



RESEARCH PAPER

Maximizing Primary School Teachers' Content-Based Knowledge in English through Professional Development Training

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ABSTRACT

The study examined the effect of professional development training on content-based knowledge in English subject using an experimental approach at primary school level. Professional development trainings develop and improve the desired abilities or skills which are required to provide the quality education. Data were obtained from 140 primary school teachers through pre-test and post-test achievement scores of teachers in English subject. To analyze the data, descriptive as well as inferential statistics were used. A training module on English content knowledge was developed by an English language, content, and assessment expert. The trainees were given 8 hours training in 5 clusters. The tests were designed from English book of class 5. The study found significant mean difference in the achievement scores of the teachers in the pretest and the posttest, which provided evidence of the effect of professional development training on teachers' content-based knowledge in English subject. The researchers recommend to improve content-based knowledge of teachers in English through professional development training.

KEYWORDS

Content-Based Knowledge, Professional Development Training, Quality Education

Introduction

At primary school level, Governments of Pakistan have been making serious effort for providing the quality education to students and helping them to make successful member of the society. There are various issues in terms of increasing enrollment number, number of teachers, and low quality of teachers' knowledge in English language. Due to low qualification, inexperienced teachers, and weak content-based knowledge to teach English, students remain at distance from achieving better grades in high stakes tests (Kouser et al., 2011; Muhammad & Iqbal, 2015). Teachers, therefore, need the professional development training to continuously perform better to uphold the quality and enhance their content-based competency in English subject. A number of studies emphasized on the importance of professional development training to develop and update content-based knowledge especially in English subject because teacher must understand about all the rules of grammar and how to teach the learners effectively (He & Lin, 2018; Kim, 2012; Mendoza, 2022; Omoto & Nyongesa, 2013; Pessoa et al., 2007; Rodriguez & de-Jesus, 2021).

The goal of teacher professional development for educators is to provide them new skills, establish their own learning strategies, and use what they have learned to better serve the needs of their students. In this context, professional development is defined as

the process of gathering values, professional expertise, and personal traits that let instructors continuously adjust to changing demands in the classroom (Avalos, 2013). Professional development has various forms as in-services trainings, workshops, and seminars (Adams et al., 2023). This study examined the effect of professional development training on teachers' content-based knowledge in English subject through using an experimental approach which is highly needed to evaluate the effectiveness of professional development training programs in Pakistan. Since primary school teachers have been providing poor results in English on high stakes tests, the training of these teachers was highly recommended. To meet the need of these teachers, this study employed pre and post experimental design.

Conceptual Framework of the study

The study theorized through theory of adult learning given by Knowles (1984) which assumed that to improve the professional approach logic of different concepts and motivation towards learning must be understood by the adult (Borg, 1998). The study used an experimental approach which help the stakeholder to develop their better approach towards their profession. The study used the following interrelated conceptual framework to understand the mechanism.

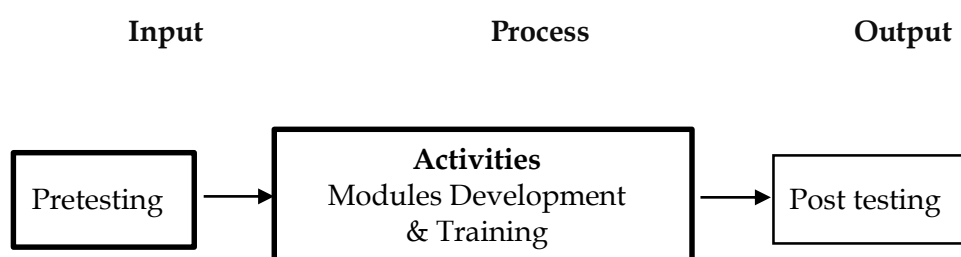


Figure 1: Conceptual framework of the study

Literature Review

Professional development Training of Teachers and Content-Based Knowledge in English

At primary school level, there are various issues involves such as low qualification of teachers, use of poor pedagogical skills, assessment techniques, and lack of professional development training in Pakistan (Kouser et al., 2011; Ministry of Education, 2009; Muhammad & Iqbal, 2015), but most important, teachers are lacking in their content knowledge especially in English subject due to foreign language which required high level of content knowledge and competencies to teach their students at primary level (Ahmad et al., 2013; He & Lin, 2018; Kim, 2012; Mendoza & Wu, 2022; Omoto & Nyongesa, 2013; Pessoa et al., 2007; Rodriguez & de-Jesus, 2021).

There are also some other studies that showed their concerned about the low teaching quality, poor content knowledge, memory-based assessment, insufficient teaching staff, and lack of financial resources which are the main problems for low level quality education and declining student performance in Pakistan at primary school level (Ahmad et al., 2013; Akram & Butt, 2021; Kouser et al., 2011; Memon, 2007).

