEO Regional Language Centre.

John, D. W. & Johnson, R. T. (1994). *Learning Together and Alone: Cooperative, Competitive and Individualistic Learning* (4th Ed.). London: Allyn and Bacon.

Krashen, S. (1985). *The Input Hypothesis*. London: Longman.

Li, Y. H. & Xia, G. Z. (2010). *New College English Integrated Course 1 & 2*. Shanghai, China: Shanghai Foreign Language Education Press. Lin, M. X. (2014). Effects of Cooperative Learning on Interactional Strategy Use in the EFL Context: An Analysis of Chinese Students' Classroom Talks. *Chinese Journal of Applied Linguistics, 1,* 49-66.

Long, M. H. (1996). The Role of the Linguistic Environment in Second Language Acquisition. In Ritchie, W. C. & Bhatia, T. K. (Eds.), *Handbook of Language Acquisition: Vol.2. Second Language Acquisition* (pp.413-468). New York: Academic Press.

Lou, W. H. & Chen, M. Y. (2017). On the Flipped Classroom of College English from the Local Perspective. *Foreign Languages Teaching, 38 (5),* 69-72.

Lu, H. Y. (2014). On the Feasibility of the Application of the Flipped Classroom Model in College English Teaching. *Technology Enhanced Foreign Languages, 1,* 33-36.

Mackey, A. (2007). Interaction as Practice. In Dekeyser, R. M. (Ed.) *Practice in a Second Language: Perspectives from Applied Linguistics and Cognitive Psychology* (pp.85-109). Cambridge: Cambridge University Press.

McCafferty, S. G., Jacobs, G. M. & Iddings, A. C. D. (Eds.) (2006). *Cooperative Learning and Second Language Teaching*. Cambridge: Cambridge University Press.

Masoud, A., Masoud, H. & Sohrab, D. (2013). Application of Cooperative Learning in EFL Classes to Enhance the Students' Language Learning. *Procedia - Social and Behavioral Sciences, 93,* 138 -141.

Naughton, D. (2006) Cooperative Strategy Training and Oral Interaction: Enhancing Small Group Communication in the Language Classroom. *The Modern Language Journal, 90 (2),* 169-184.

Seliger, H. W. & Shohamy, E. (1989). Second Language Research Methods. Oxford University Press.

Shrum, J. L. & Glisan, E. W. (2000). *Teacher's Handbook: Contextualized Language Instruction* (2nd Ed.). Boston, MA: Heinle & Heinle.

Swain, M. (1995). Three Functions of Output in Second Language Learning. In Cook, G. & Seidlhofer, B. (Eds.), *Principle and Practice in Applied Linguistics: Studies in Honor of Widdowson*, H. G (pp.125-144). Oxford: Oxford University Press.

Vygotsky, L. (1978). *Mind in Society*. Cambridge, MA：MIT Press.

Wen, Q. F. (2020). *Production-oriented Approach: Developing a Theory of Foreign Language Education with Chinese Features*. Beijing: Foreign Language Teaching and Research Press.

Xu, Y. M & Li, X. D. (2014). On the flipped classroom model Based on Electronic Files by Taking New College English Teaching as Example. *Foreign Languages in China, 5*, 81-87.

Zhang, R. X., Feng, L. H. & Liu, B. (2014). *The Flipped Classroom Model and Teaching Transformation*. Beijing: World Knowledge Press.

Acknowledgements

This paper is part of the teaching reform program "the Application of the CL-based flipped classroom model in the College English Classroom" funded by Foshan University, China.

Journal of Contemporary Teacher Education
Volume: 6, 2022, 69–86

Exploring Parental Control and its Impact on Secondary Level Students' Attitude Towards Studies

Mushtaq Ahmad[*]
Farah Shafiq[**]
Muhammad Nadeem Anwar[***]

Abstract

In the present study, we examined the relationship between parental control and secondary level students' attitude towards studies. The population of the study was the male and female Secondary level students and their parents of all the boys' and girls' government secondary schools of Tehsil Sargodha. A sample of 150 students of the10th class and their parents were selected on an availability basis from the randomly selected 30 secondary schools including 10 Boys and 20 Girls schools. Two self-developed research instruments including one for parents' control and the other for students' attitude were used. To analyse the data, statistical calculations including frequency, percentage, mean score, standard deviation, t-test, one-way ANOVA and correlation were used. The findings showed that the parents with more public dealing professions tend towards the strict and highly strict level of parental control and there exist a positive and moderate relationship between parental control and students' attitude towards studies. The study recommends that parent teacher regular meetings may be organized for parents 'awareness to adopt better control strategy.

Keywords: Parental control, Attitude towards studies, Secondary level students

[*] Associate Professor, Department of Education; University of Sargodha; mushtaq.ahmad@uos.edu.pk
[**]Assistant Professor of Education, University of Education Lahore, Township Campus; farah.shafiq@ue.edu.pk
[***]Associate Professor, Department of Education; University of Sargodha; nadeem.anwar@uos.edu.pk

Introduction

Parents ensure the good education of their children. So, they keep control of their children to abstain their deviation from education. Parental control may be referred to a managing the children lives towards the maturity of their children's life by demanding the ways in which they are connected (Agabrian, 2007). Parental control affects a lot on children learning (Denga & Denga, 2007). Similarly, according to Nye, et. al. (2006) parental control affects the children's performance in and outside the school. Parental control helps to manage the children's lives towards maturity of their children's life by demanding the ways in which they are connected (Agabrian, 2007).

When parental control is used as a supplementary tool with school activities, it increases children's involvement in studies and improvement in academic achievement. So, it can be said that parents play a central role in both the school and home environments. According to Bryan (2005), the learning environment at the higher secondary level may be more complex than in elementary schools, and academic expectations from students are increased.

The understanding between parents and children may be seen as: psychological, biological, historical, social, educational, and anthropological aspects. Gurland and Grolnick, (2005) described five indicators of parental control i.e., psychological control, emotional control, social control, motivational control and behavioural control.

Psychological control means parents control the child's adolescent behaviour, such as guilt induction, manipulation of love extraction, and restrictive approval (Hill & Craft, 2003; Ross et al. 2002) e. g. affection withdrawal, and/or the manipulation of the parent–child relationship (Barber, 2002). Emotional control is the capability to control own feelings e.g., deep breathing, producing some good emotions, etc. (Landau, Kay & Whitson, 2015). Social control is choosing the atmosphere for own advantage e.g., censorship, or bindings on political liberty and motivational control is the capacity to work on agreed behaviors to apply training activities for example, working harder on challenging tasks, control the flow of a conversation etc. (Robbins, Oh, Le & Button, 2009). Further behavior control is the use of methods such as therapeutic techniques, conditioning, etc. to direct behavior in a chosen direction, for example, uniform restriction (Heckhausen, 2015).

Emotions are physical or psychological changes in the results of feelings, which influence behaviour. Further according to Hill & Craft, (2003), emotional control is a kind of social intellect which involves the

ability to control the own and others' emotions and to use this information for guidance of the thinking and actions of a person. However, it refers mainly to attempts by a person to handle the generation, experience, or expression of emotion, and one's an emotional reaction (Ross et al., 2002). Academic emotions are emotions related to any achievement upshot e.g., anxiety, pride, shame linked to success and failure, etc. or activities of achievement e.g., enjoyment of learning, boredom experienced in reviewing online materials, anger at the task demands, etc. (Pekrun et al. 2007). Positive emotion can widen thought-action repertoires (Fredrickson, 2001).

Social control is the patterns of pressure that society exerts to sustain order and established rules (Jason, 2012). On activity disruption in academics, parents' social control may help in students' activeness (Wilson, Spink, & Priebe, 2010) e.g., law, bindings on political liberty, etc. (Robbins, Oh, Le & Button. (2009)

According to Gurland & Grolnick, (2005) parents work to supports their children's motivation. Motivation is the attribute that moves a person for doing something or not (Broussard & Garrison (2004). Motivation is a key factor in the learning and achievements of student in all levels of School. Teachers' and parents' role is very important for motivating students to study. Teachers uses many techniques for students such as providing a learning environment, Sparking Interest, giving feedback and rewards etc. It is a very difficult task to motivate students to do something. It is time consuming and a lot of effort is required for motivating the students (Tuckerman, 2003). According to Self-determination theory (Ryan & Deci, 2000), motivation can be Intrinsic and extrinsic motivation. Intrinsic motivation is an inner force or drive in human nature that motivates students to engage in academic activities independently, have an interest to face challenges, and enjoy the learning process while Extrinsic motivators include parental expectations, expectations of other trusted role models, earning potential grades and may be enhanced through rewards, praise, punishments, public recognition and phone calls to home (Adamma, Ekwutosim, Unamba, 2018).

Behaviour control is patterns of behaviour, which parents use for dealing with children's situations. Behavioural control is parental efforts to check and guide their children such as monitoring, discipline and rule-setting (Hill & Craft, 2003) Insufficient behavioural control is a risk factor for adolescent's because behavioural control refers to the regulation of children's behaviour (Barber & Harmon, 2002).

These patterns of parental control, broken down further, with respect to particular clusters like promoting conformity, enriching the child's home

environment, and encouraging independence, can enhance the attitude of students toward their studies. Students' attitude towards studies is taken as the mental activities of the students about their studies (Eshghinejad, 2016). Moreover, parental control increases the risk that youth have drug-using friends, and prevent antisocial associations and conduct problems (Watson, Sifers, & Houlihan, 2013).

In western areas of the world, researches have proved that parental control has a direct relationship with the students' attitude towards the studies (e.g., Wu, & Qi, 2006; Hart, Ganley, Purpura, 2016), and these have been supported in Pakistani contexts (e.g., Inam, Nomaan & Abiodullah, 2016). Parental control has been evidenced as related not only with children's higher achievements but also with better behaviour, better social skills and adaptation to school, better attendance, and lower drop-out rates. However, the cultural traditions of parental control and children's upbringing styles are different in Pakistani society. Hence keeping in view these facts this study was opted to determine the relationship between parental controls on secondary level students' attitudes towards studies in Pakistan.

Objectives of the Study

Objective of the study was to find out the relationship between reports of parental control and secondary level students' attitude towards studies.

Research Questions

Following were the research questions to direct the data collection:

1. What types of control do parents report using on their children?
2. What is the impact of the parents' education and occupation on their reported control over the children?
3. What are the differences in reported parental control on the basis of gender and locality?
4. What is the self-reported level of students' attitude towards their studies?
5. Is there any relationship between reported parental control and secondary level students' self-reported attitude towards their studies?

The research was to be significant as it would contribute to practical knowledge about the parental control on the children. In this way, the students' attitude towards studies may be improved. The study would provide a guideline for teachers to help parents of students about parental control on students' attitude towards studies.

Research Methodology

The study was correlational and data was collected through survey technique. According to the time, resources and financial constraints, the study was delimited to Government Secondary Schools in one Tehsil in one district.

The population of the study was all the male and female students studying in 10^{th} class in 142 Boys and 160 Girls Government secondary schools (Total 302) and all their parents. Using multistage random sampling, from gender-based two groups of institutions (10) Boys secondary schools and 20 Girls secondary schools (Total 30) were selected randomly; Five (5) students of 10th class ages 13-14 (ASER-Pakistan, 2010), from each of Government Boys and Girls secondary schools were selected convenient sampling (on availability basis) to make the sample of 150 students and all the parents of the selected students.

Instruments of the study two bilingual questionnaires (in English and Urdu) were developed; one questionnaire for parents about their control over their children and second was attitude scale for students towards studies. The questionnaire for parental control had 27 items such that 4 statements for psychological control, 6 for emotional control, 6 for social control, 5 for behavioural control, and 6 statements for motivational control. Questionnaire for students' attitude toward studies comprised of 10 statements about study, learning environment, parents' pressure, thinking & classroom activities. Both the instruments validated through five experts of both languages i.e. English and Urdu to check the content as well as face validity. The questionnaires were administered to 100 students and their parents for pilot testing. The reliability coefficient Chronbach`s alpha (α) was 0.7 for the questionnaire of parental control and 0.766 for the attitude scale which were acceptable. The questionnaires were administered to 150 students of Government secondary schools and their parents (150). Students were approached through self-visit and they were requested to get the questionnaire filled out from their parents and were collected the next day. The received filled questionnaires were 150 so the response rate was 100%. All the data were analysed using mean score, standard deviation, t-test, one-way ANOVA and Pearson correlation.

Data Analysis and Results

Table 1
Parents views about their control on HSSC Students

		Range	Frequency	Percent	Mean	SD
Valid	Laissez faire	>2.5	3	2%	3.76	1.09
	Less control	2.5- 3	16	10.7%		
	Moderate	3.01 – 3.5	45	30%		
	Strict	3.51- 4	35	23.3%		
	Highly strict	4.01- 5	51	34%		
	Total		150	100%		

Table 1 shows that 34% parents with mean score 3.76 and SD= 1.09, responded that they had highly strict control over their children. 23.3% parents responded that they had strict control and 30% of the parents reported that they had a moderate level of control over their children. 11% of the parents responded that they had less control and only 2% of parents responded that they were Laissez faire for their children. The trend showed that majority of the parents used strict and highly strict levels of control on their children.

Table 2
Factor wise analysis of reported parental control

Statement	SA f(%)	A f(%)	UD f(%)	DA f(%)	SDA f(%)	Total f(%)	Mean	SD
Psychological control	166 27.6%	224 37.3%	56 9.3%	96 16%	58 9.6%	600 100%	3.57	1.1
Emotional control	279 31%	310 34.4%	108 12%	134 14.8%	69 7.6%	900 100%	3.66	1. 9
Social Control	287 31.8	325 36.1	98 10.8%	104 11.5%	86 9.5%	900 100%	3.68	1.3
Behavioural control	216 28.8%	304 40.5%	80 10.6%	102 13.6%	48 6.4%	750 100%	3.71	1.6
Motivational control	318 35.3%	360 40%	105 11.6%	74 8.2%	43 4.7%	900 100%	3.92	1.0

Table 2 shows that 65% of parents agreed or strongly agreed in use of psychological control; 65.4% of parents agreed or strongly agreed in use of emotional control; 68% of parents agreed or strongly agreed in use of social control; 69% of parents agreed or strongly agreed in use of behavioural control and 75% of parents agreed or strongly agreed in use of motivational

control. Trend shows that majority of the parents mostly use motivational control and then all other types of control i.e. psychological, emotional, social and behavioural controls.

Table 3
Gender wise category of reported parental control

Gender	Laissez faire	Less control	Moderate	Strict	highly strict	Total
Fathers	2	11	23	15	25	76
	2.6%	14.5%	30.3%	19.7%	32.9%	100%
Mothers	1	5	22	20	26	74
	1.4%	6.8%	29.7%	27%	35.1%	100%
Total	3	16	45	35	51	150
	2%	10.7%	30%	23.3%	34%	100%

Table 3 shows that 52.6% of fathers and 62% of mothers of the students reported to have strict or highly strict control over their children whereas 30% of fathers and mothers reported to have moderate level control over their children. The overall trend showed that mothers have strict and highly strict control over their children as compared to fathers.

Table 4
Location wise categories of reported parental control

Locality	Laissez faire	Less control	Moderate	Strict	highly strict	Total
Rural	3	4	15	10	10	42
	7.1%	9.5%	35.7%	23.8%	23.8%	100%
Urban	0	12	30	25	41	108
	0.0%	11.1%	27.8%	23.1%	38%	100%
Total	3	16	45	35	51	150
	2%	10.7%	30%	23.3%	34%	100%

Table 4 shows that 47.6% of rural parent and 61% of urban parents reported to have strict or highly strict control over their children whereas 35.7% of rural and 27.8% of urban parents reported to have moderate level control over their parents. The trend showed that Parents of students living in urban areas tend to use strict and highly strict control as compared to parents of the students living in rural areas.

Table 5
Qualification wise categories of reported parental control of father

Qualification of father	Laissez faire	Less control	Moderate	Strict	highly strict	total
Illiterate	0	1	0	0	0	1
	0.0%	100%	0.0%	0.0%	0.0%	100%
Middle	1	1	3	3	5	13
	7.7%	7.7%	23.1%	23.1%	38.5%	100%
Metric	0	3	16	6	10	35
	0.0%	8.6%	45.7%	17.1%	28.6%	100%
Intermediate	0	0	2	2	2	6
	0.0%	0.0%	33.3%	33.3%	33.3%	100%
Bachelor	1	3	9	8	7	28
	3.6%	10.7%	32.1%	28.6%	25%	100%
Master	0	6	10	12	21	49
	0.0%	12.2%	20.4%	24.5%	42.9%	100%
Others (professional qualification)	1	2	5	4	6	18
	5.6%	11.1%	27.8%	22.2%	33.3%	100%
Total	3	16	45	35	51	150
	2.0%	10.7%	30%	23.3%	34%	100%

Table 5 shows that the majority of the fathers; (67%) of the fathers with master qualification; 66.6% fathers with intermediate (HSSC) qualifications; 53.6% of fathers with bachelor qualifications, and 55.5% of fathers of the students with other (professional qualification) reported strict and highly strict control over their children. While 45.7% fathers with matric (SSC) qualification and 61.6% of fathers with middle (8^{th} class pass), all reported strict or highly strict control over their children but 45.7% of fathers with matric (SSC) and 23.1% of fathers with middle (8^{th} pass) qualifications reported moderate level control over their children while illiterate fathers have less control. The trend was that as the level of education of fathers increases, they tend towards strict and highly strict control.

Table 6
Occupation wise categories of parental control of father

Occupation of any of parents	Laissez faire	Less control	Moderate	Strict	highly strict	Total
Teacher	0	2	3	7	9	21
	0.0%	9.5%	14.3%	33.3%	42.9%	100%
Doctor	0	2	5	1	3	11
	0.0%	18.2%	45.5%	9.1%	27.3%	100%
Engineer	0	2	2	0	4	8
	0..0%	25%	25%	0.0%	50%	100%

Lawyer	0	1	0	0	3	4
	0.0%	25%	0.0%	0.0%	75%	100%
Labourer	0	1	3	1	5	10
	0.0%	10%	30%	10%	50%	100%
Business men	3	3	14	12	12	44
	6.8%	6.8%	31.8%	27.3%	27.3%	100%
Others (professions) e.g., employees like patwari, clerk, mechanic, plumber, driver etc.	0	5	18	14	15	52
	0.0%	9.6%	34.6%	26.9%	28.8%	100%
Total	3	16	45	35	51	150
	2%	10.7%	30%	23.3%	34%	100%

Table 6 shows that the majority of the parents (57.7%) reported to have strict or highly strict control over their parents. Among them 76% of fathers who were teachers, 75% of fathers who were lawyer, 60% of fathers who were labourer, 54.6% of fathers who were business men, 55.7% of fathers of other professions and 50% of fathers who were engineers, reported to have strict or highly strict control over their children. While 36.4% of fathers who were doctor reported to have moderate or strict control. The trend showed that teaches and engineers use strict and highly strict control while doctors used less strict control; mostly the parents who had more public dealing professions tend towards the strict and highly strict level of parental control over their children.

Students' reported level of Attitude towards studies

The students' reported attitude level of HSSC students towards studies was analysed on the basis of mean score according to the following criteria:
1= very low = > 2.5, 2= low =2.5-3, 3= average = 3.01-3.5, 4= high = 3.51- 4, 5= very high=4.01-5

Table 7

Secondary level students' reported attitude towards studies

Attitude Levels	Range	Frequency	Percent	X	SD
Very low	>2.5	2	1.3%		
Low	2.5- 3	22	14.7%		
Average	3.01 – 3.5	45	30%	3.66	1.09
High	3.51- 4	37	24.7%		
Very high	4.01- 5	44	29.3%		
Total		150	100%		

Table 7 showed that 54% students with a favouring mean score of 3.66 and SD= 1.09 had very high and high level attitudes toward studies, whereas

30% of the students had average leveattitudes toward studies, 15% students' had low-level attitudes toward studies, and 1.3% students had a very low level attitude towards studies. The trend showed that the majority of the students' possessed average, high, and very high levels of attitude towards their studies.

