

Effect of Pedagogical Content Knowledge of Elementary Teachers

Abstract

"Any enlightened human being can be created by the teacher through providing two unique characteristics. One is building capacities among the students to inquire, to innovate, be creative and moral leadership; second is the development of social value system".(Kalam, 2008)

Elementary education is the base of all education systems, where every individual has get foundation for further education. The overall development of a toddler is feasible solely by robust foundation of pedagogy. Correct pedagogy leads one among the direction of achieving his goals. Learning could be a method through that we tend to acquire new modes of behavior or modify the prevailing modes of behavior. Human behavior is classed into three domains: psychological feature (thinking), emotive (feeling), and mental object (doing). Teaching could be a purposeful activity done to facilitate learning. Teaching is associate degree activity done to facilitate the scholars to accumulate (factual) data, to create (desirable) attitudes and to develop (required) skills. Therefore researcher thought the need of this study. This paper is an extract of Ph.D. work of four dimensions entitled "Study of Learning Outcome of Students In Relation To Pedagogical Content Knowledge of Elementary Teachers".

Keywords: Content, Pedagogy, Social Studies, Learning Outcomes.

Introduction

"Any enlightened human being can be created by the teacher through providing two unique characteristics. One is building capacities among the students to inquire, to innovate, be creative and moral leadership; second is the development of social value system".(Kalam, 2008)

The above quotation of Dr. Kalam put forth the whole scenario of process of education including aims of education, dimensions of education and role of the teachers. Here, the emphasis is given on social development and role of teacher. It also explores the interdependence between individual and social development and role of a teacher as a catalyst in this process, and this relationship between society and education is also explained in the report of UNESCO.

The report says - "Education is a social experience through which children learn about themselves, develop interpersonal skills and acquire basic knowledge and skills. This experience should begin in early childhood in different forms depending on the situations but always with involvement of families and local communities".(Delors, 1996)

The report claims education as social practice through knowledge and skills. With relation to this quotation report also emphasize that – "Education is at the heart of personal and community development, it's mission is to enable each of us, without exception, to develop all talents to the full and realize our creative potential, including responsibility for our own lives and achievements of personal aims." (Delors, 1996)

Review of Literature

Researcher had explored that one study is predicated on Technological education Content data that has been introduced as abstract framework for the cognitive content lecturers have to be compelled to effectively teach with technology. The framework stems from the notion that technology integration in a very specific academic context edges from a careful alignment of content, pedagogy and also the potential of technology, which lecturers who need to integrate technology in their teaching follow so have to be compelled to be competent all told three domains. There's a requirement of the study to explore the scientific discipline space.



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Aim of the Study

Education is the backbone of our society and every individual has the right to get an education. Elementary education is the base of all education systems, where every individual has get foundation for further education. The overall development of a child is possible only by strong foundation of elementary education. Proper elementary education leads one within the direction of achieving his goals. Learning is a process through which we acquire new modes of behavior or modify the existing modes of behavior. Human behavior is classified into three domains: cognitive (thinking), affective (feeling), and psychomotor (doing). Teaching is a purposeful activity done to facilitate learning. Teaching is an activity done to facilitate the students to acquire (factual) knowledge, to form (desirable) attitudes and to develop (required) skills. Learning is a process of information processing. It involves reception, selective perception, semantic encoding, storing in long term memory and o retrieving whenever necessary. Teaching should be arranged so as to enable the

process of learning. In the Fourth Survey of Research in Education (Buch, 1992) about 20 studies were reviewed related to teaching. But in the Fifth survey of research in education (1997), 44 studies on teaching were reviewed and placed in a separate chapter. This is a potent indicator of the momentum gained by the research on teaching.

Objectives, Hypothesis and Findings

To study the learning outcomes of students in relation to pedagogical content knowledge of social science teachers in elementary schools

Hypotheses

¹H₀

There is no correlation between student's learning outcomes and Pedagogical Content Knowledge of social science teachers in elementary schools. i.e. ¹H₀ : r₁ = 0

¹H₁

There is positive correlation between student's learning outcomes and Pedagogical Content Knowledge of social science teachers in elementary schools. i.e. ¹H₁:r₁> 0

| Correlations | | | | REMARK |
|----------------------|---------------------|---------------------|--------|---------------------------|
| | | Students Mean Score | D6_PCK | |
| Student's Mean Score | Pearson Correlation | 1 | .398** | Weak positive correlation |
| | Sig. (2-tailed) | | .000 | |
| | N | 276 | 276 | |
| D6_PCK | Pearson Correlation | .398** | 1 | |
| | Sig. (2-tailed) | .000 | | |
| | N | 276 | 276 | |

** . Correlation is significant at the 0.01 level (2-tailed).

Inference

Since the value of p = 0.000 is less than (α =0.01) , null hypothesis will not accepted at 99% level of significance. Thus, there is positive correlation between student's learning outcomes and Pedagogical Content Knowledge of social science teachers in elementary schools.