Poor subject matter knowledge of teachers especially in English subject, poor use of the teaching methodologies and poor use of student assessment techniques are the major issues which should be addressed and resolved immediately if we want to compete our education system with other countries. In certain situation, when the primary schools were

not performing well and the Punjab government was paying billions of rupees to the caretakers of these failing schools, it was right time to provide trainings of these teachers where possible, and suggest remedial actions so that the system could work effectively. The study was initiated to address these challenges properly and find out proper solutions to improve content knowledge in all the subjects especially for English subject and educational improvement of schools.

There are various studies which provided evidence that good content-based knowledge about English subject is highly needed, for that purpose we make our teachers competent through providing professional development trainings. Omoto and Nyongesa (2013) revealed that content knowledge and pedagogical knowledge while teaching English subject at primary school level is most essential for the development of language and understand the rules of grammar which can be improved through providing the professional development opportunities to teachers that is the main factor to provide the quality education to their learners.

In another study, Rodriguez and de-Jesus (2021) examined how professional development contributes to enhance the content-based knowledge about English subject and data were collected through questionnaires and interviews. The study revealed that primary school teachers improved their content knowledge about English subject and teaching practices as a result of mentoring process conducted through professional development trainings. Mendoza and Wu (2022) also explored that content knowledge can be improved by providing different professional opportunities such as seminars, workshops and training sessions at school level.

He and Lin (2018) investigated the role of professional development meetings of teachers in content-based knowledge of subject English and revealed that professional development highly contributed to enhance the capabilities of teachers in teaching English subject. In another study, Pessoa et al. (2007) also found the similar results that if we want to make the teachers competent in terms of teaching English subject, continuous professional development will be most important factor to lead the instructional process effectively. Moreover, Kim (2012) revealed that to produce better results of the students while teaching English subject, effective content knowledge and methodology are required which might be obtained through making effective arrangements of professional development for teachers.

After reviewed the different previous studies, it has been concluded that English is not out first language instead it is the foreign language, therefore our teachers are lacking the competency in that particular subject and needed to get expertise to teach this subject which further might produce the quality learners at primary school level. To obtain the expertise and competence in the English subject, effective arrangement for professional development trainings is required because various studies confirmed that through arranging the trainings, teachers' competence in that subject can be maximized and better results can be produced.

Material and Methods

From 5 clusters, 140 primary school teachers were pretested on an achievement test designed by the researchers based on the content taken from class 5 English book designed by the Punjab Textbook Board. To develop the content-based knowledge in English subject, a rigorous training module was developed by an expert of the language. The training was given by a university professor who had vast experience of teaching English language courses to the undergraduate students of teacher education programs. The training lasted

for 5 days. After the training, the teachers were post tested on the same test as used for pretesting. The difference in their achievement scores on pretest and posttest were calculated. Various threats related to the validity were addressed such as maturation, pretesting, history, and mortality.

Table 1
Cluster-Wise Sample Distribution

S. No.	Name of Cluster	Participants (f)
1	Cluster 1	30
2	Cluster 2	27
3	Cluster 3	30
4	Cluster 4	30
5	Cluster 5	23
	Total	140

Testing

The major segment of the study was testing teachers' current knowledge in English subject. To serve this purpose, the researchers developed the test of English subject from the content and the questions taken from the textbook of grade 5 approved by the Punjab Textbooks Board (PTB) Lahore. The Test of *English* comprised 80 marks related to the words and their meanings, grammatical errors, sentence correction, change of tenses, parts of speech, punctuation, comprehension passage, and essay writing. These tests comprised both objective and subjective type questions. The objective type part included fill in the blanks, and short questions, while extended-response essay type questions were included. Multiple Choice questions were not included in the test to minimize the guessing chance. The content validity of test was ensured by the experts and practitioners. Five content experts (2 from public universities) and three practitioners (from school side) with the background in teaching English were requested to validate the content of test. The changings were made in the test according to the given feedback from the experts.

Threats and Control

In experimental research designs, there are many threats that can affect the results of experiment of pretest and posttest. To gain reliable results the researchers must control all these threats such as threat of history, maturation, testing and instrumentations (Creswell, 2007). First threat is history that involves in any event that happen during the experiment and it can affect the results of pretest and posttest. Maturation related to participants get older, wiser, and strong during the study time. But this experimental study in which training was conducted for one week there is no threat related to history. In the same way, during one-week training there is no threat of participants maturation. To avoid the threat of instrumentation the researchers used valid and reliable instrument.

Pre-Testing

After making proper seating arrangements and ensuring strict invigilation, sampled teachers were pretested and marking arrangement were made according to rubrics by the researchers.