Table 8

Gender wise analysis of students' attitude towards studies

Gender	Very low	Low	Moderate	High	Very high	Total
Male	2	9	20	21	24	76
	2.6%	11.8%	26.3%	27.6%	31.6%	100%
Female	0	13	25	16	20	74
	0.0%	17.6%	33.8%	21.6%	27%	100%
Total	2	22	45	37	44	150
	1.3%	14.7%	30%	24.7%	29.3%	100%

Table 8 showed that 48.6% of female and 59.2% of male students had very high-level attitude towards studies, 33.8% female and 26.3% male students had moderate-level attitude towards studies whereas 22% of female and 28% male students had high level attitude towards studies. 18% female and 12% male students had very low-level attitude towards studies. The trend showed that male students had a high and very high-level attitude towards studies as compare to female.

Table 9

Locality wise analysis of students' attitude towards studies

Locality	Very low	Low	Moderate	High	Very high	total
Rural	0	12	11	12	7	42
	0.0%	28.6%	26.2%	28.6%	16.7%	100%
Urban	2	10	34	25	37	108
	1.9%	9.3%	31.5%	23.1%	34.3%	100%
Total	2	22	45	37	44	150
	1.3%	14.7%	30%	24.7%	29.3%	100%

Table 9 showed that 57.4% students in urban areas and 45.3% students of rural areas have high and very high-level attitude towards studies whereas 31.5% students of urban areas and 26.2% students of rural areas, had moderate level attitude towards studies; 11.2% students, of urban areas and 28.6% students of rural areas have low level and very low-level attitude

towards studies. The trend showed that the level of students' attitude towards the studies tend towards high and very high level in urban areas as compared to students of rural areas.

The data analysis through ANOVA for students' attitudes towards studies with respect to parental control levels is as follows:

Table 10
ANOVA among parents' parental control levels and students' attitude towards studies

Parental control	Mean	Std. Deviation	F	df	p-value
Lassiez Fair	32.00	12.28			
Less control	33.31	6.17			
Moderate	35.31	5.30	5.360	149	.000
Strict	35.22	6.70			
Highly strict	39.50	6.01			

The table 10 shows the comparison of all the levels of parental control with students' attitude towards studies. F value = 5.360 is significant at p-value was .000 < 0.05, showed that there was significant difference among parents having different level of attitude with respect to parental control level. To find out the difference of parental control levels and attitude towards studies post hoc test was applied and significant results are presented in the next table.

Table 11
Post hoc test

(I) Status parent	(J)Levels of parental control	Mean Difference (I-J)	Std. Error	Sig.
Less control	highly strict	-6.19730*	1.75577	.005
Moderate	highly strict	-4.19869*	1.25320	.009
Strict	highly strict	-4.28123*	1.34495	.015

* The mean difference is significant at the 0.05 level.

This table 11 shows that the attitude towards studies of students of parents having highly strict control was better than students of parents having less control. Similarly, attitude of students of parents having highly strict control were better than students of parents having moderate control. Attitude of students of parents having highly strict control were better than students of parents having strict control. This showed the trend that as the level of parental control increases towards highly strict; the level of the attitude of the students also increases.

Table 12

Relationship between parental control and students' attitude towards studies

S#	Statement	Mean	SD	N	Pearson correlation 'r'	Sig. p-value
1	Parental control	100.58	16.15	150	0.352	.000
2	Students' attitude towards studies	36.44	6.47			

Table 12 shows that Pearson correlation 'r' value was 0.352, and p- value 0.000<0.05, it shows that there was a significant positive and moderate relationship between parental control and students' attitude towards studies.

Table 13

Factor wise relationship between parental control and students' attitude towards studies

S#	Statement	Mean	SD	N	Pearson 'r'	Sig. p-value
1	Parents' Psychological control	14.29	4.07	150	0.363	.000
	Students' attitude towards studies	36.44	6.47			
2	Parents' emotional control	21.97	4.71	150	0.334	.000
	Students' attitude towards studies	36.44	6.47			
3	Parents' social control	22.15	4.29	150	0.199	0.015
	Students' attitude towards studies	36.44	6.47			
4	Parents' behavioural control	18.58	4.00	150	0.202	0.013
	Students' attitude towards studies	36.44	6.47			
5	Parents' motivational control	23.57	4.13	150	0.326	0.000
	Students' attitude towards studies	36.44	6.47			

Table 13 shows Factor wise relationship between parental control and students' attitude towards studies. Here Pearson correlation 'r' value was 0.321, and p-value 0.000<0.05, it shows that there was a significant positive and moderate relationship between parents' psychological control and students' attitude towards studies. Similarly, Pearson correlation 'r' value 0.334, and p-value 0.000<0.05, shows that there was a significant positive and moderate relationship between parents' emotional control and students' attitude towards studies. Moreover, Pearson correlation 'r' value 0.326, and p-value 0.000<0.05, shows that there was a significant positive and moderate relationship between parents' motivational control and students' attitude towards studies. But Pearson correlation 'r' value 0.199, and p- value 0.015<0.05, shows that there was a significant positive and weak relationship between parents' social control and students' attitude towards studies. Likewise, Pearson correlation 'r' value was 0.202, and p- value 0.013<0.05, shows that there was a significant positive and weak relationship between parents' behavioural control and students' attitude towards studies.

Conclusions and Discussion

The conclusion drawn from the findings was as follow:

1. The majority (57.3%) of parents of the secondary level students of public sector schools reported that they had strict control over their children in the aspects of parental control such as: psychological, emotional, social, behavioral, and motivational controls. Parents of the students living in urban areas reported using strict and highly strict control as compared with the parents of the students living in rural areas. Both fathers and mothers reported use of strict and highly strict control on their children but mothers use stricter and highly strict control over their children as compared to fathers. Similarly, Gugliandolo, et al., (2019) found that mothers are more authoritative than fathers which means mothers are stricter to their children. Similarly, according to Shek, (2005) that in Hong Kong there are strict mother, kind father" in contemporary practices.
2. As the level of education of the father increases, they tend towards strict and highly strict control. Similar findings are of Shek, (2005) that a parental educational level is positively related to perceived parental control processes. Mostly, the parents who have more public dealing professions (such as teachers and engineers) tend towards the strict and highly strict level of parental control over their children while doctors reported using less strict control over their children.
3. The majority of the students (84%) possess average, high, and very high level of attitude towards their studies. Students of urban areas have

better high and very high level attitude towards the studies as compared to students of rural areas. In particular, 59% male students reported having high and very high level attitude towards studies as compared to female students (48.6%). This conclusion is in line with findings of Verešováa, and Maláa, (2016) about study, learning environment, parents' pressure, thinking & classroom activities that girls have better attitude towards school learning possibly due to the less outside activities like boys.

4. There was a significant difference among students having different level of attitude towards studies with respect to parental control level; as the level of parental control incases towards highly strict; the level of the attitude of the students towards studies also increases. Moreover, attitude of students of parents having highly strict control were better than students of parents having strict control and attitude towards studies of students of parents having highly strict control was better than students of parents having moderate and less control. It is in line with the description of Ceka, and Murati (2016) that parenting is reflected in children through his/ her attitudes and thoughts.
5. There was a significant positive and moderate relationship between parental control and students' attitude towards studies. When we see factor-wise relationship, a significant positive and moderate relationship was found between the factors i.e., parents' psychological control, emotional control and motivational control and students' attitude towards studies. But the factors i.e., parents' social and behavioural controls have significant positive and weak relationships with students' attitude towards studies. Desforges and Abouchaar (2003) study favors this result; according to them if the parents are fully involved in their children's studies, then they may be able to lead the attitude of their children towards studies.

Recommendations

It is recommended that regular parent teacher meetings may be organized with the Head teacher so that parents may become aware of their children's attitude towards studies and may be able to advise on control strategies.

In contrast to the situation in Pakistan Rudy, and Grusec, (2006) described that, from a USA perspective, the authoritative style (strict control) of parents migrated from Muslim countries was harmful to the children's self-esteem and instead of favouring the use of authoritative parenting style, parents should be moderate; further Park, Kim, Chiang and Ju, (2010) described that to become autonomous children should be made achievement oriented and self-controlled.

References

Adamma, O. N., Ekwutosim, O. P., Unamba, E. C. (2018). Influence of Extrinsic and Intrinsic Motivation on Pupils Academic Performance in Mathematics. *Supremum Journal of Mathematics Education, 2* (2). DOI: https://doi.org/10.5281/zenodo.1405857

Agabrian, M. (2007). Relationships between School and Family the Adolescents' Perspective. *Forum: Qualitative Social Research, 8, Art. 20.* Retrieved from, http://nbn-resolving.de/urn:nbn:de:0114-fqs0701208 www.scirp.org.

ASER-Pakistan (2010). *Education Survey*. http://safedafed. Org/aser/document/aser/2011/

Barber, B. (2002). Reintroducing parental psychological control. in Intrusive Parenting: How Psychological Control Affects Children and Adolescents, ed. B. K. Barber. *American Psychological Association, 3* (3). doi: 10.1037/10422-001

Barber, B. K., & Harmon, E. L. (2002). Violating the self: Parental psychological control of children and adolescents. In B. K. Barber (Ed.), Intrusive parenting: How psychological control affects children and adolescents (pp. 15–52). *Journals of Washington*, DC: APA. Retrieved from, selfdeterminationtheory.org

Broussard, S. C. & Garrison, M. E. B. (2004). The relationship between classroom motivation and academic achievement in elementary school-aged children. *Family and Consumer Sciences Research Journal, 33*(2), 106–120. Retrieved from, www.oalib.com/references.

Bryan, J. B. (2005). Fostering educational resilience and achievement in urban schools through school-family-community partnerships. *Professional School of Counseling, 8*, 219 227. Retrieved from, www.ijhssnet.com.

Ceka, A., & Murati, R. (2016). The Role of Parents in the Education of Children. *Journal of Education and Practice, 7* (5). Retrieved from https://files.eric.ed.gov/fulltext/EJ1092391.pdf

Denga, D. I., & Denga, H. M. (2007). *Child parenting in developing nations Challenges.* Retrieved from, apjeas.apjmr.com

Desforges, P.C., & Abouchaar, A. (2003). *The impact of parental involvement, parental support and family education on pupil achievement and adjustment: a literature review.* Queen's Printer 2003 ISBN 1 84185 999 0 June 2003. Retrieved from, library.bsl.org.au

Eshghinejad, S. (2016). Retracted Article: EFL students' attitudes toward learning English language: The case study of Kashan University students. *Cogent Education, 3* (1). https://doi.org/10.1080/2331186X.2016.1236434

Fredrickson, B. L. (2001). *Cultivating positive emotions to optimize health and well-being. Prevention and Treatment*. Retrieved from, http://www.journals.apa.org

Gugliandolo, M. C., Costa, S., Cuzzocrea, F., & Larcan, R. (2019). Parenting styles and psychological control: similarities and differences between mothers and fathers of school-age children. *Journal of Clinical and Developmental Psychology, 1*(3). DOI: https://doi.org/10.6092/2612-4033/0110-2159

Gurland, S. T., & Grolnick, W. S. (2005). Perceived Threat, controlling parenting and children's achievement orientations. *Motivation and Emotion, 29* (2), DOI: 10.1007/s11031-005-7956-2

Hart, S. A., Ganley, C. M., Purpura, D. J. (2016) Understanding the Home Math Environment and Its Role in Predicting Parent Report of Children's Math Skills. *PLoS ONE 11*(12): e0168227. https://doi.org/10.1371/journal.pone.0168227

Heckhausen, J. (2015). Control Behavior: Psychological Perspectives. *International Encyclopedia of the Social & Behavioral Sciences* (2nd Ed.). https://doi.org/10.1016/B978-0-08-097086-8.26012-1

Hill, N. E., & Craft, S. A. (2003). Parent–school involvement and school performance: Mediated pathways among socioeconomically comparable African American and Euro-American families. *Journal of Educational Psychology, 95*, 74–83. Retrieved from, www.apa.org

Inam, A., Nomaan, S., & Abiodullah, M. (2016). Parents' Parenting Styles and Academic Achievement of Underachievers and High Achievers at Middle School Level. *Bulletin of Education and Research, 38* (1), pp. 57-74. Retrieved from pu.edu.pk/images/journal/.../5

Jason, C. (2012). *Social Control. Oxford Bibliographies*. doi:10.1093/OBO/9780199756384-0048

Landau, Kay & Whitson. (2015). Compensatory Control and the Appeal of a Structured World. *Psychological Bulletin, 141* (3), p. 695. DOI: 10.1037/a0038703

Nye, C., Turner, H. M. & Schwartz, J. B. (2006). *Approaches to Parental Involvement for Improving the Academic Performance of Elementary School Age Children. University of Central Florida Center for Autism and Related Disabilities*. https://doi.org/10.4073/csr.2006.4

Pakistan Bureau of Statistics (2020). Statistical Tables PSLM 2019-20. https://www.pbs.gov.pk/content/statistical-tables-pslm-2019-20

Park, Y. S., Kim, B. S. K., Chiang, J., & Ju, C. M. (2010). Acculturation, enculturation, parental adherence to Asian cultural values, parenting styles, and family conflict among Asian American college students. *Asian American Journal of Psychology, 1* (1), 67–79. Retrieved from, citeseerx.ist.psu.edu

Pekrun, K., & Schutz, P. A. (2007). Where do we go from here? Implications and future directions for inquiry on emotions in education, in Schutz, A. & Pekrun, R. (Eds,), *Emotion in education* (pp, 303-321). San Diego: Academic Press. Retrieved from, kops.uni-konstanz.de

Robbins, Oh, Le, & Button (2009). Intervention Effects on College Performance and Retention as Mediated by Motivational, Emotional, and Social Control Factors: Integrated Meta-Analytic Path Analysis. *Journal of Applied Psychology, 94* (5), 1163-1184. DOI: 10.1037/a0015738

Ross, R. J. Elliott. W. P., & Seidel. D. J. (2002). *Lower tropospheric humidity-temperature relationships in radiosonde observations and atmospheric general circulation models*. Retrieved from, https://books.google.com.pk

Rudy, D., & Grusec, J. E. (2006). Authoritarian Parenting in Individualist and Collectivist Groups: Associations with Maternal Emotion and Cognition and Children's Self-Esteem. *Journal of Family Psychology, 20* (1). DOI: 10.1037/0893-3200.20.1.68

Ryan, R.M., & Deci, E.L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology 25*, 54–67. doi:10.1006/ceps.1999.1020

Shek, D. T. L. (2005). Perceived Parental Control and Parent–Child Relational Qualities in Chinese Adolescents in Hong Kong. *Sex Roles, 53* (9/10). DOI: 10.1007/s11199-005-7730-7

Tuckerman, B. (2003). The effect of learning and motivation strategies training on college students' achievement. *Journal of College Student Development, 44* (3), pp. 430-437. Retrieved from, d32ogoqmya1dw8.cloudfront.net/files

Verešováa, M., & Maláa, D. (2016). *Attitude toward School and Learning and Academic Achievement of Adolescents*. Proceedings of 7th International Conference on Education and Educational Psychology. http://dx.doi.org/10.15405/epsbs.2016.11.90

Watson, G. C., Sifers, S. K., Houlihan, D. (2013). Parental Behavioral Control as a Moderator between Close Friend Support and Conduct Problems. *Journal of Child Adolescent Behavior 1*(105). doi:10.4172/2375-4494.1000105

Wilson, K. S., Spink, K. S., & Priebe, C. S. (2010). Parental social control in reaction to a hypothetical lapse in their child's activity: The role of parental activity and importance. *Psychology of Sport and Exercise, 11* (3), 231-237. https://doi.org/10.1016/j.psychsport.2010.01.003

Wu, F., & Qi, S. (2006). Longitudinal Effects of Parenting on Children's Academic Achievement in African American Families. *The Journal of Negro Education, 75* (3). https://www.jstor.org/stable/40026812

Journal of Contemporary Teacher Education
Volume: 6, 2022, 87–100

Exploring the Teacher Empowerment Strategies of School Heads at Secondary Level in Punjab, Pakistan

Zara Khan[*]
Samra Saeed[**]
Afshan Naseem[***]

Abstract

Teacher empowerment strategies are essential for a positive organizational identity. School heads are expected to use a variety of empowerment techniques to maximize the potential of their faculty members, inspire them in various ways, and motivate them to work. The current study intends to investigate the teacher empowerment strategies of secondary school heads in Punjab, Pakistan. A study was based on a qualitative research design. The semi-structured interview protocol was used to collect data. A purposive sampling technique was used. The sample was comprised of 57 secondary school teachers. Data were analyzed through the thematic analysis technique. The findings show that school heads have given their staff members greater autonomy by fostering opportunities for group decision-making, praising employees for good work, increasing self-efficacy, and promoting effective teacher collaboration. However, school heads have less focus on professional growth opportunities, supporting teachers' autonomy, and improving their status.

Keywords: Teacher Empowerment Strategies, School Heads, Secondary Level

[*] Ph.D. scholar, Institute of Education and Research, University of the Punjab, Lahore. zarakhan022011@hotmail.com
[**] Ph.D. scholar, Institute of Education and Research, University of the Punjab, Lahore. dr.samrasaeed.edu@leads.edu.pk
[***] Assistant Professor, University of Management and Technology, Lahore. afshan.naseem@umt.edu.pk

Introduction

The school leader has a great influence on the teacher empowerment process. Empowered teachers follow their leaders' behavior and internalize their responsibilities (Ganiban, Belecina, & Ocampo, 2019). School heads have the responsibility of empowering teachers in educational systems (Vrhovnik, Maric, Znidarsic, & Jordan, 2018). As stated by Harpell and Andrews (2010) school heads that are cognizant of this, realize that empowering individuals has an impact on the entire organization. As, empowered teachers exchange their information, talents, prospects, and visions with others. This condition ensures the improvement of the organization (Alosaimi, 2016; Ledesma & Lalaine, 2015; Longwell-McKean, 2012).

A study conducted by Wall (2012) shows that the effective use of leadership by school heads can enhance teachers' empowerment. The combined efforts of teachers are seen to have a direct impact on improved student achievement. As a result, teachers' job is vital for both schools and society as a whole. Similarly, Bogler and Nir (2012) stated that a supportive school environment and empowered teachers are possible solutions for problems related to educational effectiveness.

However, teacher empowerment is a topic that gets a lot of attention in the field of teacher education. Significant improvements in one's professional abilities, increasing independence, and participation in decision-making processes are all components of empowerment (Bogler & Nir, 2012). As stated by Kimwarey, Chirure, and Omondi (2014) an empowered person has the skills and information necessary to act or progress constructively. Teachers become more capable and learn about their weaknesses and skills as a result of being empowered. Teacher empowerment is linked to educational motivation. It provides teachers with information about themselves and their co-workers so that they can work together to improve student performance (Dee, Henkin, & Duemer, 2002).

Moreover, empowered teachers have faith in themselves and their abilities, are aware of the system, commit time and energy to their profession, and treat others with respect (Irwin, 1996). After reviewing the studies on teacher empowerment, it is found that school heads use empowerment strategies such as rewarding, assisting teachers, communicating, fostering an environment where decisions are made, and building trust (AvidovUngar & Arviv-Elyashiv, 2018; Celik & Konan, 2020; Cetin & Kiral, 2018; Ganiban et al., 2019; Kiral, 2015; Konan & Celik, 2017).

Literature Review

A study by Cheong, Yammarino, Dionne, Spain and Tsai (2019) indicated rewarding is one of the most useful empowerment strategies. It has been demonstrated that rewarding employees through a variety of methods boost their motivation, desire, and success (Maslow, 1943). School heads try to motivate their staff members by rewarding them financially, physically, or psychologically to get the efficiency they want from them (McGregor, 1966). Rewarding teachers' efforts in classroom management are boosted, helping the school to achieve objectives, and developing an effective school climate and culture (Rangel, Suskavcevic, Kapral, & Dominey, 2020; Yunus, Sukarno, & Rosyadi, 2021).

Another useful strategy is teachers' involvement in educational decisions such as program development, and assessment of learner accomplishment. Allowing teachers complete participation in critical decisions has an impact on the quality of their work (Short, 1997). Therefore, their opinions are heard in several professional settings. Kiral (2015) stated that the participation of teachers in organizational decision-making is crucial for the administration's smooth operation.

Are several expectations supporting employees' involvement in decision-making processes? Kang, Park, and Sorensen (2021) suggest that internal teacher motivation may result from the school head informing teachers about the situation at the school or from setting up internal problem-solving groups and involving teachers in the decision-making process. The goal of teacher empowerment is to give educators more power and responsibility in their subject areas (as cited in Acaray, 2010).

