Experience of Flow and Creativity in Relation to the Teacher Effectiveness of Upper Primary School Teachers

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Abstract

'The teacher must be at the centre of the fundamental reforms in the education system' (NEP 2020). A teacher plays a pivotal role not only in the capacity building of an individual but also in the development of a society. This study investigates the experience of flow and creativity in relation to the teacher effectiveness. The uniqueness of this research is that it uses hitherto unexplored concept of flow and its influence on teacher effectiveness in the Indian context. Flow describes a psychological state of optimal attention and engagement. The quantitative study, using the descriptive survey gathered data from 344 upper primary school teachers in Greater Mumbai Educational District. The correlational analysis has revealed a significant relationship between the experience of flow and teacher effectiveness. The regression equation estimates 35.9% as the influence of the experience of flow on teacher effectiveness. The study also found no significant relationship between creativity and teacher effectiveness.

Introduction

Education is for transformation. G.K. Chesterton would say that, 'if, in the end, it (education) does not empower and transform, then, it is not education at all.' The National

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Education Policy, 2020 begins by affirming that, "Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development" (NEP, 2020) A transformative education is one in which a student is incrementally invited to engage life, to reflect upon it and, then, to be of service to our world. A teacher plays a vital role in achieving this aim of education. Teachers can achieve these aims only if they themselves are able to engage, reflect and are of service.

Significance of the Study

The National Education Policy, 2020, aiming to undertake major reforms in all aspects of education lays particular emphasis on the development of the creative potential of each individual. It also underlines that, 'the teacher must be at the centre of the fundamental reforms in the education system' (NEP, 2020). In a changing educational environment, it is important that new researches are undertaken to help teachers to do their job as effectively as possible. Teacher effectiveness have often been narrowly conceptualised as a teacher's ability to produce higher than expected gains in student's standardised test scores (Goe, Bell and Little, 2008). However, multiple factors contribute towards the effectiveness of teachers (McBer 2000, Goe et al. 2008). Many researches therefore have been undertaken at various levels to explore the different factors that foster teacher effectiveness. Many of these researches have revealed different factors that foster teacher effectiveness. Based on the findings many changes have been brought in the field of pre-service as well as the in-service training of teachers. However, effectiveness is a qualitative term that grows and evolves with time and context. Add to it the fact that we study humans. This makes the exploration of teacher effectiveness an essential ongoing process.

The present study investigates the experience of flow and creativity in relation to the teacher effectiveness. Flow describes a psychological state of optimal attention and engagement. Besides, the study of flow involves number of sub-variables such as internal motivation, clarity of goal, feedback etc. which are essential elements of effectiveness. Thus, study of flow in relation to teacher effectiveness could help to widen our understanding of teacher effectiveness. The uniqueness of this research is that it uses hitherto unexplored concept of flow and its influence on teacher effectiveness in the Indian context. Research in flow undertaken at the three key elements of education, namely, teacher, learner and the learning environment will greatly enhance the quality of education. These will take us closer to our ideals of forming responsible citizens who in turn will build a better nation.

Statement of the Problem

A Study of the Experience of Flow and Creativity in Relation to the Teacher

Effectiveness of Upper Primary School Teachers.

Operational definitions

The Experience of Flow

The experience of flow is defined as a complex and positive state characterised by deep involvement and absorption, supporting personal growth, well-being and optimal functioning in daily life (Fave and Bassi, 2016). In the present study, the experience of flow is defined in terms of the frequency of experiencing the following eight dimensions in the context of a teacher — challenge and skill balance, merging of action and awareness, clear goals and feedback, concentration on the task at hand, sense of control, the loss of self-consciousness, the transformation of time, and autotelic experience.

Creativity

Franken (1994) defines creativity as, 'the tendency to generate or recognise ideas, alternatives or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others' (Franken, 1994). Creativity in the present study is the sum total of fluency, flexibility and originality. Fluency is the total number of relevant responses given by a subject. Flexibility is the number of categories in a given response. Originality refers to the statistical infrequency of a given relevant response in a given population. Greater the infrequency greater is the originality.

Teacher Effectiveness

In the present study, teacher effectiveness refers to the competencies of teachers in relation to the five dimensions, namely, preparation and planning for teaching, classroom management, knowledge of subject matter; its delivery and presentation including black-board summary, personality characteristics of teachers and interpersonal relations of teachers with others.

Objectives

1. To study the level of experience of flow, creativity and the teacher effectiveness of the upper primary school teachers.
2. To understand the relationship among the experience of flow, creativity and teacher effectiveness of the upper primary school teachers.
3. To observe the influence of the experience of flow on creativity and teacher effectiveness of the upper primary school teachers.
4. To find out whether there is any significant factor with positive loading of the variables namely, the experience of flow, creativity and teacher effectiveness.

Hypothesis

1. There is no significant relationship among the experience of

flow, creativity and teacher effectiveness of the upper primary school teachers.

2. There is no significant influence of the experience of flow on creativity and teacher effectiveness of the upper primary school teachers.
3. There is no significant factor with positive loading of the variables namely, the experience of flow, creativity and teacher effectiveness.

