Synopsis

Synopsis of the thesis entitled **Development of a Package for Enhancing Pedagogical Content Knowledge of Secondary School Teachers in Malayalam**

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Introduction

Globalisation, industrialisation and technical advancement have contributed immensely and brought up changes in the way of instruction especially the conventional teacher and traditional teaching. But it is in no way diminished the role of the teacher. Virtual classroom do of course dispensed with the traditional classroom. But a teacher as a facilitator do play a vital role, so as to say one of the most important factors in the contemplated educational reconstruction is the teacher, his personal qualities, educational qualifications, professional training and the place he occupies in the school/college as well as in the community. As harbingers of social progress, teacher should ensure against obsolescence and should update and make himself abreast with the current developments so as to cope with the ever booming knowledge. Gone are the days the teachers acted as tyrants, instead in the present education scenario, they are facilitators, guides and active partners in teaching. Teacher’s role today to guide and inspire the students and act as partner in the teaching–learning process, providing purposeful activities through self-study, observation, use of various innovative methods.
and techniques of teaching and evaluation of the pupil’s performance. The key elements in the most of the educational reforms are the professional development of teachers. This new emphasis has been accepted by teachers and educators in general as it represents a much needed appreciation of teachers work and also promotes the concept of teaching as a profession. The vast majority of teachers and the school administrators we have encountered are dedicated professionals who work hard under demanding conditions. It is for this hardworking teachers and educators that professional development opportunities are needed, not only because they promote the recognition of their work as professionals but also for all professional in any field, new opportunities for growth and exploration.

**Need and significance of the study**

Effective teaching necessitates making different and principled choices exercising careful judgement, and honouring the complex nature of the educational mission. Based on the latest developments in pedagogy, teaching has become more than an activity that conserves valued knowledge and skills by transmitting them to succeeding generations. Teachers also have the responsibility to challenge existing structures, practices and definitions of knowledge to invent and test new approaches to pursue organisational change in a constant attempt to improve the teaching-learning practices.

Delors (1996) remarked that in the report to UNESCO by the International Commission on Education for the Twenty First Century urges
that a rethinking of teacher education is necessary in bring out in future teachers precisely those human and intellectual qualities that will facilitate a fresh approach to teaching. The commission pointed out that *the importance of teachers in basic education and improving teacher’s qualifications are tasks to which all governments must address themselves.*

Content knowledge encompasses what Bruner (1992) called the *structure of knowledge the theories, principles and concepts of a particular discipline*. Especially important is *content knowledge that deals with the teaching process*. Including the most useful form of representing and communicating content and how student’s learn the specific concepts and topics of a subject. According to Grossman (2000) *if beginning teachers are to be successful, they must wrestle simultaneously with issue of Pedagogical Content Knowledge as well as general pedagogy (generic teaching principles)*

Shulman (1987) has attempted to organize the important domains of knowledge for teachers. They should have thorough mastery of the specific subject they teach, a thorough knowledge of the learners and their characteristics, a sound pedagogical knowledge with special reference to those broad principles and strategies of classroom management, knowledge of the context under which learning takes place. Shulman (1986) claimed that the emphases on teachers’ subject knowledge and pedagogy were being treated as mutually exclusive domains in research concerned with these
domains. The practical consequence of such exclusion was production of teacher education programs in which a focus on either subject matter or pedagogy dominated. To address this dichotomy, he proposed to consider the necessary relationship between the two by introducing the notion of PCK. The knowledge includes knowing what teaching approaches fit the content, and likewise, knowing how elements of the content can be arranged for better teaching. This knowledge is different from the knowledge of a disciplinary expert and also from the general pedagogical knowledge shared by teachers across disciplines. PCK is concerned with the representation and formulation of concepts, pedagogical techniques, knowledge of what makes concepts difficult or easy to learn, knowledge of students’ prior knowledge and theories of epistemology.

Training on PCK help the teachers to acquaint with the aims and goals of education. Training on PCK help the teachers to develop the ability to use a number of instructional materials and audio-visual aids, to organize and supervise co-curricular activities in school, to plan the lessons effectively and communicate knowledge efficiently. There is much research on teaching, student and student learning, but very little research focuses on teachers and what teachers do in the classroom. Shulman (2002) states not to ask how do teachers think and make decisions, but what do teachers know and how do they use what they know? That is to say how do teachers who already know and understand their subjects in particular ways learn to transform their
knowledge into representations that make sense to their student’s learning?