Additionally, when teachers participate in decision-making, their problem-solving abilities improve, which benefits the entire school and strengthens their sense of commitment to the whole organization (Dee, Henkin, & Duemer, 2002; Devos, Tuytens, & Halpin, 2014; Moran, 2015). Therefore, giving teachers the power to make decisions is an essential element of teacher empowerment. Conversely, to prevent it from becoming the privilege of a small number of teachers, school heads should establish clear and well-understood teacher participation criteria (Celik, & Kiral, 2022).

Furthermore, school administrators must support teachers' professional development initiatives (Rangel, Short, Short, & Eckley, 2020). The key to supporting teachers is to give them opportunities for professional growth, assist them in resolving issues at the school, have an open-door policy, be reachable by phone, and make sure that they know the school head is always there for them. Teachers' internalization of their profession will grow as

long as they behave in this way, which will strengthen their commitment to their organizations (Kiral, 2020).

Heads support teachers by fostering their professional development, offering resources, assisting with problem-solving, and encouraging personal growth. Creating opportunities is fundamental to teacher empowerment (Yunus et al., 2021). It will be easier for students to acquire the knowledge and abilities they need to have as long as teachers continue to advance in their profession, which will be to the benefit of both the students and the student's learning. The head of the schools will also be able to accomplish their objectives considerably more quickly (Celik, & Kiral, 2022).

Another key element in the empowerment process is teacher status. The status of teachers has an impact on their intellectual capabilities, as well as their prestige at school and in the community. It also relates to their points of view that they are professionally respected by other teachers in the school because of their knowledge and abilities (Klecker & Loadman, 1998; Short, 1997). Teachers desire to be treated as professionals. They keep control over their teaching methods (Maeroff, 1988). As a result, Rinehart et al. (1986) recommend that school head empower their teachers to support or facilitate their work.

Additionally, teacher autonomy is also considered an important factor in empowerment. Teacher autonomy refers to their ability to make decisions about time, lessons, books, and teaching plans (Klecker & Loadman, 1998). Teachers have more autonomy over their job, this gives them the freedom to make their own choices and take more chances (Short, 1997). According to Short and Greer (1997) in this approach providing a supportive environment helps to boost teachers' autonomy.

Teachers, who are more self-sufficient like to attempt new things in their classrooms, take risks, assist students, and learn new things. In this method, allowing teachers to participate more in new initiatives and responsibilities can promote teacher autonomy (Bayer, Ozcan & Yildiz, 2017). It has a positive impact on student learning when teachers are confident in their abilities. Teachers' feelings of competence are thought to be influenced by empowering them. However, school heads can improve teachers' abilities by simply praising them and acknowledging their student progress, thereby praising teachers who have helped students in achieving their goals (Kimwarey et al., 2014).

Establishing a relationship of mutual trust between the head of the school and the teachers is another strategy for empowering teachers (Kimwarey et al., 2014). Similarly, trustworthiness and communication play also an important role to empower teachers. Communication makes the structure of the school dynamic by facilitating the growth and maintenance of

relationships between the stakeholders inside and outside the school (Celik & Kiral, 2022). Teachers should be organized and free to express themselves at any moment, and school heads should be aware of the favorable organizational atmosphere (Rangel et al., 2020; Yunus et al., 2021).

Although, according to Wall (2012) the administrator has the authority to establish a vision for the teachers, foster relationships through communication, and improve a team environment, all the while enabling everyone to grow in responsibility and effectiveness and to discover hidden talents. When teachers feel empowered and involved in the decision-making process, they will act to change and have an impact on classroom instruction and school.

Most of the quantitative studies are found in the literature on teacher empowerment (Avidov-Ungar & Arviv-Elyashiv, 2018; Celik & Konan, 2020; Ganiban et al., 2019; Kiral, 2015; Kiral, 2020; Melenyzer, 1990, Short, 1992; Wilcoxen et al., 2019). However, limited studies conducted on teacher empowerment by using qualitative research design in the literature (Cetin & Kiral, 2018; Yin, 2018).

Therefore, it is anticipated that the present study will help school heads in the teacher empowerment process and give a profound viewpoint to the literature. Sometimes teacher empowerment strategies can't be put into practice because of legal restrictions or other issues (Celik, & Kiral, 2022). This study was conducted to determine the empowerment tactics used by secondary school heads in line with the views of teachers.

Objective

The objective of the current study was to identify the teacher empowerment strategies of school heads at the secondary level in Punjab, Pakistan.

Research Question

This study centered on the following research question:

What are the views of teachers about empowerment strategies that school heads implement?

Methodology

The present study was based on a qualitative research design. Researchers have used a semi-structured interview protocol. Secondary school teachers were purposively selected for the interview. Thematic analysis was used to

reach the results. Thematic analysis is utilized, following Clarke and Braun (2013), to identify themes that are noteworthy or important, such as data trends, and to apply these themes to address the research problem.

Population and Sampling

All the teachers at public secondary schools in Punjab's province were the study's target population. According to Census (2018) Punjab has 133260 secondary school teachers (67346 men and 65914 women). A purposive sampling technique was used. The sample size was comprised of 57 secondary school teachers (male & female). As suggested by Britten (1995) studies using individual interview often consists of 50 to 60 participants, so that researchers can manage the complexity of the analysis.

Interview Protocol

For a more in-depth study of the phenomenon, researchers have used a semi-structured interview protocol. The interview questions were formulated after consulting the relevant literature. To validate the interview protocol, researchers took the opinions of three experts on interview questions. Lastly, after receiving the feedback, the researchers formulated a revised form of the interview protocol. Each participant spent up to 30 minutes with the researchers answering open-ended questions in an interactive individual interview.

Data Collection

Researchers took formal permission from interviewees with interview questions after obtaining permission from the appropriate authorities. Additionally, participants were asked to choose a convenient time and date for the interview.

Results

Findings indicate the perceptions of teachers about the empowerment strategies used by the school head. The data were analyzed using the thematic analysis technique. The analysis reveals the empowerment strategies implemented by the school head also indicated some strategies that are not implemented. The results are discussed below:

Decision-Making Opportunities

In this regard, the majority of respondents (n = 39) stated that their school heads must involve teachers in meetings and prioritize teacher input for taking the decision, while some respondents (n = 6) indicate that their school head motivates teachers to participate in meetings and exchange ideas regarding decision-making, so they feel empowered. However, some of the respondents (n = 12) say their school head asks for their input, which makes them feel content. They also state that their head ensures the active involvement of teachers in the decision-making process. (Respondents 6 and11), answered that "The best way is to make decisions together, Otherwise, teachers would fail to naturalize these decisions, and a slew of problems will occur; therefore, teachers' perspectives must be preferred so that they can function at their best".

Professional Growth Opportunities

In this regard, the majority of respondents (n=47) have a negative perception of their school head empowering teachers through professional development opportunities. Respondents further elaborate that the education department is responsible for providing training sessions and refresher courses for teachers, while school heads do not have the authority to create professional growth opportunities for teachers at the school. Although some respondents (n = 10) indicate that the government provides training sessions and school heads allow their teachers to attend these sessions, these sessions are merely formalities. (Respondent 6), answered that "The government provides funds for teacher professional development, and the principal arranges workshops in the school". However, almost all the respondents expressed that there is a lack of professional development opportunities.

Communication and Trustworthiness

Regarding this area, the majority of respondents (n=37) think that school heads have worked to improve teachers' communication, make the school more attractive to the workplace, and encourage trust-based relationships. They further say that their school heads communicate the school mission with teachers and students. The mission of the school is discussed in meetings, assemblies, and on the bulletin board. According to some respondents (n = 20), school heads organize social activities to increase communication and trust among teachers, and social attractiveness at school. However, all of the respondents agree that communication is a key aspect of teacher empowerment, (Respondent 10) answered that "To accomplish the school's goal, the heads of the schools interact formally or

informally with teachers and students to share ideas, experiences, and significant information".

Acknowledgment

In this regard, the majority of respondents (n = 30) have a favorable opinion. According to respondents, the head of their school awards certificates to teachers for outstanding performance and also encourages underperforming teachers to improve their performance. While some respondents (n = 19) say that in staff meetings and assemblies, school heads orally recognize and acknowledge teachers for their good work. (Respondent 5), answered that "through clap in assemblies show appreciation for teachers." However, just a handful of respondents (n = 8) said that the school head holds an annual award ceremony to recognize teachers for their excellent work. (Respondent 15), say that "teachers are recognized annually with an award and a certificate of appreciation," although some respondents (n = 17) indicate that school heads recognize teachers in their classrooms to keep them motivated.

Increase Self-Efficacy

In this regard, the majority of respondents (n = 37) have a perception that their school head recognizes teachers by honoring them in staff meetings for their students' achievement which increase the self-efficacy of teachers. In addition, respondents state that after analyzing students' performance, the head expresses gratitude to the teacher in front of their students. While other respondents (n = 20) say their head constantly encourages them to keep up the excellent job by recognizing their abilities and providing positive feedback. (Respondents 22 and 24), answered, "that the principal's encouragement boosts teacher confidence and makes them more competent".

Teachers' Status and Autonomy

The status and autonomy of teachers refer to their sense of professional respect and independence. In this regard, the majority of respondents (n = 49) indicates that their head does not fully support them when they have problem with the student. Lack of support by the school head has a bad impact on teacher status. (Respondent 7), said that "Teachers struggle to follow policy (Maar Nahi Pyaar) because they are aware of the realities at their school". Respondents indicate that teachers are obligated to rigorously obey the rules, and they are unable to act on their own. According to the responses, the government sets limits through rules and teachers must obey them. However, a small number of respondents (n=8) believe that their

school's head tries to promote teachers' prestige and autonomy by protecting them when they have conflicts with parents or students.

Discussion

The findings of this study explore the empowerment strategies used by secondary school heads in Punjab, Pakistan. The majority of respondents claim that their heads ask their opinions in the decision-making process. This is one of the key elements of the teacher empowerment process. Balyer et al. (2017) indicate that involving teachers in decision-making had a great influence in empowering them. Teachers' empowerment can be achieved through their involvement in decision-making (In'am, 2015). Similarly, Kimwarey et al., (2014) indicated that participating in group decision-making processes can also help teachers improve their problem-solving skills. Furthermore, in the current study, most respondents hold a negative view of their school heads empowering teachers through professional development opportunities. Respondents stated that their school heads do not have the right to provide school teachers with professional growth opportunities, however training sessions and refresher courses are provided by the education department, but these sessions are merely formalities. As stated by Kimwarey et al. (2014) a significant aspect of teachers' empowerment is to develop their professional competence.

Conversely, regarding communication and trustworthiness, the majority of respondents believe that the school head has worked hard to make the school a more attractive place to work, to promote trust-based relationships, and to improve communication to empower teachers. Respondents elaborate that their school heads communicate the school mission with school members in different ways to build an effective school environment.

However, respondents hold a positive opinion about rewarding and praising by school heads. When it comes to empowering teachers by acknowledging their good performance and increasing self-efficacy among teachers, almost all respondents stated that their school heads issued certificates in recognition of their best performance also encourages underperforming teachers to improve their performance. Increase self-efficacy by constantly encouraging teachers to keep up the excellent job by recognizing their abilities and providing positive feedback.

Further, the majority of respondents held an unfavorable opinion of enhancing teachers' status and autonomy in the empowerment process. They emphasize that the student-centered system has a poor influence on the status of teachers. Respondents also added that teachers are obligated to

rigorously obey the rules, and they are unable to act on their own. School heads need to trust that their teachers will complete the necessary tasks for students to achieve greater success.

Conclusion

The current study's findings determine that the school heads use empowerment strategies and play an important role in empowering teachers at the secondary level in Punjab, Pakistan. The results show that school heads empower their teachers by allowing for joint decision-making, recognizing teachers' good performance, increasing teachers' self-efficacy by recognizing their abilities, providing positive feedback, and fostering good communication among teachers.

However, it is also identified that school heads have less focus on professional growth opportunities which is one of the key elements of teacher empowerment. The current study also indicates that the status and autonomy need to be improved to empower teachers at the secondary level.

References

Acaray, T. (2010). The teacher empowerment patterns of principals in the public schools of central districts in Ankara province (Unpublished Master Thesis). Ankara University, Ankara.

Alosaimi, M. D. (2016). The role of knowledge management approaches for enhancing and supporting education (Unpublished Doctoral Dissertation). University Paris 1, Pantheon-Sorbonne, Paris.

Avidov-Ungar, O., & Arviv-Elyashiv, R. (2018). Teacher perceptions of empowerment and promotion during reforms. International Journal of Educational Management, 32(1), 155-170.

Balyer, A., Ozcan, K., & Yildiz, A. (2017). Teacher empowerment: School administrators' roles. Eurasian Journal of Educational Research, 17(70), 1-18.

Bogler, R.., & Nir, A. E. (2012). The importance of teachers perceived organizational support to job satisfaction: What's empowerment got to do with it? Journal of Educational Administration, 50(3), 287-306.

Britten, N. (1995). Qualitative research: qualitative interviews in medical research. Bmj, 311(6999), 251-253.

Celik, O. T., & Konan, N. (2020). The relationship between school principals' empowering leadership with teachers' self-efficacy and organizational citizenship behaviors. Education & Science/Egitim ve Bilim, 46(206), 1-21.

Cetin, M., & Kiral, B. (2018). Opinions of teachers and administrators related to teacher empowerment of school administrators. Mediterranean Journal of Educational Research, 12(26), 281–310.

Cheong, M., Yammarino, F. J., Dionne, S. D., Spain, S. M., & Tsai, C. Y. (2019). A review of the effectiveness of empowering leadership. The Leadership Quarterly, 30(1), 34-58.

Clarke, V., & Braun, V. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. The Psychologist, 26(2), 120-123.

Dee, J. R., Henkin, A. B., & Duemer, L. (2002). Structural antecedents and psychological correlates of teacher empowerment. Journal of Educational Administration, 34(3), 257-277.

Devos, G., Tuytens, M., & Hulpia, H. (2014). Teachers' organizational commitment: Examining the mediating effects of distributed leadership. American Journal of Education, 120(2), 205-231.

Ganiban, R., Belecina, R. R., & Ocampo, J. M. (2019). Antecedents of teacher empowerment. International Journal for Educational Studies, 11(2), 89-108.

Harpell, J. V., & Andrews, J. J. W. (2010). Administrative leadership in the age of inclusion: Promoting best practices and teacher empowerment. Journal of Educational Thought, 44, 189-210.

In'am, A. (2015). Mathematics teachers' response towards teacher empowerment at junior high school in Indonesia, American Journal of Educational Research, 3(4), 439-445.

Irwin, J. W. (1996). Empowering ourselves and transforming schools: Educators making a difference. Albany, N.Y: State University of New York Press.

Kang, M. M., Park, S., & Sorensen, L. C. (2021). Empowering the frontline: Internal and external organizational antecedents of teacher empowerment. Public Management Review, 24(11), 1-22.

Kimwarey, M. C., Chirure, H. N., & Omondi, M. (2014). Teacher empowerment in education practice: Strategies, constraints, and suggestions. Journal of Research & Method in Education, 4(2), 51-56.

Kiral, B. (2015). The relationship between teacher empowerment of high school administrators and cynicism behaviors of teachers (Doctoral Dissertation). Ankara University, Ankara. Retrieved from https://files.eric.ed.gov/fulltext/EJ1244261.pdf

Kiral, B. (2020). The relationship between the empowerment of teachers by school administrators and organizational commitments of teachers. International Online Journal of Education and Teaching, 7(1), 248-265.

Kiral, E. (2015). A decision in management and ethical decision-making is problematic. Adnan Menderes University Faculty of Education Journal of Educational Sciences, 6(2), 73-89.

Klecker, B. J., & Loadman, W. E. (1998). Defining and measuring the dimensions of teacher empowerment in restructuring public schools. Education, 118, 358- 370.

Konan, N., & Celik, O. T. (2017). Okul mudurlerinin guclendirici liderligine iliskin ogretmen algisi. Bartin University Faculty of Education Journal, 6(1), 322-335.

Ledesma, J. M., & Lalaine M. J. (2015). Filipino financial customers' views on customer empowerment. Report from the field.: Retrieved from. https://www.cgap.org/sites/default/files/Working-Paper-Filipino-Financial-Customers%27-View-on-CustomerEmpowerment-May-2015.pdf.

Longwell-McKean, P. C. (2012). Restructuring leadership for 21st-century schools: How transformational leadership and trust cultivate teacher

leadership (Unpublished Doctoral Dissertation). University of California, San Diego.

Maeroff, G. I. (1988). The empowerment of teachers. New York: Teachers College Press.

Maslow, A. H. (1943). A theory of human motivation. Psychological Review, 50(4), 370-396.

McGregor, D. (1966). Leadership and motivation. MIT. London, UK.

Melenyzer, B. J. (1990). Teacher empowerment: The discourse, meanings and social actions of teachers. Paper presented at The Annual Conference of the National Council of States on Inservice Education, Orlando, Florida. Retrieved from https://eric.ed.gov/?id=ED327496

Moran, K. A. (2015). Teacher empowerment: School administrators leading teachers to lead. (Unpublished Doctoral Dissertation). Youngstown State University.

Rangel, V. S., Suskavcevic, M., Kapral, A., & Dominey, W. (2020). Revalidation of the school participant empowerment scale amongst science and mathematics teachers. Educational Studies, 46(1), 117-134.

Rinehart, J. S., Short, P. M., Short, R. J., & Eckley, M. (1998). Teacher empowerment and principal leadership: Understanding the influence process. Educational Administration Quarterly, 34, 630-649.

Short, P. M. (1992). Dimensions of teacher empowerment. Eurasian Journal of Educational Research. Retrieved from https://files.eric.ed.gov/fulltext/ED368701.pdf

Short, P., & Greer, J. (1997). Leadership in empowered schools. Upper Saddle River, NewJersey: Prentice-Hall Inc.

Vrhovnik, T., Maric, M., Znidarsic, J., & Jordan, G. (2018). The influence of teachers' perceptions of school leaders' empowering behaviors on the dimensions of psychological empowerment. Organizacija, 51(2), 112-120.

Wall, L. A. (2012). An exploratory study of teacher empowerment and technical education in Kentucky (Doctoral dissertation). Western Kentucky University. Retrieved from https://digital commons. wku.edu/diss/38/

Wilcoxen, C., Bell, J., & Steiner, A. (2019). Empowerment through induction: Supporting the well-being of beginning teachers. International Journal of Mentoring and Coaching in Education, 9(1), 52-70.

Yin, J. (2018). Empowering teachers through core reflection: A case in Korea. Journal of Asia TEFL, 15(4), 1005-1020.

Yunus, M., Suakrno, S., & Rosyadi, K. I. (2021). Teacher empowerment strategy in improving the quality of education. International Journal of Social Science and Human Research, 4(1), 32-36

Journal of Contemporary Teacher Education
Volume: 6, 2022, 101–112

Investigating the Effects of Storytelling Method on Students' Memory at Primary Level in (KPK)

Fehmina Anjum*

Abstract

Methodology bears very concrete role-in the-teaching learning-process to convey any learning material, psychologists and educationists have recommended both cognitive and behavioral methods in this regard. Storytelling method is one of these methods being applied in the classroom teaching. Storytelling involves two-way encounters between a storyteller and one or more listeners. The answers of the listeners affect the plot. In reality, storytelling arises from the engagement and mutual, organized efforts of the storyteller and the audience. This study was aimed at investigating the method of increasing the memory of students of class 4th in the subject of English. Objectives of the study were: (i) to analyze the effectiveness of storytelling method of teaching, (ii) to find out the impact of storytelling method on the memory increase of students, (iii) to explore the motivational effects of storytelling method on students, (iv) to investigate the effects of storytelling method on reading fluency of students. The study population was all girls in Nowshera district primary schools. As a sample of the report, 40 grade 4 students from a Government Girls Primary School were taken. These students were divided into two classes, which were experimental and controlled by random pair sampling on the basis of pre-test and post-test. Pre-test and post-test were used as analysis tools; the data obtained was tabulated and analyzed using t-test and percentage in the light of the study objectives. The analysis of the collected data revealed the following findings. It was concluded from the results that Storytelling method had significant effect on students' achievement and the learner took interest in the learning. The result of the study showed that storytelling method had significant impact on memory increase of students. Hence it is recommended that teachers may teach elementary subjects through storytelling methods and Government should arrange teacher's refresher course for storytelling method. It is recommended

* MPhil scholar Northern University Nowshehra. Email: fanjum1989@gmail.com

that teachers should adopt the storytelling method while teaching at elementary level. It was concluded that storytelling method had significance motivational effect on students.