Methodology

The present investigation is a quantitative research using descriptive survey method.

Population and Sample

Since the investigator was not able to get the exact population, he had used disproportionate stratified random sampling for selecting the sample. The upper primary school teachers teaching in aided and un-aided English medium schools of Greater Mumbai Educational District formed the population of the study. The investigator randomly selected the upper primary schools from each zone. From these schools, the teachers teaching classes sixth to eighth formed the part of the sample. Thus, 344 upper primary school teachers were randomly selected for the study.

Tools Used

ArulHari-Teacher Flow Scale (TFS-AH) developed and validated by Arul John Bosco and Harichandan (2017). The dimensions of the tool are a) challenge and skill match, b) merging of action and awareness, c) clear goals and feedback, d) concentration on the task at hand, e) the paradox of control, f) the loss of self-consciousness, g) the transformation of time and h) autotelic experience. The reliability of the tool was found to be 0.83.

The Battery of Creativity Test prepared and standardised by Venkatarami Reddy (1989) was adopted by the researcher. This is the tool for measuring creativity in this study. The dimensions of creativity are a) fluency, b) flexibility and c) originality.

Kulsum Teacher Effectiveness Scale (TES-ku) was developed and standardised by Umme Kulsum (2011). The dimensions of the teacher effectiveness are a) preparation for teaching and planning, b) classroom management, c) knowledge of subject matter d) teacher characteristics and e) inter-personal relations.

Data Collection

The investigator personally visited the schools and administered the tools to the upper primary school teachers. The battery of creativity tests without time limit was administered first. After a short break, the teacher effectiveness scale and teacher flow scale were given to the teachers to fill.

Analysis and Interpretations of Data

Based on the objectives of the study, the descriptive as well as inferential

data analyses led to the following significant findings—

- It is inferred from the calculated 't' value 2.095 (calculated 'p' value 0.037) at 5% level that there is significant difference between aided and unaided upper primary school teachers in their experience of flow. While comparing the mean scores of aided (49.19) and unaided (51.56) school teachers in their experience of flow, unaided school teachers experience more flow than the aided school teachers.
- It is inferred from the calculated 't' value 2.985 (calculated 'p' value 0.004) at 5% level and comparing the mean scores of SSC school (49.28) and ICSE (54.13) school teachers, ICSE teachers are better in their creativity than the SSC school teachers.
- It is inferred from the calculated ANOVA (F value) for creativity 3.246 at 5% level of significance, for DF (3,340) and post hoc homogeneous subsets of different faculties in their total creativity, those science faculty teachers (52.46) are better in their creativity than the teachers of other faculties.
- It is inferred from the calculated ANOVA (F value) for creativity 9.605 at 5% level of significance, for DF (2,341) and post hoc homogeneous subsets of different class sizes for creativity that the teachers with class size of 35 to 55 students (53.82) are better than the others in total creativity.
- The correlational analysis found that there is very high significant relationship between the experience of flow and teacher effectiveness and all its dimensions in terms of total population (calculated 'p' value 0.000 at 1% level of significance) as well as of female upper primary school teachers (calculated 'p' value 0.000 at 1% level of significance). The relationship is shown in Table 1.

Table 1
Relationship between the Experience of Flow and Teacher Effectiveness of Upper Primary School Teachers in Relation to Total Sample and Gender

Sample Group	Calculated 'γ' Value	df	Calculated 'p' Value	Critical 'γ' at 1% Level	Critical 'p' Value	Remarks at 1% Level
Total sample	0.360	342	0.000	0.148	0.05	S*
Female	0.381	310	0.000	0.182		S
Male	0.266	30	0.141	0.361		NS**

* Significant ** Not significant

- The regression analysis reveals that there is significant influence of the experience of flow and creativity on teacher effectiveness of upper primary school teachers. Table 2 reveals the calculated R^2 value which is found to be 0.129 which represents 12.9% of influence of the two predictors namely the experience of flow and creativity on teacher effectiveness of the upper primary school teachers. The regression equation of Y on X presented in Table 3 reveals that 35.9% is the influence of the experience of flow on teacher effectiveness.

The regression equation of Y on X is expressed as follows:

$$\hat{Y} = aX + bZ + k$$

where, $\hat{Y}$ = Dependent variable
X = Predictor 1
Z = Predictor 2
k = Constant

Regression Equation:

T E = 0.004 C + 0.359 EF + 31.802

where, TE = Teacher Effectiveness
C = Creativity
EF = Experience of Flow

It is inferred from the table above that 35.9% is the influence of the experience of flow on teacher effectiveness.