Most of the teachers are not aware of the innovative strategies and methods, how to bridge content and pedagogy in the proper way, how to meet classroom practices, highlighting connections between concepts and misconceptions about language concepts. Teachers are expected to do many tasks in the classroom such as managing classroom, organize activities, allocate time turns, structure assignments, praise students who do well and cajole, bribe or urge students who are not doing well to do better, plan lessons and judge student understanding. Studies conducted in this area (Shulman 1987, Mullock 2006) revealed that Pedagogical Content Knowledge is highly essential for teachers to make the teaching learning process effective and meaningful. Review of Studies in this area, revealed that only a very few studies have been conducted in this area on different disciplines.

It is presumed that a study of this type will be useful for identifying the level of knowledge of teachers in different aspects and components, need and requirement of teachers related to PCK. The findings of the study can be utilised for planning and restructuring the curriculum and training of teacher empowerment practices and programmes. This may lead to achieve the broad and specific aims and objectives of quality education.

**Statement of the Problem**

The area selected for the study is Pedagogical Content Knowledge of Secondary School Teachers in Malayalam. Hence the study is entitled as
DEVELOPMENT OF A PACKAGE FOR ENHANCING PEDAGOGICAL CONTENT KNOWLEDGE OF SECONDARY SCHOOL TEACHERS IN MALAYALAM

OBJECTIVES OF THE STUDY

(1) To assess the knowledge of Pedagogical Content Knowledge and Life Skill Training measures of Secondary School Teachers in Malayalam

(2) To prepare a Package for enhancing Pedagogical Content Knowledge (PCK) of Secondary School Teachers in Malayalam

(3) To assess the effectiveness of the Package for enhancing PCK of Secondary School Teachers in Malayalam by comparing the Pre and Post Assessment scores (total sample) as well as for sub samples based on the following variables

(i) Gender

(ii) Type of Institution

(iii) Educational Qualification

(iv) Teaching Experience

(4) To assess the effectiveness of Package for enhancing PCK of Secondary School Teachers in Malayalam by comparing Pre And Post Assessment scores (total sample) for the following components

(i) Knowledge of teaching strategies

(ii) Knowledge of misconceptions about language concepts
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(iii) Cognitive demands of task

(iv) Knowledge of curriculum and resources

(v) Profound understanding of fundamental aspects of Malayalam

(vi) Deconstructing content to key components

(vii) Highlighting connections between concepts

(viii) Goals for learning

(ix) Getting and maintaining student focus

(x) Classroom technique

(5) To assess the effectiveness of the Package in enhancing knowledge about Life Skill Training measures (total sample)

(6) To identify the details regarding the following aspects related to in-service programmes;

(i) Provisions for in-service training of secondary school teachers in Malayalam

(ii) Reasons for not attending the in-service programmes

(iii) Provisions for learning innovative strategies

(iv) Expected areas of in-service programmes

(v) Availability of materials for developing Pedagogical Content Knowledge
To identify the advantages and disadvantages of PCK Package for enhancing Pedagogical Content Knowledge of Secondary School teachers in Malayalam

**HYPOTHESES OF THE STUDY**

**H**(1) There will be significant difference between Pre and Post Assessment PCK scores of Secondary School Teachers in Malayalam, when the group is exposed to Package on PCK (total sample)

**H**(2) There will be significant difference between the Post Assessment scores for subsamples based on the following variables

(i) Gender

(ii) Type of institution

(iii) Educational Qualifications

(iv) Teaching Experience

**H**(3) There will be significant difference between Pre and Post Assessment scores for the following PCK components (total sample)

(i) Knowledge of teaching strategies

(ii) Knowledge of misconceptions about language concepts

(iii) Cognitive demands of task

(iv) Knowledge of curriculum and resources

(v) Profound understanding of fundamental aspects of Malayalam.
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(vi) Deconstructing content to key components

(vii) Highlighting connections between concepts

(viii) Goals for learning

(ix) Getting and maintaining student focus

(x) Classroom technique

H_{(d)} There will be significant difference between Pre and Post Assessment scores based on Life Skill Training measures (total sample)

METHODOLOGY IN BRIEF

The investigator adopted Experimental cum Survey method for the study. Experimental method was used for testing the effectiveness of Package for enhancing Pedagogical Content Knowledge of Secondary School Teachers in Malayalam. Survey Method was used for collecting the details regarding the knowledge of Secondary School Teachers on PCK, and various aspects related to in-service programmes.

Pre test-Post test single group experimental design was used for the study. The sample selected for the study comprised a group of 300 secondary school teachers in Malayalam. A group of 10 experts rated the suitability of the PCK Package and Assessment Schedule on PCK.