Keywords: Storytelling method, cognitive and behavioral methods, Elementary Level.

Introduction

Memory is the preservation of information over time. We would not be able to learn and establish languages, relationships, or personal information if we did not recall past events. Memory is a tool used in every aspect of our lives to help us work efficiently and effectively. This critical tool is defined as the capacity, also called "short-term memory" (Beer, Pisoni, Kronenberger & Geers 2010).

Both memory and learning are firmly allied. Learning would not be practical without memory. Memory keeps up data to prompt in the future (Alloway, 2011). Working memory limit, phonological preparing aptitudes and lexical capacities are intellectual parts that are vital for handling data in maximum phonological related exercises. Exploration of operational memory in kids with cochlear embed depicts the phonological stockpiling limit differs broadly (Lyxell et al., 2008).

Storytelling has been named the oldest and the newest of the arts. Storytelling tends to serve the same basic social and individual needs, although its function and conditions vary from century to century and from culture to culture (Greene & Del Negro, 2010).

This specific study deals with the form of storytelling for language learning. Storytellingstarts with the first description of the context of a word in the target language. It was achieved by giving the word, a translation, an image, and by teaching the word a gesture. (Pisoni & Cleary, 2003).

Related Research

According to a study conducted by Vaahtoranta, Lenhart, Suggate and Lenhard (2019) two classes separated the participants, but all students heard the same 24 stories. The first community had tales to tell them. Second community was listening to the tales as they were reading from the book. These findings depicted that community had gained benefits of these training. The story-telling community encountered greater understanding as shown by their retelling of stories.

According to Mello (2001) eight different studies of meta-analysis as it explores different uses of storytelling method and a pedagogic method. Her study comprised material from interviews with applicants before and after the meeting, student reproach, fluctuation measurements and student sample results. Studies have shown that participants' literacy has been improved in academic fields of fluency, vocabulary achievement, skills of writing and recollection. She also noticed that storytelling was used to enhance self-awareness, pictorial imagery and social awareness.

A human factor which arises of the teaching in storytelling has headed academics to recognize its social aspects. In Navajo community stories were used to create essential ideas and as a tool through which knowledge is transmitted from one generation to other generation. Eder interviewed David Martinez, a Navajo storyteller, as part of the report. He said that a Navajo person who knows stories, folk tales and ceremonies is considered a resource and a rich person in his community (Miller & Penncycuff, 2008).

Linse and Nunan (2005) said, it appears to be a pity deny students of occasion to hear true employments of past tense structures and differentiation with different tenses, in the important settings of stories, there is no inborn explanation behind assuming that utilization of past tense would forestall youngsters comprehend a story. Indeed, in their mother language they know about the stories; they will most likely but to listen to past tense structures and could misjudge the action words.

Statement of the Problem

Story telling method is one of the most significant methods at elementary level around the world, in the developed countries story telling method is used for the learner/learning to improve their social status in the society and under the umbrella of memorization. The world of imagination always lies on the individual's present and past memories, and in the past imagination in the present situation individual planned for future activities. In past researchers show that at early stage of learning storytelling method is always improved student memorization. Storytelling method also improves students in multi-dimensional direction, but the focus is memorization of the students. The aim of this study is to investigate the effects of the storytelling method on students' memory at the primary level in (KPK).

Objectives

The research study aimed:

- To analyze the usefulness of the teaching process of storytelling at primary level.
- To find out the effect of the storytelling process on the student memory increase.
- To explore the motivational impact of the storytelling process on students.
- To examine the effect of the storytelling approach on student fluency reading.

Hypotheses

The hypotheses were:

H_{01} There is no significant effect of storytelling method on student's achievement at elementary level.

H_{02} There is no significant impact of storytelling method on memory increase of students.

H_{03} There is no significant motivational effect of storytelling method on students.

H_{04} There is no major influence of the storytelling process on student fluency reading.

Method and Procedure

Population

Population of the study was comprised of all students of grade-IV of Government Girls Primary Schools, District Nowshera.

Sample

For the conduction of experiment, a sample of 40 students in Grade -IV of a Government Girls Primary School was taken. Forty students were divided into two groups each of 20 students; grouping was done by using paired random sampling technique.

Research Design

Pre-test and post-test equivalent group design was used to measure the effectiveness of treatment that involved two equivalent groups the following was the symbolic representation of research design (Farooq & Tabassum, 2017).

R_E = O_1	T	O_2
R_C = O_3		O_4
$dR_E = O_2 - O_1$		
$dR_c = O_4 - O_3$		
$D = d R_E - d R_C$		

Where:
R_E = Randomly Selected Experimental Group

R_C = Randomly Selected Control Group

O_1 & O_3 = Observation of pre test

O_2 & O_4 = Observation of Post-tests

T = Treatment

d = difference between mean scores of Pre-test and Post-test

Research Instrument
A test was developed for students at Government School. There were 30 items in the test. The test consists of multiple choices.

Observation Sheet
An observation sheet was also developed to observe motivational effect of storytelling method on students and conducted for three weeks.

Procedure

Lesson plans were developed from the lessons of textbook for control group and experimental group. Both groups have the same learning outcomes, but control group was taught through lecture/reading method, and experimental group was taught through storytelling method of teaching. Teacher conducted activities by using 4ps (preparation, presentation, practice, performance) setup. In first two days only warm up activities were conducted in order to motivate students because as we know that English is not the mother tongue of Pakistan. Duration of the class was forty minutes. The researcher manages to arrange the same environment of teaching for both the groups. Practically all causes, such as time duration, class timings, treatment length, course content, and teachers' qualification were the same. Both teachers have same designation PST at (Government Girls Primary School). Control group was taught for three days a week through reading method while the experimental group was taught for three days a week through storytelling method. Duration of treatment was three weeks.

Collection of Data

Data collection was done through pre-test and post-test from control and experimental group. An observation sheet was also developed to observe motivational effect of storytelling method on students and conducted for three weeks.

Data Analysis and Findings

Data obtained through pre-test and post-test were tabulated, analyzed and interpreted by applying t-test and percentage. Results obtained by statistical analysis were tested on 0.05 level of significance.

H_{01}. There is no significant effect of storytelling method on student's achievement at elementary level.

Table 1

Significant effect of storytelling method on student's achievement

Group	N	Mean	SD	V	df	t-value	Effect
Pre-test Experimental	20	9.75	2.42	5.88			
					19	8.09	Significant
Post-test Experimental	20	19.3	6.50	42.32			

Significance level = 0.05 Table Value = 2.093

Table 1 depicts that the calculated t-value 8.09 was greater than table value 2.093 which were significant at significance level (0.05); hence the null hypothesis is rejected. On the basis of pre-test and post-test results, mean and SD showed the significant difference between pre- test experimental and post-test experimental groups. The table value shows that the experiential learning is significantly better than traditional learning. It means that storytelling method has significant effect on students' academic achievement.

H_{02} There is no significant impact of storytelling method on memory increase of students.

Table 2
Significant impact of storytelling method on memory increase of students

Group	N	Mean	SD	V	df	t-value	Effect
Post-test Control	20	12.05	2.03	4.15	38	4.75	Significant
Post-test Experimental	20	19.3	6.50	42.32			

Significance level = 0.05 Table Value = 2.024

Table 2 indicates that the calculated t-value 4.75 was greater than table value 2.024 which were significant at significance level (0.05); hence the null hypothesis is rejected. The mean score in post-test in control group was 12.05 while the mean score in post-test in experimental group was 19.3. It means that there is significant difference between the achievements of Students who practice the storytelling method and traditional method. It means that storytelling method has significant impact on memory increase of students.

H_{03} There is no significant motivational effect of storytelling method on students.

Table 3
Significant motivational effect of storytelling method on student story 1

N	Participation		Performance		Improve-ment		Interest		Motivational	
	Score	%	Score	%	Score	%	Score	%	Score	%
20	21	52.5	17	85	13	65	15.5	77.5	66.5	66.5

Table 3 It is evident from the table that 52.5, 85, 65, 77.5, 66.5 showed that significant motivational effect on student in story 1 was found**.**

Table 4
Significant motivational effect of storytelling method on student story 2

N	Participation		Performance		Improve-ment		Interest		Motivational	
20	Score	%	Score	%	Score	%	Score	%	Score	%
	16.5	41.25	15.5	77.5	17	85	16	80	65	65

Table 4 indicates that though participation is below 50% but participation, improvement and interest is higher than 50%. It is evident from the table that 41.25, 77.5, 85, 80, 65 showed that significant motivational effect on student in story 2 was found**.**

Table 5
Significant motivational effect of storytelling method on student story 3

N	Participation		Performance		Improve-ment		Interest		Motivational	
20	Score	%	Score	%	Score	%	Score	%	Score	%
	20.5	51.25	18.5	92.5	17.5	87.5	16.5	82.5	73	73

In table 5 the performance scores 51.25, 92.5, 87.5, 82.5, 73 showed significant motivational effect on student in story 3.

H_{04} There is no significant effect of storytelling method on reading fluency of students.

Table 6
Significant effect of storytelling method on reading fluency of students

Group	N	Mean	SD	V	df	t-value	Effect
Pre-test Experimental	20	2.2	1.05	1.115	19	11.91	Significant
Post-test Experimental	20	4.3	0.86	0.747			

Significance level = 0.05 Table Value = 2.093

Table 6 reveals that calculated t-value 11.91was greater than table value 2.093 which were significant at significance level (0.05); hence the null hypothesis is rejected. It means that there is significant effect on reading

fluency of students. Following is the table of high achiever and low achiever in post experimental test.

Discussion

A research study was carried out to study the effect of the technique of narration on learner achievement and motivation in primary studies. Similarly, Nicholas, Rossiter and Abbott (2011) shows that storytelling, an effectively applied technique for teaching and learning, is taught as a reflective, transformational and/or experimental teachings method by a variety of other educational theorists and researchers. Storytelling is a mode of communication preceding the written history of the human race as a way of teaching and transmitting history between generations.

By engaging in storytelling experience, these students are able to display more progress in the understanding of reading, some investigators have concentrated on the realistic application of storytelling as a pedagogical technique for building an understanding of reading. In language teaching there are many explanations why narrative is used. Wright says that histories that rely heavily on vocabulary provide children with an important and reliable basis of language experience. Moreover, stories can inspire children, stimulate the imagination of children and arouse the interests of children, etc. (Wright, 2013).

Some teachers may use repeated speeches to introduce the new vocabulary and demand that students listen carefully. You conclude that the more a new language the teacher repeats, the children will remember it. Stories can be repetitive naturally. When students read the tales, the main word or the new language will naturally be repeated in the tales. Children may improve hearing skills. The use of storytelling is also an increase in listening skills for students. When kids listen to stories, they try to devise the meaning of the new words and comprehend the main concept. When listening, children focus on terms or phrases, but not on the meaning of a context or on the meaning of the word. Stories allow kids to understand and hear a lot more English than any other procedure. This includes stories.

Enhancing story telling through gestures, actions, vivid images, related games and role play, improves language retention and acquisition. The greatest benefit for the teacher is its ability to promote a comfortable and intimate environment in the classroom.

Conclusions

- It was concluded from the results that Storytelling method had significant effect on students' achievement and the learner took interest in the learning.

- The result of the study showed that storytelling method had significant impact on memory increase of students.
- The study reveals that storytelling has motivational effect on the student's performance.
- The result of the study showed that storytelling method had significant effect on reading fluency of students.
- The results show that after the treatment with storytelling method the mean score between high achievers and low achievers had significant difference. Before the treatment it was almost the same.

Recommendations

- It was concluded from the results that Storytelling method had significant effect on students' achievement and the learner took interest in the learning. Hence it is recommended that teachers may teach elementary subjects through storytelling methods and Government should arrange teacher's refresher course for storytelling method.
- The result of the study showed that storytelling method had significant impact on memory increase of students. Hence it is recommended that teachers should adopt the storytelling method while teaching at elementary level.
- It was concluded that storytelling method had significant motivational effect on students. Keeping the benefits of storytelling method, it should be included in the curriculum of teachers training for pre-service courses.

Suggestions

- It is also recommended that future research studies may be conducted at male students, in co-education, it can also be conducted storytelling method with affective and Psycho motor domain.
- It can also be exercised in the description of Psychology and Philosophy.

References

Alloway, I. (2011). *Keep it in mind: understanding and improving your working memory*. Psychology Today.

Beer, J., Pisoni, D.B., Kronenberger, W.G., & Geers, A.E. (2010). *New research findings: executive functions of adolescents who use cochlear implants.* The ASHA Leader.

Farooq. R. A., & Tabassum. R. (2017). *Understanding research in education'Pakistan Lahore*.Majeed Book Depot.

Greene, E., & Del Negro, J.M. (2010). *Presentation. In Storytelling: Art and technique (4th ed*.). Santa Barbara, CA: Libraries Unlimited.

Linse, C. T., & Nunan, D. (2005). Practical English language teaching. *Young Learners, (McGrawHill, 2006), 47*.

Lyxell, B., Sahlen, B., Wall, M., Ibertsson, T., Larsby, B., Hullgren M., & Maki-Torkko. B. (2008). Cognitive development in children with cochlear implants: relations to reading and communication. *International Journal of Audiology, 47*(2), 47-52.https://www.tandfonline.com/doi/abs/10.1080/14992020802307370

Mello, R. (2001). Storytelling and literacy learning: A review of the literature. *Wisconsin English Journal 4*3(2), 20-28.http://ep.yimg.com/ty/cdn/yhst55030780566641/FRY.pdf#page=20

Miller, S., & Pennycuff, L. (2008). The power of story: Using storytelling to improve literacy learning. *Journal of Cross-Disciplinary Perspectives in Education, 1*(1), 36-43.https://jonsundell.com/wp-content/uploads/The_power_of_story_using_storytelling_to.pdf

Nicholas, B., Rossiter M., & Abbott, M. (2011). The Power of story in the ESL classroom. *The Canadian Modern Language Review/La Revue canadienne des languesvivantes, 6*7(2), 247-268. https://www.utpjournals.press/doi/abs/10.3138/cmlr.67.2.247

Pisoni, D. B., & Cleary, M. (2003). Measures of working memory span and verbal rehearsal speed in deaf children after cochlear implantation. *Ear & Hearing, 2*4(1S), 106S-120S.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3434463/

Wright, A. (2013). *RBT*: *Creating Stories with Children.* Oxford University Press.

Vaahtoranta, E., Lenhart, J., Suggate, S., & Lenhard, W. (2019). Interactive elaborative storytelling: Engaging children as storytellers to foster vocabulary. *Frontiers in psychology, 10,* 1534. https://www.frontiersin.org/articles/10.3389/fpsyg.2019.01534/full

Journal of Contemporary Teacher Education
Volume: 6, 2022, 113–126

Teaching Past Tense by Using Repetition and Substitution Drill to 5th Grade Students

Sumaira Chand*
Rabia Tabassum**

Abstract

The present study was aimed to investigate the effect of repetition and substitution drills method on the academic achievement of elementary school students in subject of English. The objectives of this study were (i) to find out the effectiveness of drill method on the construction of past tense ability, (ii) to find out the effect of substitution drill on the performance of the students, (iii) to investigate the effectiveness of repetition and substitution drills in improving the vocabulary of the students, (iv) To explore the effect of repetition and substitution drills method on the retention level of the students. To achieve the above objectives, the following null hypotheses were tested, (i) there is no significant effect of drill method on construction of past tense ability, (ii) there is no effect of substitution drill on the performance of the students, (iii) there is no effect of repetition and substitution drills in improving the vocabulary of the students, (iv) there is no effect of repetition and substitution drill method on the retention level of the student. All the students of 5th class were population of the study. Seventeen students of grade 5 from a Government Girls Primary School were selected as the sample of the study. These students were taught control group as well as experimental group through Four Cycle Experimental Design. Data was collected through pre-test and post-test, and that data were tabulated and analyzed in the light of objectives of the study by using t-test. The analysis of the collected data revealed the following findings: It was concluded from the results that drill method had significance effect on students' construction of past tense ability. The result of the study showed that substitution drill method had significance impact on performance of the students. Hence it is recommended that teachers should teach English subject at elementary level and government should arranged teacher refresher with drill method. The result of the study showed that substitution drill method had significance impact on performance of the students. Hence it is recommended that teachers should adopt the substitution drill method while teaching at elementary level.

Keywords: Repetition and Substitution Drills Method, Past Tense Ability, Elementary Level.

---

* MPhil scholar Northern University Nowshehra. summygul2016@gmail.com
**Professor, Faculty of Arts and Social Sciences, Northern University Nowshehra. rabiatabassum227@gmail.com

Introduction

According to Mansour (2017) the primary purpose of language is to allow individuals to interact effectively with one another. It is expected that learning a language will assist students in participating in society. As Mansour (2017) declares that the interpretation of an information delivered through language must be converted into words assembled according to grammatical rules, and then these words must be conveyed through sound. Grammar is also the central component of language, as phonology and semantics, or sound and meaning are connected by grammar.

According to Murad (2017), drills have been proved to be beneficial in foreign language teaching because they allow students to put what they've learned into practice. The technique of drilling is usually useful to practice sentence structure or pronunciation of the learners.

According to Badea (2015) drilling is a technique that many teachers still employ when teaching new language concepts to their learners. Drilling entails repeating what is heard from a model given by the instructor, a tape, or maybe other learner.

The most basic drill for learning language patterns is repetition drill. Students keep repeating whatever the teacher is saying or what the recording device delivers. The instructor says the model (words and phrases) and the learners keep repeating it. Drilling, at its most basic level, entails listening to a teacher-provided model, a tape, or the other student in the school environment and trying to repeat what is noticed. It's a drill where you do the same thing over and over again. This can be used to introduce new words and will be beneficial in pronunciation classes (Lynch, 2022). Drills of repetition are used to quickly familiarise students with something like a particular structure formulaic utterance (Doff, 1990).

Related Research

According to Larsen-Freeman (2000), the teacher is directing and controlling the students' language behavior while also providing a good model for imitation, the teacher's role is similar to that of an orchestra leader. The students imitate the teacher's model or the model of tape recorder. They listen to the teacher and react as efficiently and consistently as possible. Finally, repetition drill allows students in a foreign language learning class to understand the relationship between form and language use, as well as aids in the memorization of phrases and words.

According to Maharida (2014), substitution drilling is a language practice technique used in the classroom. It begins with the teacher modelling a word or a sentence, which the students then repeat. The students then change the message or substitute one or maybe more key words in the sentence given by the teacher.

Larsen-Freeman (2012) declares that a question-and-answer drill, a transformation drill, and a chain drill follow the substitution drills. The teacher moves quickly and only slows down when there is an error. When a student makes a pronunciation error, the teacher suggests a word that is only slightly different from the one they're having trouble with so that they can hear the difference between the familiar sound and the one they're having trouble with.

According to Aitken and Aitken (1992) states that, the past, present, or future tense is any of the forms of a verb that can be used to demonstrate the time of the portion or state expressed by the verb. Past, present (now), and future tenses are classified into three parts. Each section has its own formula and time references. Each section also necessitates extensive rote learning in order to distinguish events that occurred at specific times.

Aitken and Aitken (1992) state that the simple past tense in English language is used to describe an event that occurred in the past or an action that has already been completed. Simple past tense highlights that something has been completed and this tense has special form in order to display that condition by addition of–*ed* or *–d* for the verbs having regular form and for irregular verbs by checking the table. The past tense also has a specific time reference for its recognition likes *in..., yesterday, last*..., and ...ago.

Statement of the Problem

The aim purpose of this research was to evaluate the effect of Repetition and Substitution Drill on Teaching Past Tense to the students at elementary level in the subject of English. Most of the schools in public and private sector are practicing traditional teaching methods. A study was made in order to check and implement any shift from the currently used methodology of teaching and learning to those possible within learning framework. The study aimed at Teaching Past Tense by Using Repetition and Substitution Drill to 5th Grade Students.