The factor analysis of the variables yields two factors with

Table 2
Influence of the Experience of Flow and Creativity on Teacher Effectiveness of Upper Primary School Teachers

Model	Sum of Squares	df	Mean Square	Calculated 'F' Value	R	Calculated 'R^2' Value	Calculated 'p' Value	Remarks at 5% Level
Regression	4439.661	2	2219.831	25.350	0.360	0.124	0.000	
Residual	29860.339	341	87.567					S
Total	34300.000	343						

Table 3
Table Formulating Regression Equation Coefficients

Model	Unstandardised Coefficients	Standardised Coefficients	t	Sig.	
	B	Std. Error	Beta		
(Constant)	31.802	3.512		9.055	0.000
Experience of Flow	0.359	0.051	0.359	7.103	0.000
Creativity	0.004	0.051	0.004	0.088	0.930

considerable factor loading as given in Table 4. Teacher effectiveness and the experience of flow yield one factor and creativity and its dimensions yield a second factor. The combination of teacher effectiveness with creativity could be called as flexi-fluent-creative- teacher effectiveness.

Table 4
Factors Structure Obtained for the Variables

Rotated Component Matrix		
	Component	
	1	2
Experience of Flow	0.422	-
Preparation and Planning for Teaching	0.923	-
Classroom Management	0.932	-
Knowledge of Subject Matter	0.950	-
Teacher Characteristics	0.959	-
Inter-Personal Relations	0.809	-
Teacher Effectiveness	0.994	-
Fluency	-	0.952
Flexibility	-	0.958
Originality	-	0.939
Creativity	-	0.993

Discussions and Educational Implications

The research was undertaken with an objective to study the relationship among the experience of flow, creativity and teacher effectiveness of the upper primary school teachers. The findings of the study throw certain insights on the objectives. Significant insights and their educational implications are discussed below—

- There is highly significant relatioship between the experience of flow and teacher effectiveness and all its dimensions. This finding is true for the total sample as well as the female population. The regression equation estimates 35.9% as the influence of the experience of flow on teacher effectiveness. The estimated influence could be attributed to challenge and skill balance which is an important dimension of flow (Yang, 2018). The considerable balance between challenges teachers face in their profession and their skills (through subject mastery, planning, preparation and management) to perform the tasks could be one reason for the estimated influence of flow on teacher effectiveness. Another reason could be that a teacher with a clear goal prepares, plans and manages effectively. Similarly, unambigous feedback through classroom management and inter-personal relations facilitates greater effectiveness in their profession. The dimensions of flow, namely, clear goal and feedback also could have influenced the teacher effectiveness. The other dimensions of flow such as, immersion in activty and internal motivation could also have influenced teacher

effectiveness (Ljubin-Golub, 2018). The remaining 64% of influence on teacher effectiveness may be due to certain individual and environmental factors. There is evidence that individual factors such as general intelligence, thinking style (Toor, 2014), problem solving skills (Kumari, 2018), emotional intelligence (Reddy, 2018; Joshi, 2015) and the environmental factors such as supportive administration (Akbaş, 2019; Cockpim, 2019) and supervised guidance (Aja, 2017) influence teacher effectiveness.

- The study found that there is no significant relationship between creativity and teacher effectiveness of upper primary school teachers. The creativity of the teacher is not significantly influencing teacher effectiveness. The factor analysis too elicits that creativity and teacher effectiveness are two distinct factors. It also emerges that a teacher need not be creative in order to be effective. This finding throws open a discrepancy between the ideal and the ground reality. The reason for this could be that overemphasis on completing syllabus and getting ready for the exam which jeopardises the vital long-term goal of holistic formation of the student. Consequently, we have teachers who are efficient in getting their students score the highest grades in exams. The more important pursuit of higher order cognitive capacities such as critical thinking and problem solving, social, ethical and emotional capacities and dispositions which are supposed to be developed through education (NEP, 2020) seem to be neglected. It is the collective responsibility of the government, management and individual teachers to fix this glaring gap. Finally, the very definition of teacher effectiveness also should be broadened to include creativity as an integral part of teacher effectiveness.

Recommendations

On the basis of the research findings, the following recommendations are made—

Pre-service Training

Since the experience of flow does influence the teacher effectiveness, the pre-service training programs could include in their syllabus the theory of flow among the motivational theories. This would help the prospective teachers to consciously assess and develop the dimensions of flow which are found to influence teacher effectiveness.

Ongoing Formation of the in-service Teachers

It is noticed that flow influenced the teacher effectiveness in spite of the fact that teachers were not even aware of the concept of flow. Efforts could be made to accelerate flow by consciously fine tuning the

conditions for experiencing flow (Csikszentmihalyi, 1975). Teachers can be trained through workshops to enhance challenge-skill balance, set clear goals with unambiguous feedback etc., to stimulate flow experience. This will make them autotelic and enjoy what they do.

Flexibility in Curriculum

The research found that the creativity of the teacher is not influencing the teacher effectiveness. The curriculum could be flexible so there is space for teachers to be creative and encourage critical thinking in the classroom. It may be interesting to note that the ICSE teachers with flexible syllabus are better in creativity than the SSC school teachers with fixed syllabus.

Research

Flow could be studied with a sociological perspective to understand the effect of autotelic personality on the school and social environment.

The present study established a significant relationship between flow and teacher effectiveness. An experimental study could be undertaken to study the precise way the flow stimulating activities enhance the teacher effectiveness.

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