TOOLS AND TECHNIQUES

The following tools were employed for collecting necessary data:
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(i) PCK Package for enhancing Pedagogical Content Knowledge of Secondary School Teachers in Malayalam.

(ii) Assessment Schedule on PCK for assessing Pedagogical Content Knowledge of Secondary School Teachers in Malayalam.

(iii) Rating Scale on PCK for assessing the level of knowledge about Pedagogical Content Knowledge of Secondary School Teachers in Malayalam.

(iv) Observation Schedule for assessing classroom practices of Secondary School Teachers in Malayalam related to PCK components.

(v) Rating Scale for experts for assessing suitability and practicability of PCK Package.

(vi) Rating Scale for experts for assessing suitability of the Assessment Schedule on PCK

(vii) Questionnaire for Secondary School Teachers in Malayalam to collect details about various aspects of in-service programmes.

STATISTICAL TECHNIQUES EMPLOYED

(1) Test of significance of difference between means

(2) Percentage Analysis

(3) F-test
MAJOR CONCLUSIONS

(1) Ratings of teachers on the level of knowledge about components of PCK revealed that for many of the components of PCK (innovative teaching strategies, misconceptions about language concepts, represents concepts using appropriate methods, expectations of curriculum and available resources, deconstruct content to key components and generic classroom practices) and life skill training measures, the level of knowledge of a great majority of teachers is very low.

(2) Analysis of data revealed that there is significant difference between Pre and Post assessment PCK scores for total samples. The difference is in favour of Post assessment scores and the difference can be attributed to the influence of the use of PCK package. Hence it can be concluded that PCK package is effective in enhancing the level of PCK knowledge in teachers.

(3) The statistical analysis of data revealed that PCK package is effective in enhancing the level of knowledge of secondary school teachers in Malayalam about the following components of PCK:

(i) Knowledge of teaching strategies

(ii) Knowledge of misconceptions about language concepts

(iii) Cognitive demands of task
(iv) Knowledge of curriculum and resources

(v) Profound understanding of fundamental aspects of Malayalam

(vi) Deconstructing content to key components

(vii) Highlighting connections between the concepts

(viii) Goals for learning

(ix) Getting and maintaining student focus

(x) Classroom technique

(4) Analysis of post assessment scores of PCK (based on sub samples revealed that there is no significance difference between pre and post assessment scores of PCK with regard to the following variables.

(i) Gender

(ii) Type of institution

(5) Analysis of data also revealed that PCK package is more effective to enhance Pedagogical Content Knowledge of Post Graduate teachers than that of Graduate teachers.

(6) Analysis of ratings of experts on suitability of PCK package revealed that all the experts reported that PCK package is suitable to a great extent for enhancing Pedagogical Content knowledge of secondary school teachers in Malayalam.
Analysis of ratings of experts on practicability of PCK package revealed that all the experts recorded that PCK package is practicable to a great extent.

Analysis of teachers’ response regarding the advantages of PCK package revealed that the package is suitable to develop Pedagogical Content Knowledge, helpful to clarify the confusions and doubts about the pedagogical aspects, useful to know different teaching methods and helpful in Life Skill training.

Analysis of Ratings of teachers regarding expected areas of in-service programmes revealed that teachers are in need of acquiring more knowledge and skills about personality development programmes, Life skill training, Malayalam software and innovative strategies.

**EDUCATIONAL IMPLICATIONS**

The study revealed that Package on PCK is effective in enhancing Pedagogical Content Knowledge of Secondary School Teachers in Malayalam. Package prepared by the investigator, can be used for enhancing knowledge and skills of teachers (primary, higher secondary, college level) with necessary modifications in accordance with the need and requirements of teachers.
(2) The tools and techniques used by the investigator can be utilized for identifying the level of Pedagogical Content Knowledge of language teachers.

(3) The findings of the study can be served as an initial step to promote discussions leading to the development of further teacher empowerment programmes for teachers.

(4) The outcomes of the study highlight the need for restructuring the content and methodology of existing faculty improvement programmes.

(5) DIETS and other training institutions may take steps in the light of the study to restructure the present curriculum and faculty improvement programmes to enhance Pedagogical Content Knowledge of teachers.

(6) The outcomes of the study highlight the need for restructuring the existing empowerment programme and practices to make it more responsive and feasible to enhance the functional efficiency of the system.

(7) The policy makers and educational planners can design and develop in-service teacher empowerment programmes that aim at better teacher competencies, contributing to the improvement of quality of education.