Objectives

The research study aimed:

- To find out the effectiveness of drill method on the construction of past tense ability.
- To find out the effect of substitution drill on the performance of the students.
- To investigate the effectiveness of repetition and substitution drills in improving the vocabulary of the students.
- To explore the effect of repetition and substitution drills method on the retention level of the students.

Hypotheses

The hypotheses were:

H_{01} There is no significant effect of drill method on construction of past tense ability.

H_{02} There is no effect of substitution drill on the performance of the students.

H_{03} There is no effect of repetition and substitution drills in improving the vocabulary of the students.

H_{04} There is no effect of repetition and substitution drill method on the retention level of the student.

Method and Procedure

Population

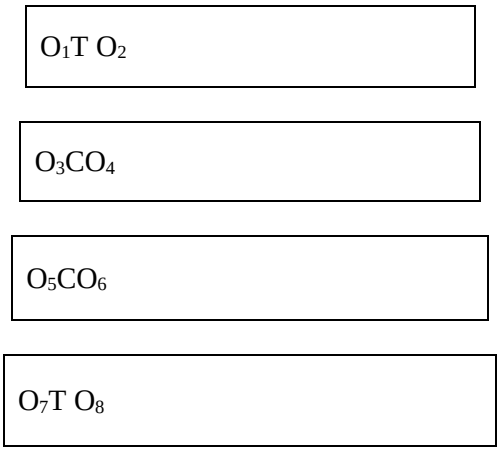
Population of the study was comprised of 5^{th} Grade girl students of all the government elementary schools of District Nowshera.

Sample

One school was selected through convenient sampling for experimental purpose. Seventeen students of grade 5 from a Government Girls Primary School were selected as the sample of the study.

Research Design

The research was experimental. In this study the research design was single group four cycle pretest-posttest designs. The following was the symbolic representation of research design (Farooq & Tabassum, 2017).



Where O_1, O_3, O_5 and O_7 are pretest and O_2, O_4, O_6 and O_8 are poet tests. T is treatment and C is control group (Traditional method)

Research Instrument

In order to measure students' academic achievements, pre-test and post-test were used as research instruments.

Pretest and Posttest

Pretest and Posttest were developed for the students of the English subject. The tests consisted of 40 multiple choice questions (items).

Treatment

This research was four cycle experimental design. In which a single group of 17 female students was considered control group as well as experimental group. At the first cycle, the group was considered as experimental group and researcher took pre-test from this experimental group. And after that researcher taught past tense to this group with drill method, in which researcher used repetition drill and substitution drill for teaching regular verbs, nouns, pronouns, use verbs in sentences. Positive sentences, Negative sentences and interrogative sentences of past tense, rearrange the sentences of past tense. And after completion of cycle 1, post-test was given to these experimental group students. Each cycle consisted of two weeks.

In cycle 2, the same group was considered as control group and similarly researcher took pre-test which was consisted of some grammatical items, to the students to know the progress and understanding of the student's mastery in simple past tense. And after taking pre-test, past

tense was taught to control group with traditional method, after completion second cycle post-test was administered to these students.

In cycle 3, the same group was considered as control group. And according to this process pre-test was taken from control group, this test was consisted of some grammatical items of past tense. And after pre-test, researcher taught them irregular verbs, nouns, pronouns, use verbs in sentences. Positive sentences, Negative sentences and interrogative sentences of past tense, rearrange the sentences of past tense with traditional method, and after completing this cycle, post-test was taken from control group.

In cycle 4, the same group was considered as experimental group. Similarly, pre-test was taken from the experimental group. And after this test researcher taught them irregular verbs, change positive sentences into negative and interrogative sentences of past tense, and use irregular verbs in past tense sentences with drill method. And after completion of this cycle, post-test was taken from the experimental group.

Data Collection

The data was collected through pretests (before treatment) and posttests (after treatment) in every cycle from respondents in this study.

Data Analysis and Findings

Data was analyzed through mean, standard deviation and dependent t-test. The mean scores were used to determine the overall performance of the groups, and dependent t-test was used to find out whether there was a significant difference in pretest and posttest scores between the experimental groups in all cycles.

H_{01} There is no significant effect of drill method on construction of past tense ability.

Table 1
Significant effect of drill method on construction of past tense ability

Group		N	Mean	SD	V	df	t-value	Effect
Experimental	O1	17	4	0.86	0.75	16	4.76	Significant
	O2	17	5	0	0			
Control	O3	17	2.82	0.39	0.154	16	1.76	Not Significant
	O4	17	3.11	0.6	0.36			
Control	O5	17	0	0	0	16	11.09	Significant
	O6	17	2.17	0.8	0.654			
Experimental	O7	17	0	0	0	16	23.34	Significant
	O8	17	4.52	0.79	0.639			

Significance level = 0.05 Table Value = 2.119

Table 1 depicts that calculated t-values4.76, 11.09 and 23.34was greater than table value 2.119 and 1.76 was lesser then table value 2.119 but the difference between O_1 (Pre-test) and O_2 (Post-test) as well as O_7 (Pre-test) and O_8 (Post-test) of Experimental group is much larger than the difference between O_3 (Pre-test) and O_4 (Post-test) which were not significant at significance level (0.05) as well as O_5 (Pre-test) and O_6(Post-test) of Control group which was significant at significance level (0.05); hence the null hypothesis is rejected. It means that drill method significant effect on construction of past tense ability.

H_{02} There is no significant effect of substitution drill on the performance of the students.

Table 2
Significant effect of substitution drill on the performance of the students

Group		N	Mean	SD	V	df	t-value	Effect
Experimental	O1	17	2.35	1.27	1.617	16	7.16	Significant
	O2	17	4.47	0.62	0.389			
Control	O3	17	1.58	1.62	2.632	16	5.05	Significant
	O4	17	3.47	1.001	1.014			
Control	O5	17	3.11	1.45	2.11	16	3.11	Significant
	O6	17	4	0.86	.75			
Experimental	O7	17	2.82	0.72	0.529	16	11.35	Significant
	O8	17	4.88	0.33	0.110			

Significance level = 0.05 Table Value = 2.119

Table 2 indicates that calculated t-values7.16, 5.05, 3.11 and 11.35was greater than table value 2.119 but the difference between O_1 (Pre-test) and O_2 (Post-test) as well as O_7 (Pre-test) and O_8 (Post-test) of Experimental group is much larger than the difference between O_3 (Pre-test) and O_4 (Post-test) as well as O_5 (Pre-test) and O_6 (Post-test) of Control group which were significant at significance level (0.05); hence the null hypothesis is rejected. It means that substitution drill has significance effect on the performance of the students.

H_{03} There is no significant effect of substitution and repetition drills in improving the vocabulary of the students.

Table 3
Significant effect of substitution and repetition drills in improving the vocabulary of the students

Group		N	Mean	SD	V	df	t-value	Effect
Experimental	O1	17	3.52	2.09	4.389	16	6.94	Significant
	O2	17	7.58	0.61	0.382			
Control	O3	17	2.76	1.82	3.316	16	4.48	Significant
	O4	17	4.70	1.92	3.720			
Control	O5	17	3.64	1.27	1.617	16	0.264	Not Significant
	O6	17	3.52	2.26	5.139			
Experimental	O7	17	3.70	1.61	2.595	16	7.24	Significant
	O8	17	7.82	1.13	1.279			

Significance level = 0.05 Table Value = 2.119

Table 3 depicts that calculated t-values6.94, 4.48 and 7.24was greater than table value 2.119 and 0.264 was lesser then table value 2.119 but the difference between O_1 (Pre-test) and O_2 (Post-test) as well as O_7 (Pre-test) and O_8 (Post-test) of Experimental group is much larger than the difference between O_3 (Pre-test) and O_4 (Post-test) which were significant at

significance level (0.05) as well as O_5 (Pre-test) and O_6 (Post-test) of Control group which was not significant at significance level (0.05); hence the null hypothesis is rejected. It means that substitution and repetition drills in improving the vocabulary of the students.

H_{04} There is no significant effect of repetition and substitution drill method on the retention level of the students.

Table 4

Significant effect of repetition and substitution drill method on the retention level of the students

Group		N	Mean	SD	V	df	t-value	Effect
Experimental	O1	17	19.88	3.05	9.32	16	30.50	Significant
	O2	17	41.88	2.52	6.36			
Control	O3	17	13.14	2.91	8.49	16	10.20	Significant
	O4	17	22.76	4.21	17.75			
Control	O5	17	14.88	3.01	9.11	16	10.54	Significant
	O6	17	22.94	4.87	23.80			
Experimental	O7	17	16.29	3.94	15.53	16	27.51	Significant
	O8	17	46.52	1.89	3.608			

Significance level = 0.05 Table Value = 2.119

Table 4 indicate that calculated t-values30.50, 10.20, 10.54 and 27.51 was greater than table value 2.119 but the difference between O_1 (Pre-test) and

O_2 (Post-test) as well as O_7 (Pre-test) and O_8 (Post-test) of Experimental group is much larger than the difference between O_3 (Pre-test) and O_4 (Post-test) as well as O_5 (Pre-test) and O_6 (Post-test) of Control group which were significant at significance level (0.05); hence the null hypothesis is rejected. It means that repetition and substitution drill method has significance effect on the retention level of the students.

Discussion

The study was aimed at Teaching Past Tense by Using Repetition and Substitution Drill to 5th Grade Students. According to Badea (2015) drill means listening to a model, provided by the teacher, or a tape or another student and repeating what is heard. Drilling is a technique that is still used by many teachers when introducing new language items to their students. The most basic drill for learning language patterns is repetition drill. Students keep repeating whatever the teacher is saying or what the recording device delivers. The instructor says the model (words and phrases) and the learners keep repeating it. Drilling, at its most basic level, entails listening to a teacher-provided model, a tape, or the other student in the school environment and trying to repeat what is noticed. It's a drill where you do the same thing over and over again. This can be used to introduce new words and will be beneficial in pronunciation classes (Lynch, 2022). Drills of repetition are used to quickly familiarise students with something like a particular structure formulaic utterance (Doff, 1990). Learning a foreign language is similar to learning other skills. It's simply a matter of developing the right habits. It is thought that if a learner repeats phrases correctly many times, he or she will master the language. Larsen-Freeman (2000) said: "Learning languages is a habit-forming process. The more you repeat something, the stronger the habit and the more you learn. The acquisition of a native language is the same as learning a foreign language. "The objectives of the study were (i) to find out the effectiveness of drill method on the construction of past tense ability, (ii) to find out the effect of substitution drill on the performance of the students, (iii) to investigate the effectiveness of repetition and substitution drills in improving the vocabulary of the students, (iv) to explore the effect of repetition and substitution drills method on the retention level of the students.

All students of 5th Grade girl students from Government Primary Schools of District Nowshera were the population of this study. This study was delimited to students of 5th Grade girl students at Government Schools

to analyze the effect of drill, substitution and repetition drills method. 17 girl students of 5th Grade from a Government Girls Primary School, District Nowshera constitute the sample of the study by using random sampling technique.

A test was developed for government elementary school students of English subject. There were 8 items in the test. The researcher personally developed and administered the test (pre-test and post-test for four week) to the respondents. The researcher also developed the lesson plans and delivered. Data collected through test (pre-test and post-test) from students was tabulated, analyzed and finally interpreted. For statistical analysis formula of paired t-test was applied.

Conclusions

- It was concluded from the results that drill method had significance effect on students' construction of past tense ability.
- The result of the study showed that substitution drill method had significance impact on performance of the students.
- The results show that after the treatment with substitution and repetition drills method the vocabulary of the students improved.
- The results show that repetition and substitution drill method had significance effect on the retention level of the students.

Recommendations

- It was concluded from the results that drill method had significance effect on students' construction of past tense ability. Hence it is recommended that teachers should teach English subject at elementary level and government should arranged teacher refresher with drill method.
- The result of the study showed that substitution drill method had significance impact on performance of the students. Hence it is recommended that teachers should adopt the substitution drill method while teaching at elementary level.
- The results show that after the treatment with substitution and repetition drills method the vocabulary of the students improved. Hence it is recommended that substitution and repetition drills method should use for vocabulary building of the students.

- The results show that repetition and substitution drill method had significance effect on the retention level of the students. Keeping the benefits of repetition and substitution drill it should be included in the curriculum of teachers training for pre-service courses.

References

Aitken, R., & Aitken, R. (1992). *Teaching tenses*. Addison Wesley Publishing.

Badea, M. (2015). English classes and effectiveness of games in higher education. *Educația Plus*, *13*(2), 79-85.

Doff, A. (1990). *Teach English: A Training Course for Teachers*: Cambridge University Press in Association with the British Council.

Farooq. R. A.,& Tabassum. R. (2017). *Understanding research in education'Pakistan Lahore*.Majeed Book Depot.

Larsen-Freeman, D. (2000). *Techniques and principles in language teaching*. Oxford University.

Larsen-Freeman, D. (2012). From unity to diversity: twenty-five years of language-teaching methodology. In *English teaching forum* (Vol. 50, No. 2, pp. 28-38). US Department of State. Bureau of Educational and Cultural Affairs, Office of English Language Programs, SA-5, 2200 C Street NW 4th Floor, Washington, DC 20037.

Lynch, G. (2022). 11. Back to Odessa, Still Drilling. In *Roughnecks, Drillers, and Tool Pushers* (pp. 124-144). University of Texas Press.

Maharida, M., (2014). Using substution drill technique to improve students' pronunciation ability. *Exposure, 3(*2), 178-191.

Mansour, A. S. (2017). Analysis of word order in arabic within the theory of generalized phrase structure grammar. *Journal of Duhok University*, *20*(2), 68-75.

Murad, I. H. (2017). Investigating English teachers' awareness of the teaching methods that should be used in teaching the sunrise series in Zakho City, Duhok-Iraq. *Humanities Journal of University of Zakho, 5*(1), 239-249.

Journal of Contemporary Teacher Education
Volume: 6, 2022, 127–130

Effect of Problem Solving Method on Learning of Periodic Table by Using Game Instruction

Neelma Hassan[*]
Madiha Shafiq[**]

Abstract

The purpose of study was to investigate the effect of problem solving method on learning of periodic table by using game instruction. Study objectives were (i) to determine the effect of game instructions on student's problem solving skills; (ii) to investigate the effect of game instructional approach on student's academic achievements: (iii) to compare the mean score of high achiever students and low achiever students taught by game instruction approach. Design of the study was pretest posttest equivalent group design and study was experimental in nature. Population of the study was comprised of the entire Government Girls' High Schools grade-IX chemistry students of District Nowshera. Sample of the study was 40 students of a Government Girls' High School, District Nowshera. Twenty students were assigned to each control group and experimental group on the basis of pre-test through paired random sampling technique. Duration of treatment was 2 weeks. Data were collected personally by the researcher. Analysis of data was done through mean, SD and t-test. The following suggestions and recommendations were made on the basis of findings. The results clearly show that the verities of teaching approach such as use of educational games in teaching and learning process can help to improve student achievement in learning of periodic table, moreover, use of educational games in chemistry classroom during teaching learning process enhance student interest toward chemistry. This study was significant for teachers, students and curriculum development.

Keywords: Problem Solving Method, Game Instruction, Academic Achievement, Secondary Level.

[*] MPhil scholar Northern University Nowshera. neelmahassan16@gmail.com
[**] MPhil scholar Northern University Nowshera. sajid@habibgulzar.com

Introduction

Chemistry is one of all the compulsory subjects in science not solely as results of its various elementary connections with alternative branches of science, however conjointly as results of its wide move influence on the method we tend to measure. Chemistry particularly incorporates four components approaches; want to get (discover or create) chemical data; the ultimate thoughts and specific standards for that reason produced; the functions of that knowledge in perception and ever-changing the world; and also, the implications of that perception and alter for human beings (Cheng & Gilbert, 2009). They conjointly argued that understanding is required to grasp the concepts in chemistry: the persona of chemistry, its norms and methods; the key theories, model and ideas of chemistry; alternatively, chemistry and chemistry-based applied sciences relate to each other; and appreciating the effect of chemistry and chemistry-related applied sciences on society.

Likewise, Nweze, Okafor and Njoku (2004) reported that the teachers have to be expert in the way to use activities that may require creativity and has to be trained with the knowledge of science rather than simply reading the text while teaching science. According to modern learning philosophy, if learners are to gain a practical knowledge of chemistry, they must be forced to be frequently engaged in learning activities. Chemistry should be taught in a way that incorporates innovative ideas, particularly in this innovative era where children learn a lot from mobile phones and computers. Since simply teaching the chemical ideas within the category would not suffice to achieve the requisite mastery of such ideas, chemistry lessons must be activity-based. To overcome these difficulties, innovation such as games could boost mastering and retaining of certain chemical concepts. Drawback resolution technique and game tutorial approach may also be used in educational institutions to spark learners' attention and encourage active participation in chemistry learning.

Mintzes, Wandersee and Novak (2006) have called the periodic table to be "premier graphic tool in chemistry." This claim has been accepted by many historians. Strathern (2000) stated, “Chemistry came of age with the periodic table.... chemistry now has a fundamental concept from which a whole large collection of knowledge might be built”.

Since the classical Greek philosophers and their ideas about the nature of matter, the concept of the 'elements' that make up the periodic table has been a source of debate. Is a factor an abstract being, a physically realised substance, or a combination of the two? Mendeleev, who discovered the system of periodic for the arrangement of the elements, had a lot to say

about it, and the periodic table, he believed, was principally a categorization of the elements in their abstract sense. Since then, there has been a long-running debate about how elements survive in compounds, if they do at all. Contemporary debates in chemistry theory are primarily based on a widely quoted paper by radio chemist Paneth, who also proposed the current concept of an element (Paneth, 2003).

Related Research

Adesoji (2008) examined the outcome of a problem solving teaching approach on the success of learners of various skill levels in Chemistry. Poor teaching method was found to be the cause of the difference between high and low performance students' ability to solve science problems. Teachers of science were encouraged to use effective teaching strategies such as problem-solving techniques.

Poripo (2008) investigated in Bayelsa State, Nigeria, the impact of a simulation games on male and female learners' chemistry achievement. The results of the hypotheses that were tested revealed that using the simulation process improved students' chemistry achievement. Students of both the genders all do well, with no statistically meaningful differences in their mean responses.

According to Linda (2020), both chemistry students and chemists can benefit from the periodic table of elements. It depicts all naturally occurring elements and all artificial elements produced in laboratories. Each part, as well as many numbers, is put in its own box. The interpretation of the numbers can tell us a lot about the elements. For chemistry students, the periodic table can be challenging; however, games and puzzles can be very helpful in making the learners to grasp the table. These games can be a lot of fun as well.

There are several advantages of using a student-made board game regarding the periodic table and elements. When learners build the game and solve someone else's, they learn about chemistry. When the learners make the game with someone else, they can even have some experience interacting together (Oakley, 2004).

Statement of the Problem

Problem solving is an essential part of the information, as it should be. It allows learners to use their already gained skills in practical, real-world experiences while also encouraging and assisting the learners in reasoning at higher levels. It assumes that learners should accept certain

responsibilities for their own learning and that they can take personal steps to address challenges, settle issues, explore solutions, and emphasize thought as an important part of the curriculum. Use of instructional games is one of the many problem solving approaches that may be suitable to enhance students understanding regarding chemistry especially in learning of periodic table. The aim of this study is to exercise this method for secondary level students in learning of chemistry especially in periodic table. Problem under investigation is to investigate the effect of problem solving method on learning of periodic table by using game instruction.

Objectives

Objectives of the study were:

- To determine the effect of game instructional approach on students' problem- solving skills.
- To investigate the effect of game instructional approach on students' academic achievements.
- To compare the mean score of high achiever students``` and low achiever students taught by game instructions.

Hypotheses

The hypotheses were:

H_{01} There is no significant effect of educational games on student's learning of Periodic table.

H_{02} There is no significant effect of educational games on student's academic achievement in Periodic table.

H_{03} There is no significant difference between the mean score of high achievers and low achievers.

H_{04} There is no significant difference between the mean score of pre-test and post-test.

Method and Procedure

Population

All Government Girls High School students of Grade-IX studying Chemistry were the population of the study.

Sample

For the conduction of experiment, a sample of 40 students were taken from Grade-IX of a Government Girls' High School, Nowshera. These forty students were separated in two groups by paired random sampling technique.