To study the learning outcomes of students in relation to technological knowledge of social science teachers in elementary schools

Hypothesis

²H₀

There is no correlation between student's learning outcomes and technological Knowledge of social science teachers in elementary schools. i.e. ²H₀ : r₂ = 0

²H₁

There is positive correlation between student's learning outcomes and technological Knowledge of social science teachers in elementary schools. i.e. ²H₁:r₂> 0

| Correlations | | | | REMARK |
|----------------------|---------------------|---------------------|--------|-------------------------------|
| | | Students Mean Score | D1_TK | |
| Student's_Mean_Score | Pearson Correlation | 1 | .572** | Moderate positive correlation |
| | Sig. (2-tailed) | | .000 | |
| | N | 276 | 276 | |
| D1_TK | Pearson Correlation | .572** | 1 | |
| | Sig. (2-tailed) | .000 | | |
| | N | 276 | 276 | |

** . Correlation is significant at the 0.01 level (2-tailed).

Inference

Since the value of p = 0.000 is less than (α =0.01) , null hypothesis will not be accepted at 99% level of significance. Thus, there is positive correlation between student's learning outcomes and technological Knowledge of social science teachers in elementary schools. This shows that teaching becomes more effective when any kind of technology is used in classroom. It also gives new direction and reinforcement towards learning.

To study the learning outcomes of students in relation to pedagogical knowledge of social science teachers in elementary schools

Hypothesis

³H₀

There is no correlation between student's learning outcomes and pedagogical Knowledge of social science teachers in elementary schools. i.e. ³H₀ : r₃ = 0

³H₁

There is positive correlation between student's learning outcomes and pedagogical

Knowledge of social science teachers in elementary schools. i.e. $^3H_1 : r_3 > 0$

| Correlations | | | | Remark |
|---------------------|---------------------|---------------------|--------|-------------------------------|
| | | Students Mean Score | D2_PK | |
| Students_Mean_Score | Pearson Correlation | 1 | .573** | Moderate positive correlation |
| | Sig. (2-tailed) | | .000 | |
| | N | 276 | 276 | |
| D2_PK | Pearson Correlation | .573** | 1 | |
| | Sig. (2-tailed) | .000 | | |
| | N | 276 | 276 | |

** . Correlation is significant at the 0.01 level (2-tailed).

Inference

Since the value of $p = 0.000$ is less than ($\alpha = 0.01$), null hypothesis will not be accepted at 99% level of significance. Therefore, we conclude that there is positive correlation between student's learning outcomes and pedagogical Knowledge of social science teachers in elementary schools. It shows that teaching methods used in the classroom matters and effecting teaching includes various types of teaching style.

To study the learning outcomes of students in relation to content knowledge of social science teachers in elementary schools

Hypothesis

4H_0

There is no correlation between student's learning outcomes and Content Knowledge of social science teachers in elementary schools. i.e.

$^4H_0 : r_4 = 0$

4H_1

There is positive correlation between student's learning outcomes and Content Knowledge of social science teachers in elementary schools. i.e.

$^4H_1 : r_4 > 0$

| Correlations | | | | Remark |
|----------------------|---------------------|----------------------|--------|--------------------------|
| | | Student's Mean Score | D3_CK | |
| Student's_Mean_Score | Pearson Correlation | 1 | .428** | Low Positive Correlation |
| | Sig. (2-tailed) | | .000 | |
| | N | 276 | 276 | |
| D3_CK | Pearson Correlation | .428** | 1 | |
| | Sig. (2-tailed) | .000 | | |
| | N | 276 | 276 | |

** . Correlation is significant at the 0.01 level (2-tailed).

Inference

Since the value of $p = 0.000$ is less than ($\alpha = 0.01$), null hypothesis will not be accepted at 99% level of significance. Therefore, we conclude that there is positive correlation between student's learning outcomes and Content Knowledge of social science teachers in elementary schools. The content knowledge effects teaching and the updated version of current development in the field of education enhance achievement of the students.

Conclusion

The study shows that there is positive correlation between student's learning outcomes and Pedagogical Content Knowledge of social science teachers in elementary schools. Therefore the teaching becomes more effective when any kind of technology is used in classroom. It also gives new direction and reinforcement towards learning. The teaching methods used in the classroom matters and effecting teaching includes various types of teaching style. The content knowledge effects teaching and the updated version of current development in the field of education enhance achievement of the students.

References

Blank, R.K., de las Alas, N., & Smith, C. (2007, February). *Analysis of the quality of professional development programs for mathematics and science teachers: Findings from a cross-state study*. Washington, DC: Council of Chief State School Officers.

Borko, H. (2004, November). *Professional development and teacher learning: Mapping the terrain*. *Educational Researcher*, 33(8), 3-15.

Cohen, D. & Hill, H. (2000). *Instructional policy and classroom performance: The mathematics reform in California*. *Teachers College Record*, 102(2), 294-343.

Fleer, M. (1999) *The science of technology: young children working technologically*, *International Journal of Technology and Design Education*, 9, 269-91.

Grossman, P. (1990) *The making of a teacher: teacher knowledge and teacher education* (New York, Teachers College Press).

Kennedy, M. (1998, March). *Education reform and subject matter knowledge*. *Journal of Research in Science Teaching*, 35(3), 249-263.

Sharma, S. Malik, M.A. (2018) *Impact of Emotional Intelligence on cognitive Difficulty and Academic Achievement of Higher Secondary Students*, ISSN: 2456-5474, Vol-3 Issue-3 April - 2018, *Innovation the Research Concept*. Page No.22-25

Sharma, S. Rai, A. (2018) *A Study of Vocational Interest among Prospective Teachers Studying in Central Universities*, Page No. 19-24, *International Journal of Engineering, Applied and Management Science Paradigms*, Volume 52 Issue 01, Quarter 01, March 2018

Shulman, L.S. (2000, January-February). *Teacher development: Roles of domain expertise and pedagogical knowledge*. *Journal of Applied Developmental Psychology*, 21(1), 129-135.