Research Design

The research study was experimental, where two groups of the participants were formed i.e., experimental and control. To determine the impact of method that involved two equivalent groups and design was pretest posttest equivalent group design (Farooq & Tabassum, 2017).

$R_E =$	O_1 T	O_2
$R_C =$	O_3	O_4

$$dR_E = O_2 - O_1$$
$$dR_c = O_4 - O_3$$

$$D = d R_E - d R_C$$

Where:

RC = Randomly Control Group

RE = Randomly Experimental Group

O_1 & O_3 = observation of pre test

O_2 & O_4 = observation of Post-tests

d = Difference between mean scores

T = Treatment (teaching by experiential learning model)

Research Instrument

For collecting data following tool were used.

Pretest and Posttest

Teacher's constructed pre-test and post-test were used for this study. Pre-test was taken to check the student's learning abilities before starting of the treatment on the sample students whereas the post-test was taken after the treatment. Both these tests consisted of 40 items related to periodic table.

Treatment

Experimental group was taught with problem solving method. The students were introduced with game instructional technique (StopGoPs) to solve their problem which they face in learning of periodic table. The students were asked to form simple daily use sentences from the symbols of the elements, then write the atomic and mass number of every element use in the sentence and then memorize with practice. The students were guided to form sentences from the pictures consisting of first alphabet of the element symbol. And fill periodic table worksheet after activates performed in classroom. After treatment researchers were collect data from the result of post-test. While control group was treated with lecture method by delivering lesson on every group of periodic tables daily with additional explanation of necessary topics.

Procedure

Steps followed before treatment

i) A pretest was taken from the students to check their previous knowledge in the related topic.
ii) Some questions were asked from the sampled students by the researcher to check their interest towards learning of periodic table and their difficulties in the subject of chemistry and periodic table.
    1. Why do you feel chemistry is difficult?
    2. Do you know the use of periodic table?
    3. Can you people give me an example of a daily use element?
    4. What is the atomic number of that element?
    5. What is the atomic mass of that element?
    6. What is the difference between the atomic number and atomic mass?
    7. Is this element metal or non-metal?
    8. What is the difference between metal and not metal?
    9. From which group these elements belong?
    10. Is there is any relation between the valence and group number?

After discussion with student and pretest result it was cleared that students have difficulties in the following area of the periodic table.

i) Difference between atomic number and atomic mass
ii) Difference between group and period
iii) Difference between metal and non-metal
iv) Position of the element within group and periods
v) Number and names of the elements in same group and period.

As this research study is only related to number and names of the elements in the same group and periods, but it is impossible to know the concept of arrangement of elements in groups and period without knowing the concept of atomic mass, atomic number, group and period. To overcome these problems, the researcher guided the experimental group students to find solution of their problems by playing different educational games and activities, before learning the sequence of elements within the group and periods in the periodic table, while control group was thought by lecture method. Including group discussion and answer questions practices.

Day 1 Activities

The teacher provided instruction to students to prepare a model from the China clay or small ball. (consisting of a big ball in the center occupying large area and having compact mass, representing nucleus and small balls revolving around the nucleus representing electrons) to understand the concept of number of proton, electron and neutron and structure of an atom.

From this activity the students learned that

i) Atom is mainly composed of three particles known as electron proton and neutron.
ii) Proton and neutron are located in the center forming nucleus of the atom.
iii) Electrons are revolving around the nucleus in specific shell and sub shell.
iv) The number of electron or proton present in an atom called its atomic number.
v) The number of proton or neutron present in an atom called its atomic mass.

Day 2 Activities

Three groups A B and C were formed group one was called to collect pencils, group two was called to collect books and group C was called to collect erasers from their class fellow, after collection they were directed to arrange all these collected material on the basis of similarities i.e., size and color in the horizontal and vertical rows.

From this activity student learned that as they arranged pencils of different size in one group, chemistry books in other group, English books in other group and erasers in other group, all the things were kept in their respective category as student found it, in this why scientist kept elements

in the similar group after their discovery one by one on the basis of similarities in their characteristic.

Day 3 Activities

Two groups A and B were formed. Group A was assigned a task to arrange the students in 10 mints without giving them any criteria. While group B Students were directed to arrange students of their class in ascending order of their roll number.

From this activity the students learned that it is easy to arrange the students on the basis of their roll number. In the same way scientist first try to arrange elements on the bases of similar property and atomic mass later Moseley arranged the elements in the periodic table on the bases of atomic number.

Day 4 Activities

Three groups A, B and C were formed consisting of 2 and 8,8 students respectively standing on a horizontal line. These students were called to collect balls from the basket according to their row number. These three groups represent first three periods of the periodic table, while balls in their hand representing their valence electron.

From this activity student learned about first three periods of the periodic table, number of elements in these periods and the number of valence electron of these elements.

Day 5 Activities

Students were introduced with game instruction and problem solving method to solve their problems which they face in learning of periodic table. The students were asked to form simple sentences of their daily use from the symbols used in periodic table for example Science is Fun. As every alphabet of this sentence represent atomic symbol of different elements.

After activities class work was discussed with the students and they were asked to do their assigned task in groups by shearing different ideas and homework was given on daily basis. Moreover, Students were also encouraged to search on internet also.

Periodic Table and positions of different element were taught by using different educational games. Control group was taught with the traditional teaching method, which includes book, chalk/marker, blackboard/ whiteboard and oral tables and experimental group was taught with problem solving method. The students were introduced to game instructional technique to solve their problem which they face in learning of periodic table.

After finding pretest result it was interpreted that students face two types of problem in periodic table i.e., Name and symbol of the elements as well as their position in group or period.

To overcome these problems, the students were guided to find solution of these problems by playing different games i.e., they were asked to form simple sentences of their daily use from the symbols used in periodic table for example (I) Be Nice then find out their atomic number and atomic mass by using periodic table.

$^{5}B_{10}$	$^{28}Ni_{58}$	$^{38}Ce_{140}$
Boron	Nickel	Cerium

Data Collection

Data collection was an important part of the study. For data collection, the researcher developed pre-test and post-test with valuable feedback of the subject experts. Pre-test was used before the start of the experiment while post-test was administered to check sampled students' achievements after treatment.

Data Analysis and Findings

Collected data were tabulated, analysed and interpreted. For statistical treatment of the data mean, SD and t-test was applied. Level of significance was 0.05 in order to obtain results from statistical analysis.
$H_{01.}$

Table 1
Significant effect of games on student's learning of periodic table

Group	N	Mean	SD	V	df	t-value	Effect
Post-Control	20	11.35	2.27	5.186			
					38	11.55	Significant
Post-Experimental	20	24.85	4.70	22.134			

Significance level = 0.05 Table Value = 2.024

Table No.1 depicts that the calculated t-value 11.55 was greater than table value 2.024 which were significant at significance level (0.05); hence the

null hypothesis is rejected. It means that games have significance effect on students' learning of periodic table.

$H_{02.}$

Table 2

Significant effect of games on student's academic achievement in periodic table

Group	N	Mean	SD	V	df	t-value	Effect
Pre-Experimental	20	10.45	2.03	4.155	19	15.48	Significant
Post-Experimental	20	24.85	4.70	22.134			
Significance level = 0.05						Table Value = 2.093	

Table No.2 indicates that calculated t-value 15.48 was greater than table value 2.093 which were significant at significance level (0.05); hence the null hypothesis is rejected. It means that games have significance effect on students' academic achievement in periodic table.

$H_{03.}$

Table 3

Significant difference between high achiever and low achiever students

Group Experimental	N	Mean	SD	V	df	t-value	Effect
High Achiever	18	25.611	4.313	18.604	17	7.486	Significant
Low Achiever	2	18	0	0			
Significance level = 0.05						Table Value = 1.739	

Table No.3 It is apparent from the table that calculated t-value 7.486 was greater than table value 1.739 which was significant at significance level (0.05); hence the null hypothesis is rejected. It means that there is significance difference between high achiever and low achiever students.

$H_{04.}$

Table 4
Significant difference between the mean score of pre-test and post-test

Group	N	Mean	SD	V	df	t-value	Effect
Pre-Control	20	10.6	1.729	2.989	19	1.831	Not Significant
Post-Control	20	11.35	2.277	5.186			

Significance level = 0.05 Table Value = 2.093

Table No.4 It is evident from the table that calculated t-value 1.831 was lesser than the table value 2.093 which were significant at significance level (0.05); hence the null hypothesis is accepted. This means that lecture method has no significance influence over student's academic achievement.

Discussion

The importance of chemistry cannot be neglected in the science because it is the backbone of science curriculum and provide a platform for other sciences and field too., it co-relates with other sciences like physics and biology etc., in so many aspects. Moreover, mastery on chemistry subject is totally dependent on learning of periodic table. Students, who are unable to learn periodic table or having no understanding regarding periodic table and periodicity of element, can't understand chemistry.

According to Mat Salleh (2013) the students of science consider chemistry as a boring and complicated subject, therefore teachers must be innovative in encouraging practical and successful classroom learning of this subject, which will result in motivating the learners and will increase the interest of the learners in learning chemistry.

The teaching approach used by teachers will either discourage or encourage learning. As a result, the teacher must be knowledgeable of recent teaching developments in order to decide the most appropriate approach for a given circumstance and subject. Since chemistry is a subject in which the majority of students are acrophobic, teachers must use constructive approaches to arise students' attention (Okpala, 2006).

The current study was carried to scrutinize the effect of Problem Solving Method on learning of Periodic table by using game instruction. Following were objectives; (i) to determine the effect of game instructional approach on student's problem solving skills; (ii) to investigate the effect of game instructional approach on student's academic achievements: (iii) to compare the mean score of high achiever students and low achiever students by using Game instruction. All students of Grade-IX from Government Girls' High Schools of District Nowshera were the population of this study. This study was delimited to chemistry subject of Grade-IX used by Government Schools in Khyber Pakhtunkhwa to analyze the effect of problem solving method by using game instruction. 40 girl students of Grade-IX from a Government Girls' High School of District Nowshera constituted the sample of the study.

Conclusions

- It was concluded from the results that "game instructions" had significant effect on student's problem solving skills.
- The result of this study discovered that educational games had significant effect on students' educational attainment.
- The results show that after the treatment with games instruction, the mean score between high achievers and low achievers had significant difference, as it was almost same before the treatment.
- It can be concluded that as in learning and teaching games may improve students' achievement, so suitable game should practice in the classroom.
- The better result in academic achievements of the experimental group also shows that students' interest in using games in learning periodic table are positive and students gain better knowledge from the learning process as compared to experimental group.

Recommendations

- It was concluded from the results that "problem solving method by using game instruction" has significance effect on students' academic achievement and the learner took interest in the subject. Hence it is recommended that teachers should teach periodic table by using games in classroom.

- The result of this study discovered that educational games had significant effect on students' educational attainment. Hence it is recommended that curriculum makers should include such topics in textbook of chemistry which can be taught through educational games.
- It was concluded that the students produce better result in learning of periodic table by using games. Hence it is recommended to apply educational games in other chapters and topics too.
- It is also recommended to use problem solving method and educational games in others science subject and other classes too.
- This study was conducted in girls' school in Pakistan. It is recommended that it would be worth presenting if a similar study is conducted in boys' school.
- Academic achievements of the students were only evaluated in this study, further studied may be required in order to find out the usefulness of problem solving for other dependent variables.
- The curriculum planners should design Chemistry Curriculum to accommodate the activities involving inquiry based skills and problem solving to encourage student's interest in chemistry.
- Keeping the benefits of activity based learning it should be made part of the curriculum of teachers training for pre-service courses.

References

Adesoji, F. A. (2008). Students' ability levels and effectiveness of problem solving instructional strategy. *Journal of Social Sciences*, *17*(1), 5-8. https://www.tandfonline.com/doi/abs/10.1080/09718923.2008.11892628

Cheng, M., & Gilbert, J. K. (2009). Towards a better utilization of diagrams in research into the use of representative levels in chemical education. In *Multiple representations in chemical education* (pp. 55-73). Springer, Dordrecht. https://link.springer.com/chapter/10.1007/978-1-4020-8872-8_4

Farooq, M. S., Chaudhry, A. H., Shafiq, M., & Berhanu, G. (2011). Factors affecting students' quality of academic performance: a case of secondary school level. *Journal of quality and technology management*, *7*(2), 1-14. https://d1wqtxts1xzle7.cloudfront.net/48101755/01-Factor-with-cover-page-v2.pdf?Expires=1650027333

Farooq. R. A., & Tabassum. R. (2017). *Understanding research in education Pakistan Lahore*. Majeed Book Depot.

Linda, C. (2020). *Periodic table through games*. Cambridge, M.A.: Harvard University Press.

Mat Salleh, F., & Abdullah (2013). Using profstar game in teaching periodic table of elements: towards enhancing students' engagement in learning chemistry.

Mintzes, H., Wandersee, J.H. & Novak, J.D. (2006). *Assessing science understanding: A human constructivist view* (15-40). San Diego: Academic Press.

Nweze, E. I., Okafor, J. I., & Njoku, O. (2004). Antimicrobial activities of methanolic extracts of Trema guineens is (Schumm and Thorn) and Morinda lucida benth used in Nigerian. *Bio-research, 2*(1), 39-46. https://www.ajol.info/index.php/br/article/view/28540

Oakley, B., Felder, R. M., Brent, R., & Elhajj, I. (2004). Turning student groups into effective teams. *Journal of student centered learning, 2*(1), 9-34. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.422.8179&rep=rep1&type=pdf

Okpala, L. (2006). Toward effective teaching of music in Nigerian schools. *International Journal of Research in Education, 3*(1), 157-163.

Paneth, F.A. (2003). The epistemological status of the chemical concept of element, *Foundations of Chemistry, 5*, 113-145, 2003.

Poripo, J. (2008). *Effects of simulations on male and female students' achievement in problem solving*. New York: John Wiley & Sons.

Strathern, P. (2000). *Mendeleyev's dream: The quest for the elements*. New York: St. Martin's Press. *Studies Research*, 1-3.

Journal of Contemporary Teacher Education
Volume: 6, 2022, 131–144

Assessment of High Performing Teachers: The Role of Personality Traits

Atif Riaz[*]
M. Majid Mahmood Bagram[**]

Abstract

The majority of the successful organizations of the world are using personality assessment tests like Myers Briggs Type Indicator (MBTI) for recruitment and selection (R&S), and to better understand the strengths and weaknesses of their high performing employees. MBTI research divides humans into 16 categories and also proposes that those having specific personality traits can adopt the teaching profession, as it suits their personality. Employers in Pakistan hardly use any personality assessment tools for recruitment and selection, and still rely on more conservative methods like 'interviews'. As a result, many of their recruitment decisions cannot produce the desired pool of employees, which could perform as well as their other 'high performing staff'. An assessment was conducted to analyze the personality types, using MBTI questionnaire, of 'high performing teachers' working at the primary and secondary levels in the private educational sector of Islamabad. Sample of 98 out of 400 high performing teachers was selected, based on their teaching skills, personal qualities, and relationship with students. The convenience sampling technique used to select students to identify their high performing teachers. Results of this study suggested that the majority of these high performing teachers fall into 03 MBTI categories out of 16. This finding can guide employers of Pakistan in devising their recruitment and selection as well as retention strategies at primary and secondary levels.

***Keywords*:** Personality traits, Personality assessment, Primary and secondary level teachers, Teachers, Private sector, MBTI test

[*] Atif Riaz, Faculty Member (Visiting), Dept. of Business Administration, Allama Iqbal Open University, Islamabad, Pakistan. riaz_atif@yahoo.com
[**] Dr. M. Majid Mahmood Bagram, Associate Professor, Dept. of Business Administration, Allama Iqbal Open University, Islamabad, Pakistan.

Introduction

Personality is defined as "the psychological qualities that add to an individual's continuing and distinguishing patterns of feeling, thinking, and behaving" (Dawson, 2015), and also characterized by constant patterns of thoughts, emotions, and behaviors which vary between persons (Cattell, Eber, & Tatsuoka, 1970; Costa & McCrae, 2008). In broader terms, "personality may be regarded as a compound system of traits" (Mischel & Shoda, 1995).

"Personality-job fit theory" highlights that each profession requires specific personality traits, and this match can ensure better overall performance for an organization. The good thing is, each existing and potential employees can be evaluated with the help of various personality assessment tools to better understand their personality traits (Tomat, Trkman, & Manfreda, 2021).

The humans possess varied personalities and have always tried to understand fellow humans by utilizing adaptable methods. One such method is the utilization of personality assessment tests like Myers Briggs Type Indicator (MBTI). For exploring and understanding human personalities, the 19th century witnessed the development of psychological tests to measure individual differences and for personality classifications (Dashiell Stoops, 1909) developed a psychological test to measure the traits and aptitudes necessary and desirable in employees. Later, these tests were used by the companies like the American Tobacco Company, and the Boston Elevated Company for the selection of their salesmen and conductors respectively. Further developments were made in personality testing during World War 1, and these testes were used to select soldiers for special missions (Black, 1994).

In 21st century, research indicates that effective workers do twice as much work as non-effective workers. Also, each year they remain with an organization, they workers contribute a monetary value added equivalent in the range of 70% to 140% of their annual salaries (Turner, 2004). During recruitment and selection (R&S), how can an employer search in depth about an applicant's strengths and weaknesses? In fact, finding good high performing workers is a difficult task. The starting point in an effective recruitment and selection (R&S) process for an employer is to assess the personalities of their current high performers, and then with the help of personality assessment tools, look for applicants who share the same personality traits (Greenberg & Sweeney, 2008).

To start this thorny journey of recruitment and selection (R&S) of good workers, many American corporations use personality tests as part

of the hiring and promotion process. Also, Two and a half million Americans each year take personality assessment tests like Myers-Briggs type indicator. Eighty nine companies out of the Fortune 100 also make use of it, for hiring and training sessions to help employees understand them and their colleagues (Nevins, 2004).

In a developing country like Pakistan, publication by UNESCO, UNICEF, suggests that construction and maintenance of the physical features of schools is important but R&S of qualified and trained teachers is must for enhancing the quality of education in Pakistan (Farooq, 2018). Interviews with the management of few of the private schools in Islamabad region suggested that they don't assess the personalities of their high performers, and hardly use any personality assessment tests while hiring teachers and are still using more conventional methods like 'interviews'. The purpose of this study was to assess the personalities of high performing teachers at primary and secondary levels in Islamabad, Pakistan, working in the private sector educational institutions.

Statement of the Problem

Face to face interviews with the management of few of the private school chains in Islamabad, Pakistan suggested that currently they do not utilize any personality assessment tests like Myers Briggs Type Indicator to assess their high performers, and for the recruitment and selection (R&S) of their teachers. Rather, they still rely on more conventional methods like 'interviews'. A majority of these teachers, selected only through interviews, cannot deliver as good as their current pool of high performing teachers. Resultantly, sooner or later, many of these new hires are fired from their services, and the employer not only wastes his/her time and resources, but this search of hiring good teachers continues indefinitely.

Objectives of the Study

The main objectives of this study were:

- To develop guidelines for employers for their recruitment, and selections, and retention strategies
- To explore the personality types of high performing teachers at primary and secondary levels in private education sector of Pakistan

Research Questions

Following are the research questions of this study:

RQ-1: Which personality traits employers must focus on during R&S process and retention strategies?

RQ-2: What type of personality traits high performing teachers at primary and secondary levels possess in Pakistan?

Literature Review

An understanding of personality is essential for self-development. Perhaps improved familiarity of oneself and others, in terms of motivators, strengths and weaknesses, and thinking as well as working styles, it all helps in effective self-management and to be a useful team member. The more a person understands about his or her own personality and the personalities of others, the better the individual's understanding of how others react to him or her, how they recognize him or her, and how they respond to his or her personality and style of working (Osborne, 2012).

Each individual is different from the other on the basis of their strengths and weaknesses etc. During recruitment and selection process, personality testing tools help in finding these differences among various applicants (Goldman, 2009). The good news is, according to Jung, everyone is born inclined to certain personality preferences, and human actions are not random but expected and classifiable (Taggar & Parkinson, 2007). Therefore, organizations use personality assessment tools to predict individual behavior under different circumstances and it helps them in better utilizing every employee to their best possible potential (King, 2012).

A survey suggests that majority of employer's hiring decisions have negatively affected them in some way i.e. bad hires means headaches for co-workers, human resources officers and the management, which eventually results in not only more turnover cost but overall employee morale also suffers (Lazear & Gibbs, 2014). Obviously, bad hiring decisions affect all type of organizations as well as professions including teaching. Therefore, need to be studied in more detail.

Personality assessment tools are successfully used by companies for hiring, coaching and staff development etc. Same tools can also be used to assess the personality types of high performing teachers at primary and secondary level education in the private educational institutions of Islamabad. This information will obviously guide employers in their future R&S and retention strategies.

On the other hand, there is a global consensus that the most vital and complex variable in the educational process is teacher's personality. A study conducted on high performing teachers found a predominance of 'ENFP' type profile (Göncz, 2017).

Also, to improve and strategically enhance hiring decisions by human resources and the employers, algorithm-based decision tools are available, which helps them in moving from "gut feeling" to more data-driven decisions. A study by the Harvard Business Review also reports that "a simple equation outperforms human decisions by 25%" (Kim, Liu, & Love, 2015).

Personality assessment tests can help formulate interview questions and are also good for applicants with skinny resumes. They also claim lower turnover, and increased sales for their clients. They reveal things that human interviewers frequently miss like what job seekers enjoy doing, and are ultimately good at (Kim et al., 2015). These days, increasingly popular for companies is the use of web-based screening and selection assessments (Stuart, 2015). It's now possible, after assessing applicant's personalities, to identify those who would be happiest and more successful in the roles employers have to offer. "I used to think when I hired someone that I had a 50-50 chance that it would work, but with a personality assessment, it has a 75 percent chance of the new hire working out" (Calvasina & Calvasina, 2016).

Other studies also suggest that all of personality traits (Introversion, extroversion, sensing, intuition, feeling, judging etc.) are indeed very relevant to a team's success, and further indicates that performance improves when a team pays attention to its individual personalities, and sharing personality information about each other facilitates this essential awareness (Wilde, 2010).

A Gallup survey found that more than 70 percent of American workers having low productivity problem because of emotional disconnection from their workplace. Eventually, it effects overall organizational effectiveness. For human resources professionals, major challenge is to help the employer hire a specific type of individual, and to rule out those who don't fit (Fink, 2012).

Studies also show that companies make better hiring decisions by using personality assessments and the companies which use these tools are ranked among the most successful in the World. Majority of most successful companies of the world use personality assessment tools for hiring, coaching, human resource development (HRD), and team building etc. Research also confirms that a few elite/high performing workers

contribute the most towards the overall productivity of an organization (Walsh et al., 2014).

As discussed above, organizations can utilize various personality assessment tools to help them make better hiring and recruitment decisions. The educational sector in Pakistan can also learn from the successful practices of the world and can utilize personality assessment tools like Myers Briggs Type Indicator (MBTI) to effectively manage their human resources (HR) needs.

Theoretical Framework

Carl Jung, a Swiss psychologist, presented the theory of psychological type and suggested that people use their mental capacities differently, which uses the main reason behind their general behaviors.

He also highlighted the following two general mental functions of people:

- Taking in information, which he referred to as perceiving, and
- Organizing information and coming to conclusions and referring it as judging.

Whether perceiving or judging, Jung observed that people prefer to perform that function in one of two ways, which are called preferences. Jung concluded that "Each person seems to be energized more by either the external world (extraversion) or the internal world (introversion). What he called a person's psychological type consists of his or her preference in each category" (Jung & de Laszlo, 1958).

In 1921, Jung published Psychological Types, introducing the idea that each person has a psychological type.

It was Isabel Briggs Myers and her mother Katherine Cook Briggs, during World War II, who made it possible to use Jung's theory in everyday life. With the help of their research people became able to identify their psychological types (Jung & de Laszlo, 1958).

Later, Myers Briggs Type Indicator (MBTI), a popular psychometric instrument/questionnaire, was developed from Jung's theory of psychological types.

MBTI describes a human personality as a combination of one preference from each of the following:

- Extroversion (E) or Introversion (I)
- Intuition (N) or Sensing (S)
- Feeling (F) or Thinking (T)
- Perceiving (P) or Judging (J)

MBTI test/questionnaire is used to determine a combination of a person's four preferences (E or I, N or S, F or T, P or J), which provides four-letter code such as ENTJ. In the same way, a total of 16 following preferences are identified by MBTI researchers (Hirsh & Kise, 2012):

ISTJ	ISFJ	INFJ	INTJ
ISTP	ISFP	INFP	INTP
ESTP	ESFP	ENFP	ENTP
ESTJ	ESFJ	ENFJ	ENTJ

Researchers have also proposed certain professions for the above 16 preferences, in which they will be more satisfied and would be able to perform at their best e.g. ESTJ, ISFJ, ISFP, INTJ, ENFJ, INFJ, ENFP, INFP can adopt teaching as a profession as it suits their preferences/ personality (Walker, 1997).

This study compared the personalities of high performing teachers working at the primary and secondary level in Islamabad, Pakistan with MBTI proposed categories i.e., ESTJ, ISFJ, ISFP, INTJ, ENFJ, INFJ, ENFP, INFP, and will highlight the similarities or differences thus found for future guidance of employers.

Hypotheses

In this study, the following hypotheses were tested:

H_{01}: Employers in Pakistan while devising recruitment, selection and retention strategies do not focus on the personality traits of employees

H_{02}: High performing teachers in Pakistan at primary and secondary levels do not possess the same personality traits as suggested by MBTI

Methodology

Research Design

In this descriptive study mixed method was utilized, quantitative and qualitative technique used, survey method i.e., Myers Briggs Type Indicator questionnaire and interviews. Population of this study was the 'high performing teachers' working at primary and secondary-level at one of the private-schools in Islamabad, which has 12 branches, and 400 primary and secondary level teachers are working in these branches. These high performing teachers were identified after face-to-face interviews with

the principals, and students. Interviews were conducted with the principals and students of 12 branches to identify their 98 high performing teachers, which became the sample for this study.

In this study, multistage convenience sampling technique was used to select the high performing teachers. On the first stage interviews were conducted with the respective principals and on the second stage with the students to identify their high performing teachers.

Research Instrument

This study was conducted in 2 phases:

- Phase-I comprised the interviews with school management/principals, and students to identify their high performing teachers.
- Phase-II consisted of utilizing Myers Brigs Type Indicator (MBTI), personality assessment test/questionnaire (Myers, McCaulley, & Most, 1985), to evaluate the personality types of identified high performing teachers. Empirical evidence suggests 'MBTI' questionnaire to be a relatively stable instrument (Francis & Village, 2022), and this study also found test-retest reliabilities of continuous scores across a 6-week period of .81 for EI, .84 for SN, .87 for TF, and .79 for JP.

Results

High performing teachers (98), at 12 branches, were selected through interviews with the management/principals and students and were given Myers Briggs Type indicator questionnaire. The returned questionnaires were analyzed, to find out the personality type of each high performing teacher, and the following table shows the frequency distribution of these respondents:

Table 1

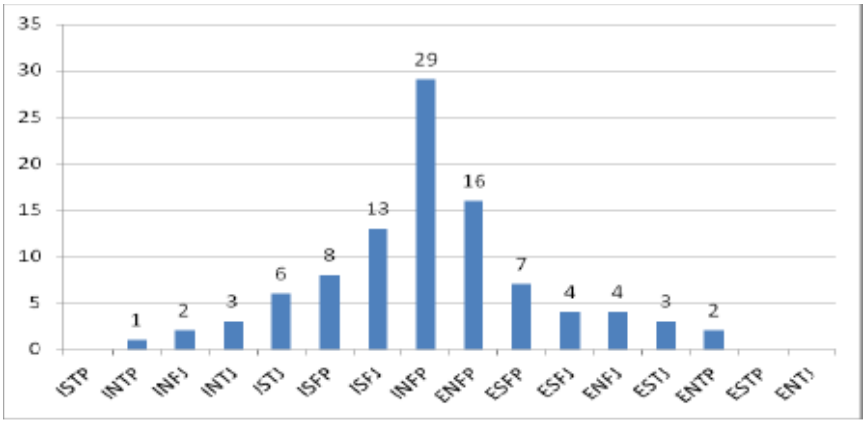
MBTI Personality-Wise Frequency Distribution of High Performing Teachers

Category	Br. 1	Br. 2	Br. 3	Br. 4	Br. 5	Br. 6	Br. No. 7	Br. No 8	Br. No 9	Br. No, 10	Br. No. 11	Br. No. 12	TOTAL
ISTP													0
INTP	1												1
INFJ				1			1						2
INTJ			1			1					1		3
ISTJ			1			1		1		1	1	1	6
ISFP	1	1		1	2		1		2				8
ISFJ	1		1			2	1	1	2	3		2	13
INFP	2	2	2	2	2	3	4	4	2	1	3	2	29
ENFP	1	2	1	2	2	2	1	1	1	1	2		16
ESFP		1		1				1	1	1		2	7
ESFJ			1					1	1	1			4
ENFJ	1							1			2		4
ESTJ	1			1	1								3
ENTP	1	1											2
ESTP													0
ENTJ													0
Total	9	7	7	8	7	9	8	10	9	8	9	7	98

*Br - stands for branch

Table 2

MBTI/personality trait-wise frequency distribution of 98 performing teachers at primary and secondary level at 12 branches.



In the studied sample of 98 high performing teachers at 12 branches of one of the private school chains in Islamabad, the most important finding of this study is that majority of these high performing teachers at primary and secondary level i.e. 58 possess personality types INFP, ENFP and ISFJ. Out of these 58 teachers, 29 fall in INFP, 16 in ENFP and 13 in ISFJ categories.

Table 3

Frequency distribution of 58 teachers

Personality Type	Frequency
INFP	29
ENFP	16
ISFJ	13

Discussion

Results of this study highlight that employers in Pakistan do not utilize personality assessment tools during recruitment, selection and devising retention strategies. Therefore, "Ho1: Employers in Pakistan while devising recruitment, selection and retention strategies do not focus on the personality traits of employees" is accepted.

Secondly, this study's result also suggests that majority of high performing teachers i.e. 58 out of selected sample of 98 possess 03

personality types. Out of these 58 high performing teachers, 29 possess INFP, 16 ENFP, and 13 share ISFJ personality traits.

Chi-squared test i.e. $\lambda^2_c = \sum \frac{(Oi-Ei)^2}{Ei}$ was used to test H_{02}: "High performing teachers in Pakistan at primary and secondary levels do not possess the same personality traits as suggested by MBTI"

Since, chi-squared calculated value i.e. $\lambda^2_{calculated} = 62.3077 > \lambda^2_{7(0.05)} = 14.05$.

It implies that Ho2 i.e. High performing teachers in Pakistan at primary and secondary levels do not possess the same personality traits as suggested by MBTI" is rejected and thus alternate hypothesis is accepted at 5% level of significance. Hence, we conclude that the eight categories of personality types have significant difference to each other because $\boldsymbol{\lambda}^2$ test statistic shows independence of the eight categories.

A study conducted on high performing teachers found a predominance of 'ENFP' type profile (Göncz, 2017). Also, another research proposes specific list of professions for the 16 MBTI personality types, in which they will be more satisfied and would be able to perform at their best e.g. ESTJ, ISFJ, ISFP, INTJ, ENFJ, INFJ, ENFP, INFP can adopt teaching as a profession, which suits their personality(Walker, 1997), but this study found that at primary and secondary level, majority of high performing teachers belong to ISFJ, INFP and ENFP personality types. This inconsistency in results of this study may be due to various factors e.g., demographics, cultural, regional etc. So, further research is proposed in these areas.

Conclusion

This study was conducted to assess the personality types of high performing teachers at primary and secondary levels in the private education sector and found that these teachers possess 03 personality types i.e., INFP, ENFP, and ISFJ. Also, employers do not utilize personality assessment tests to understand their current as well as potential employees.

Recommendation

As identified in this study, for recruitment & selection, and retention purposes of primary and secondary level teachers, employers must utilize personality assessment tools and they may look for personality type i.e., ISFJ, INFP, and ENFP, as these three are shared by the high performing teachers.

References

Black, K. R. (1994). Personality screening in employment. *Am. Bus. LJ*, *32*, 69.

Calvasina, G. E., & Calvasina, R. V. (2016). Using personality testing as part of the employee selection process: Legal and policy issues for employers. *Journal of Legal, Ethical and Regulatory Issues*, *19*(2), 112.

Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1970). *Handbook for the sixteen personality factor questionnaire (16 PF): In clinical, educational, industrial, and research psychology, for use with all forms of the test*: Institute for personality and ability testing Champaign, IL.

Costa, P. T., & McCrae, R. R. (2008). The revised neo personality inventory (neo-pi-r). *The SAGE handbook of personality theory and assessment*, *2*(2), 179-198.

Dashiell Stoops, J. (1909). Reviews: Münsterberg, H. Psychotherapy. Pp. 40I. Price, $2.00. New York: Moffat, Yard & Co., I909. *The ANNALS of the American Academy of Political and Social Science*, *34*(3), 185-185.

Dawson, P. (2015). *Insights and analysis into weapon-enabled sexual offending.* University of Birmingham.

Farooq, M. S. (2018). Millennium development goals (MDGs) and quality education situation in Pakistan at primary level. *International Online Journal of Primary Education (IOJPE) ISSN: 1300-915X*, *7*(1).

Fink, S. B. (2012). Encourage engagement for accountability. *Industrial Management*, *54*(4).

Francis, L. J., & Village, A. (2022). The Francis Psychological Type Scales (FPTS): Factor structure, internal consistency reliability, and concurrent validity with the MBTI. *Mental Health, Religion & Culture*, 1-21.

Goldman, R. (2009). Personality testing: identify your top performers before you reduce your work force. *Industrial Engineer, 41*(9), 41-46.

Göncz, L. (2017). Teacher personality: a review of psychological research and guidelines for a more comprehensive theory in educational psychology. *Open Review of Educational Research, 4*(1), 75-95.

Greenberg, H., & Sweeney, P. (2008). Looking to hire a top performer? Develop a personality profile. *National Underwriter Life & Health, 112*(40), 16-17.

Hirsh, S. K., & Kise, J. A. (2012). *Introduction to Type® and Coaching*: CPP.

Jung, C. G., & de Laszlo, V. S. (1958). *Psyche and symbol: A selection from the writings of CG Jung*: Doubleday Garden City, New Jersey.

Kim, S., Liu, J. D., & Love, A. (2015). Event prestige as a mediator between sport involvement and intent to continue participation. *Perceptual and motor skills, 121*(2), 371-389.

King, C. R. (2012). *Personality Traits and User Behavior.*

Lazear, E. P., & Gibbs, M. (2014). *Personnel economics in practice*: John Wiley & Sons.

Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological review, 102*(2), 246.

Myers, I. B., McCaulley, M. H., & Most, R. (1985). *Manual, a guide to the development and use of the Myers-Briggs type indicator*: consulting psychologists press.

Nevins, J. L. (2004). Measuring the Mind: A Comparison of Personality Testing to Polygraph Testing in the Hiring Process. *Penn St. L. Rev., 109*, 857.

Osborne, G. D. (2012). Psychological-type theory and the exercise of Christian ministry: A pilot study. *Mental Health, Religion & Culture, 15*(9), 893-903.

Stuart, A. (2015). The rise of the hiring machines. Inc.

Taggar, S., & Parkinson, J. (2007). Personality tests in accounting research. *Journal of Human Resource Costing & Accounting*, *11*(2), 122-151.

Tomat, L., Trkman, P., & Manfreda, A. (2021). Personality in information systems professions: identifying archetypal professions with suitable traits and candidates' ability to fake-good these traits. *Information Technology & People*.

Turner, T. S. (2004). *Behavioral Interview Guide: A Practical, Structured Approach for Conducting Effective Selection Interviews*: Trafford Publishing.

Walker, T. C. (1997). *Psychological type as a framework for assessing organizational change: An investigation of interactions between Air Force leadership levels*: University of Southern California.

Walsh, J., Thomas, R. H., Church, C., Rees, M. I., Marson, A. G., & Baker, G. A. (2014). Executive functions and psychiatric symptoms in drug-refractory juvenile myoclonic epilepsy. *Epilepsy & Behavior*, *35*, 72-77.

Wilde, D. (2010). Personalities into teams. *mechanical engineering*, *132*(02), 22-25.

Journal of Contemporary Teacher Education
Volume: 6, 2022, 145–156

Determining the Effect of Bar Model Technique on Students' Mathematical Word Problem Solving Skills

Muhammad Naeem Shah*

Abstract

The study aims at probing the effect of Bar Model Technique on the word problem solving skills of primary level students in the subject of mathematics. Following were the objectives (i) to determine the effect of Bar Model Technique on student's mathematical word problem solving skills; (ii) to compare the academic achievements of male students and female students by using Bar Model Technique. It was experimental study and pretest-posttest equivalent group design was used as a tool for data collection in this study. Sample of the study was 40 students (Male & Female) of Government Primary School District Nowshera, Khyber Pakhtunkhwa. The sample students were divided in two group control and experimental on the base of pretest score by using paired random technique. Data were analyzed by mean, SD and t-test. Results of the study show that Bar Model Technique had significant effect on Mathematical word problem solving skills. It was also concluded that with visualization technique the learners had better understanding of word problem question and they participate in the activities. In the comparison of boys and girls, the girls had performed better than the boys. This study can be helpful for the students to develop their mathematical word problem solving skills. It provides alternative method for teachers to teach mathematics.

Keywords: Bar Model Technique, Mathematical word problem, Elementary level, Problem solving skills.

* PhD scholar Qurtuba University of Science & Information Technology Peshawar. Email: mnaeemshah4@gmail.com

Introduction

Mathematics is precisely considered as the science which mainly concerns the logic of arrangement, character, shape and quantity. We are surrounded all around by Mathematics in our daily life happenings. Mathematics is considered as the basic building block for the daily happenings of our lives, such as: money, architecture (ancient and modern), mobile devices, computers, art, engineering, different measurements, offices, in sports and many other aspects of life. The importance of mathematics is not only limited to technological and scientific development but it has also got a great importance in daily interactions at the dealings performed by both literate and illiterate citizens of any community, transportation and market places etc. (Golji & Dangpe, 2016).

According to Skovsmose (2013) the view point of educating learners in mathematics can be taken as narrowly and widely. Assumed the philosophy narrowly in some of the tasks of mathematics is considered as its aim. So it can be said that in this sense of mathematical philosophy i.e, narrow sense, the concern of education aims besides the way of its teaching.

According to Ali (2011) these mathematical standards included in the national curriculum are not present in subject of mathematics, which enable the leaners to utilize mathematical knowledge for the dire demand to live in a society surrounded by technology.

Jan and Rodrigues (2012) added that problem solving is one of the critical mechanisms in mathematics at all levels and in all mathematical activities in education. Almost all the learners of mathematics around the globe consider this word problem as a boring task and they feel difficulty in solving such questions. At elementary level Mathematics, Science, English, Urdu are the important subjects and Mathematics is one of them but students find it difficult to solve numbers, algebra and geometry.

The curriculum for the subject of mathematics should be offered in multiple ways in order to make the teaching of mathematics understanding and interesting. These multiple ways may include virtual (dynamic electronic) representation, pictorial (static visual) representation and physical (concrete) representations. Such representations could be used by mathematics educators for manipulative purposes to enhance the abstract contents or symbolic contents for modelling the concepts of mathematics. He further cited that in the late 1800s, it was used for the first time in mathematics education formally, the learners of mathematics and educators used concrete manipulative in those old days, but in the modern

classroom the use of pictorial and virtual manipulative is in practice for teaching of mathematics (Cope, 2015).

Bar Model is particular model which provides them well to the idea of equality. "In the subject of mathematics, bar model indicates to some extent long or short size stripe on which different scales are represented at the identical time, by the use of bar mode, a quantity of amount can be conveyed through a different quantity or amount". Three types of bad models are widely in practice: the first on in them is part-part-whole, the second type of bar model is comparing, and the third type of bar model is multiplication or division (Tanujaya, Prahmana & Mumu, 2017).

According to Azizah, Rohani and Mokhtar (2010) one of the important aspects of mathematics is word problem solving. It joins day to day and real life problems and applications.

The difficulties felt by the students in problem-solving can be easily tackled by the means of numerous activities and strategies. Of among those strategies is the use of bar model strategy, which is suitable enough for the learners to enhance their way of understanding, related to questions like word problem-solving. Bar model was introduced in Singapore Education. This strategy in teaching of mathematics is one of the visualization ways of learning. Problem-solving skills enable the learners of mathematics to be more independent in solving the problems (Vula & Kurshumlia, 2015).

Bar model strategy enable the learners to be more constructive their own knowledge. Bar Model strategy is a strategy that promotes understanding of the learners regarding problem-solving questions. Piaget's constructivist theory has a close relation with the strategy of bar model, which enable the school leaners to build their personal knowledge by practice (Hofer, 2015).

The visualization happening the minds of the learners can be transported by the means of the bar model more effortlessly, simply, naturally and smoothly as compare to symbols (Fong Ng & Lee, 2009).

Clements amd Sarama (2014) found that the learners were well able to express their thinking and overcome a much comfortable knowledge of equality, when they were provided a problem without symbolic contexts. Possibly the learners may show more improvement and they may enjoy the problem solving if bar model is used.

Statement of the Problem

Bar Model is an effective technique for students to acquire Math. Goal of the study is to practice this technique for primary level students, work

together to achieve the objectives of the learning subject. The study was intended at examining the effect of Bar Model Technique on the word problem solving skills of elementary level learners in the subject of mathematics.

Objectives

Research objectives were:

- To determine the effect of Bar Model Technique on students' mathematical word problem solving skills.
- To compare the academic achievements of male students and female students by using Bar Model Technique.

Hypotheses

The hypotheses were:

H_{01} There is no significant difference between the mean score of control and experimental group in post-test.

H_{02} There is no significant difference between the mean score of male students and female students of post-test control group

H_{03} There is no significant difference between the mean score of male students and female students of post-test experimental group.

H_{04} There is no significant effect of Bar Model Visualization Technique on student's mathematical word problem solving skills.

Method and Procedure

Population

All the students studying in Grade-V in all Government Primary Schools of Nowshera District were the population of the study.

Sample

Forty students of Grade-V of a Government Primary School Tehsil Pabbi District Nowshera were selected as sample of the study for the conduction of experiment. These forty students were separated in two different groups by paired random sampling technique. There were 15 male and 5 female students in each group.

Research Design

The research was experimental. Pretest-posttest equivalent group design was used to measure the effectiveness of treatment that involved two equivalent groups; the following was the symbolic representation of research design (Farooq & Tabassum, 2017).

R_E =	O_1 T	O_2
R_C =	O_3	O_4
d R_E =	$O_2 - O_1$	
d R_C =	$O_4 - O_3$	
D = d R_E -	d R_C	

R_E = Experimental Group Selected Randomly

R_C = Control Group Selected Randomly

O_1 & O_3 = Observations of pretest

O_2 & O_4 = Observations of posttest

T = Treatment

d = difference between mean scores

Research Instrument

The instruments used for the collection of data are as follows:
A Pre-test was administered to evaluate the educational performance at the start of treatment. A post-test was directed to evaluate the educational performance of learners after the completion of treatment. Both tests were established on the basis of lesson plan objectives as well as study objectives.

Validity and Reliability

The research instrument for this study was further improved by the professional input of three experts in the field of Mathematics and Educational research. The research instrument was administered to twelve students of Grade-V for pilot study. Split half method was used to

determine reliability with the help of Karl Pearson's coefficient of correlation and Spearman's rank difference method. The values of reliability score for test were 0.87 which is high positive correlation. It shows that the test was reliable.

Treatment

Teacher developed lesson plans for delivering the lecture. Control group were taught with lecture demonstration method. While experimental group were taught with Bar model visualization technique which include book, chalk/marker, blackboard or whiteboard, flash cards and Bar models (developed from packing foam and drawing on charts).

Three chapters Numbers and Arithmetic Operations, Unitary Method and Fractions were taught to the Grade-V students by two different teachers, one teacher for control and other one for experimental group.

Procedure

The researcher for this research study developed sixteen sets of lesson plans from Grade-V Mathematics Text Book. Duration of the study was six weeks. Each class lasted thirty-five minutes in duration. The subject students were introduced to mathematical words question and teacher converted word problem into an internal depiction. During this stage actions were also taken to move to an external representation from the internal representation. For instance, a diagram was drawn by the teachers related to the elements of the problem on black/white board and also presented charts and models (made of packing foam/ clipboard). These diagrams were rectangular in shape. Different strategies (operations) were applied in order to achieve the desired numerical solution. Groups were formed and blocks were distributed among them. Different sizes of blocks (models) were used. Students practiced independently to solve words problem questions using bar models.

The Part Whole Method

Part Whole Method is also called as the 'part part whole' method. In this method, bar models are used for representation of the known and unknown quantities as parts of a whole. It helps the learners of mathematics to represent the very common 'missing number' problems. This can be done in two ways.

Data Collection

Pre-test was given to the sample student of the study in order to divide them into two equal groups based on their pre-test scores using paired random sampling technique. Three chapters were taught to the experimental group through experiential learning, whereas the control

group was taught using the traditional (lecture demonstration) method. The treatment was continued for a total of six weeks. The post-test was given after the six-week treatment to assess the effectiveness of the treatment. The data was collected by instructors (research assistants) using a test (posttest) which was delivered to the sample learners.

Data Analysis and Findings

For analyzing data mean, standard deviation and t-test were applied. The mean scores were used to determine the overall performance of the groups, and the t-test was used to measure whether there was significant difference between the groups of experimental and control.

$H_{01.}$

Table 1

Significance of difference between the mean score of control and experimental group in post-test

Group	N	Mean	SD	V	df	t-value	Effect
Control	20	23.05	3.60	12.99	38	4.084	Significant
Experimental	20	29.15	5.62	31.60			

Degree of freedom=38 Significance level = 0.05 Table Value =2.024

First table indicates calculated t-value was 4.084 which were significant at significance level (0.05) because t-value (4.084) is larger than table (critical) value (2.024), hence the null hypothesis rejected. It means there was significant difference between the mean score of post control group and post experimental group.

$H_{02.}$

Table 3

Significance of difference between the mean score of male students and female students of post-test control group

Group	N	Mean	SD	V	df	t-value	Effect
Male	15	23.73	3.63	13.20	9	1.701	Not Significant
Female	5	21	2.91	8.5			

Degree of freedom=9 Significance level = 0.05 Table Value =2.262

Second table shows calculated t-value was 1.701 which was not significant at significance level (0.05) because t-value (1.701) was less than table (critical) value (2.262); hence the null hypothesis was accepted. It depicts that after receiving traditional method of teaching mean scores of male and female learners of control group were at identical level and had no significance difference.

$H_{03.}$

Table 3

Significance of difference between the mean score of male students and female students of post-test experimental group

Group	N	Mean	SD	V	df	t-value	Effect
Male	15	27.33	4.60	21.23	6	2.812	Significant
Female	5	34.6	5.12	26.3			

Degree of freedom=6 Significance level = 0.05 Table Value =2.446

Third table illustrate that calculated t-value 2.812 which was significant at significance level (0.05) because calculated t-value (2.812) was greater than table (critical) value (2.446); hence the null hypothesis was rejected. It shows that after receiving bar model method of teaching mean scores of male and female learners of experiment group was at different level and had significance difference.

$H_{04.}$

Table 4

Significance effect of Bar Model Visualization Technique on student's mathematical word problem solving skills

Group	N	Mean	SD	V	df	t-value	Effect
Pre-Experimental	20	22.9	3.14	9.88	19	5.375	Significant
Post-Experimental	20	29.15	5.62	31.60			

Degree of freedom=19 Significance level = 0.05 Table Value =2.093

Fourth table depicts that calculated t-value 5.375 which were significant at significance level (0.05) because calculated t-value (5.375) was greater than table (critical) value (2.093); hence the null hypothesis was rejected.

This shows that there was significant outcome of Bar Model Technique on students' mathematical word problem solving skills.

Discussion

The present study was undertaken to analyze the effect of Bar Model Technique on mathematical word problem solving skills of Grade-V students in the subject of mathematics. The study objectives were (1) to determine the effect of Bar Model Visualization Technique on students' mathematical word problem solving skills, (2) to compare the academic achievements of male students and female students by using bar model technique. Forty students studying in primary school were taken randomly as sample of the study. Teacher made test that were developed for collection of data. For analyzing acquire data statistical techniques mean standard deviation and t-test was used. The study was significant for students, teachers, curriculum developers and future researchers.

On the basis of findings of post-test score, the t-value (4.084) reject the null-hypothesis, it illustrates that experimental learning of students' achievement is significantly improved than traditional learning and results of the study supported the findings of the studies reported by Rau (2017) that experiential learning had significant effect on the increasing students' conceptual knowledge and achievement.

On the basis of findings of post-test score, at t-value (1.701) the null-hypothesis was accepted, it shows there was no significance difference between the mean score of female and male students of post-test control group.

On the basis of findings of post-test score, at t-value (2.812) the null hypothesis was rejected, it depicts that there was significance difference between the mean score of female and male students of post-test experimental group.

On the basis of findings of pre-experimental and post-experimental score, the t-value (5.375) reject the null-hypothesis, it illustrates that there was significant outcome of Bar Model Visualization Technique on student's mathematical word problem solving skills. Osman et al. (2018) determine that bar model enriches learners' understanding about problem solving as it helps to visualize and solve it.

Conclusions

- It was concluded from the results that the lecture demonstration method of teaching had no effect on Mathematical word problem solving skills and the learner cannot take interest in the subject.
- The results of the study show that Bar Model Technique had significant effect on Mathematical word problem solving skills and also the learner take interest in the subject.
- It was concluded that the current traditional methods of teaching were neither according to the needs of our society nor according to the needs of the learners.
- It was also concluded that with visualization technique the learners had better understanding of word problem question and they participate in the activities.
- In the comparison of boys and girls both performed same. Though after treatment the girls had performed better than the boys.

Recommendations

- It was concluded from the results that the traditional way of teaching has no effect on Mathematical word problem solving skills and the learner cannot take interest in the subject. Hence it is recommended that teachers should stop traditional methods to teach mathematics and government should arrange teacher training with visualization technique.
- The results of the study show that Bar Model Technique has significant effect on Mathematical word problem solving skills and also the take interest in the subject. Hence it is recommended that government should introduce the Bar Model Visualization Technique in the textbook of Mathematics.
- It was also concluded that with visualization technique the learners have better understanding of word problem question and they participate in the activities. Hence it is recommended that teachers should use visualization technique in Mathematics as well as in Science for better understanding of problem and teacher should motivate the learner to participate in the activities.
- In the comparison of boys and girls both performed same. Though after treatment the girls have performed better than the boys. However, it is recommended that the Bar Model Technique should be used for both male students and female students.

References

Ali, T. (2011). Exploring students' learning difficulties in secondary mathematics classroom in Gilgit-Baltistan and teachers' effort to help students overcome these difficulties. *Bulletin of Education and Research, 3*3(1), 47 https://ecommons.aku.edu/pakistan_ied_pdck/81/

Azizah, A., Rohani, A. T., & Mokhtar, N. (2010). Visual representations in mathematical word problem solving among form four students in Malacca. *Procedia-Social and Behavioral Sciences, 8,* 356-361 https://www.sciencedirect.com/science/article/pii/S1877042810021555

Clements, D. H., & Sarama, J. (2014). *Learning and teaching early math: The learning trajectories approach*. Routledge.

Cope, L. (2015). Math manipulatives: making the abstract tangible. *Delta Journal of Education, 5*(1), 10 19 https://eric.ed.gov/?id=EJ1097429

Farooq, R. A. & Tabassum, R. (2017). *Understanding research in education.* Revised Edition. Majeed Books, Rawalpindi: Pakistan https://www.qurtuba.edu.pk/thedialogue/The%20Dialogue/12_4/Dialogue_October_December2017_433-440.pdf

Fong Ng, S., & Lee, K. (2009). The model method: Singapore children's tool for representing and solving algebraic word problems. *Journal for Research in Mathematics Education, 4*0(3), p282-313 https://pubs.nctm.org/view/journals/jrme/40/3/article-p282.xml

Golji, G.G., & Dangpe, A. K. D. (2016). Activity-based learning strategies (ABLS) as best practice for secondary mathematics teaching and learning. *International Advanced Journal of Teaching and Learning, 2*(9), 106-116 https://www.ejmste.com/article/the-effects-of-activity-based-learning-on-sixth-grade-students-achievement-and-attitudes-towards-5401

Hofer, C. (2015). The introduction of the Singapore bar model in year 1 problem solving: a personal reflection. *The STeP Journal: Student Teacher Perspectives, 2*(2), 107-117 http://insight.cumbria.ac.uk/id/eprint/4149/

Jan, S., & Rodrigues, S. (2012). Students' difficulties in comprehending mathematical word problems in English language learning contexts. *International Researchers, 1*(3), 152-160 https://link.springer.com/article/10.1007/s10758-014-9238-0

Osman, S., Che Yang, C. N. A., Abu, M. S., Ismail, N., Jambari, H., & Kumar, J. A. (2018). Enhancing Students' Mathematical Problem-Solving Skills through Bar Model Visualisation Technique. *International Electronic Journal of Mathematics Education, 13*(3), 273-279. https://doi.org/10.12973/iejme/3919 https://www.taylorfrancis.com/ books/mono/10.4324/9780203520574/learning-teaching-early-math-douglas-clements-julie-sarama

Rau, M. A. (2017). Conditions for the effectiveness of multiple visual representations in enhancing STEM learning. *Educational Psychology Review*, *29*(4), 717-761. https://link.springer.com/article/10.1007/s10648-016-9365-3

Skovsmose, O. (2013). *Towards a philosophy of critical mathematics education* Vol. 15. Springer Science & Business Media https://books.google.com.pk/books?hl=en&lr=&id=WJ3dBgAAQBAJ&oi=fnd&pg=PT8&dq=Skovsmose,+O.+(2013).+Towards+a+philosophy+of+critical+mathematics+education+Vol.+15.+Springer+Science+%26+Business+Media&ots=fY7pJZWywz&sig=q_qdkwcnQPJNE-Nwad7l7vIPFbo&redir_esc=y#v=onepage&q&f=false

Tanujaya, B., Prahmana, R., & Mumu, J. (2017). Mathematics instruction, problems, challenges, and opportunities: A case study in Manokwari regency, Indonesia. https://scholar.google.com/scholar?cites=8770666387034682984&as_sdt=2005&sciodt=0,5&hl=en

Vula, E., & Kurshumlia, R. (2015). Mathematics word problem solving through collaborative action research. *Journal of Teacher Action Research*, *1*(2), 34-46 http://www.practicalteacherresearch.com/uploads/ 5/6/2/4/56249715/vula_34-46.pdf

INSTRUCTIONS FOR AUTHORS

1. Introduction

The Faculty of Education, Allama Iqbal Open University, welcomes you to come forward in participation of our peer reviewed journal in discipline of teacher education. The journal provides a platform for the publication of the most advanced research in the areas of teacher education. The paper may represent a variety of theoretical perspectives and different methodological approaches. This may rest on the full spectrum of established methodologies from experiments to field observations. The major criteria in the review and the selection process concern the significance of the contribution.

2. General Instructions

- Manuscripts should not exceed 20 pages and must conform to the style of the Publication Manual of the American Psychological Association (APA 6th edition).
- The name(s), affiliation(s), and phone, fax, e-mail addresses), permanent and postal address and a brief biography of the author(s) should appear on cover page.
- An Abstract of 200 to 250 words should be submitted with the manuscript.
- The authors are requested to check the article thoroughly with spellings, figures, and illustrations, etc., before sending for publication. Incomplete articles will not be entertained.
- The research papers are accepted for publication on the understanding that they have not been published earlier and are not being considered for publication elsewhere.
- Research papers/articles should be an original piece, including methodology, contents, data analysis and interpretation.
- Add something new to the existing stock of knowledge.
- The maximum number of authors for an article should not be not more than three.
- Authors should be clearly specified as i) main/corresponding author, ii) co-author, and/or iii) Supporting author.
- Manuscripts will be reviewed by at least three consulting editors/reviewers. This process normally takes 6-12 months.
- After approval, these will be edited thoroughly. If conditionally approved, the authors will be required to revise within a specific time.

3. Formatting

- Margins: One inch on all sides except left side with 1.5 inch.
- Font size and Type: 12-pt Time New Roman.
- Line Spacing: Double-space throughout the paper, including the title page, abstract, body of the document, references, appendixes, footnotes, tables, and figures.
- Alignment: Flush left (creating uneven right margin)
- Paragraph Indentation: 5-7 spaces.
- Pagination: The page number appears one inch from the right edge of the paper on the first line of every page.
- Running Head: The running head is a short title that appears at the top of the pages of a paper or published article. The running head is typed flush left at the top of all pages. The running head should not exceed 50 characters, including punctuation and spacing.
- Referencing: Sources cited appear in parentheses after each reference (direct or otherwise), giving author's name (unless mentioned in text), year of publication, and page number(s) in the case of direct quotes. Enclose quotes of 40 or fewer words in double quotation marks in the text; indent quotes longer than 40 words in block format; page numbers must be given. List all sources alphabetically at the end of the manuscript under the heading References using APA style.
- Footnotes are not allowed, and the use of endnotes is discouraged; however, necessary brief explanatory notes, numbered consecutively and marked in the text with superscript numeral may appear before the References under the heading Notes; citations in notes follow the same format.
- Graphics: Mathematical symbols should be clearly marked. Number the tables and figures with Arabic numerals. Prepare tables using tabs without vertical lines; provide figures, charts, and diagrams in camera-ready form.

- The soft copy of the article complete in all respect and all correspondence regarding contribution to the Journal and other information should be email: coordinator_jcte@aiou.edu.pk

4. Section of Research Article

Research articles should present innovative research that clearly addresses selected hypothesis or question. A research article should be divided into the following sections:

(i) Title Page
(ii) Introduction
(iii) Literature Review
(iv) Methodology
(v) Results and Discussion
(vi) Conclusions
(vii) Acknowledgment (if any)
(viii) References

5. References

The contributors are advised to follow the publication manual APA 6th edition for referencing. The accuracy and completeness of all references are the responsibility of the author(s). A reference list should contain only those references that are cited in the text.

References notes referring to material that is not readily available to the public (e.g. reports of limited circulation, unpublished works, personal communication, papers presented at meetings, some technical reports and works in progress) should include as much information as possible to make them retrievable.

6. Tables, Figures and Illustrations

The purpose of tables and figures is to present data to the reader in a clear and unambiguous manner. The author should not describe the data in the text in such detail that illustration or text is redundant. Figures and tables should be keyed to the text. Tables should each be typed on a separate sheet and attached at the end of the manuscript (after the references). Tables will be typeset.

7. Originality of Manuscript

Manuscripts are accepted for consideration with the understanding that they are original material and are not under consideration for publication elsewhere.

8. Review Process

After a preliminary editorial review, articles will be sent to referees who have expertise in the subject of the articles for blind review. Author(s) contributors will be informed about comments of the referees and will be required to revise the article accordingly, if required.

9. Plagiarism Policy

As per HEC policy, plagiarism will not be accepted in any journal of the Faculty of Education. With the submission author is required to declare the originality of his/her work, properly citing or copying previous publications. If plagiarism is detected during the peer review process, the manuscript may be rejected. If the plagiarism is detected after publication, the publisher has the right to issue a correction or retract the paper.

10. Conflict of Interest

Authors, reviewers or editorial board have to disclose every situation, which could potentially affect the impartial review and publication procedure.

11. Open Access Policy

Open Access is an unrestricted online model that allows the distribution of research papers through the internet to everyone in the global community with no price restraint. Thus, all articles published under open access can be accessed by anyone with internet access. All articles published by the Journal of the Faculty of Education will be freely accessible online to the global community.

Important Note: *Authors are required to agree to the Author's Declaration confirming that the work as submitted has not been published or accepted for publication, nor is being considered for publication elsewhere, either in whole or substantial part; the work is original and all necessary acknowledgements have been made; all authors and relevant institutions have read the submitted version of the manuscript and approve its submission; all persons entitled to authorship have been so included.*

Faculty of Education
ICT Building, Room No.110,
Allama Iqbal Open University, Islamabad.
Email: sidra.rizwan@aiou.edu.pk
aseditor.jcte@aiou.edu.pk
Phone No: 051-9054424, 9057708