Developing Professional Development Plan and Module Development

To achieve the targets of training, Professional development plan was developed through following Tucker (2013) Professional Development Taxonomy (PDT) framework

which is most appropriate for productive training. Through providing assessment sheet regarding designing individual plan for their professional development, the trainees were able to describe objectives of their professional development and find out the gaps in their learning, and were much interested in developing their knowledge in all the content of English subject they were pretested in. They set similar objectives and the module for English subject was developed based on the content which were taken from the textbooks of class 4 and 5.

The training related to *English* teaching was conducted by the trainer. It focused on developing trainees' understanding related to the content of grade 5 text book and language development. The trainer taught parts of speech, tenses and their uses, antonym and synonyms given in the text book. A detailed description of comprehension was also added to the training material. Guidelines for letter and essay writing were also part of the training. Small group discussion led the trainees think about sentence structure, and use of punctuation. Some of the passages were taken from the book for translation purpose to strengthen their vocabulary. Various exercises were solved in the classroom. The power point presentations and other visual aids were prepared for training and cooperative learning method was used effectively.

Post-Testing

Through using the same procedure of the pre-test, examinees were post-tested after one week and the scores of each examinee were entered into SPSS for conducting relevant analysis.

Results and Discussion

Descriptive statistics and paired sample t-test were used to analyze the data.

Table 2
Descriptive Statistics--Pre-Test and Post-Test Achievement Scores in English Subject

Subject		N	Mean	SD
English	Pre-test	140	29.44	11.331
	Post-test	140	43.78	08.745

Table 2 revealed that student achievement scores in post-test for English subject (M=43.78, SD=08.745) was found better as compared to the student achievement scores in pre-test for English subject (M=29.44, SD=11.331).

Table 3
Paired Samples t-test for Content-based Comparisons in English Achievement

Subject		M	SD	t	df	Sig.	Effect Size
English	Pretest	29.44	11.331	28.637	139	.000	1.416
	Posttest	43.78	08.745				

According to Table 3, there was a statistically significant mean difference between scores of trainees in pretest (M=29.44, SD=11.331) and posttest (M=43.78, SD=08.745) in English, $t(139)=28.637$, $p=.000$. The effect size ($d=1.416$) was found to exceed Cohen's (1988) convention for a large effect ($d=.80$).

Discussion

Through using an experimental approach, the study examined the effect of professional development training on the teachers' content-based knowledge in English subject at primary school level which found that there was significant difference in the

achievement scores in pre-test and post-test for the English subject which provided evidence that professional development training significantly affected the teachers' content-based knowledge in English subject. The results of given study are in line with multiple of previous studies, theories and models that teachers' content-based knowledge in English subject might be maximized through professional development trainings at primary school level (He & Lin, 2018; Kim, 2012; Mendoza, 2022; Omoto & Nyongesa, 2013; Pessoa et al., 2007; Rodriguez & de-Jesus, 2021).

There are various studies which have similar findings that good content-based knowledge about English subject is highly needed, for that purpose we make our teachers competent through providing professional development trainings. Omoto and Nyongesa (2013) revealed that content knowledge and pedagogical knowledge while teaching English subject at primary school level is most essential for the development of language and understand the rules of grammar which can be improved through providing the professional development opportunities to teachers that is the main factor to provide the quality education to their learners. In another study, Rodriguez and de-Jesus (2021) revealed that primary school teachers improved their content knowledge about English subject and teaching practices as a result of mentoring process conducted through professional development trainings. Mendoza and Wu (2022) also explored that content knowledge can be improved by providing different professional opportunities such as seminars, workshops and training sessions at school level.

He and Lin (2018) found that professional development highly contributed to enhance the capabilities of teachers in teaching English subject. In another study, Pessoa et al. (2007) also found the similar results that if we want to make the teachers competent in terms of teaching English subject, continuous professional development will be most important factor to lead the instructional process effectively. Moreover, Kim (2012) revealed that to produce better results of the students while teaching English subject, effective content knowledge and methodology are required which might be obtained through making effective arrangements of professional development for teachers. All the added studies are in line with the study at hand which endorsed the idea that through arranging the professional development trainings for teachers, content matter knowledge and pedagogical skills in English subject can be improved.

Conclusion

Through using an experimental approach, the study examined the effect of professional development training on the teachers' content-based knowledge in English subject and revealed that achievement scores in post-test were better than pre-test for the teachers' content-based knowledge in English subject and significant difference in achievement scores of pre-test and post-test for teachers' content-based knowledge in English subject was also found which confirmed that professional development training affected the teachers' content-based knowledge and pedagogical skills in English subject at primary school level.

Recommendations

- The study found the difference in achievement scores of the pretest and the posttest in the teachers' content-based knowledge in English subject. Therefore, the study suggested to conduct professional development trainings for primary school teachers on regular basis to maximize the teachers' content-based knowledge in English subject that are most required to achieve the targets about the provision of quality education.

- Further, the study suggested to the policymakers and district authorities to plan for similar trainings of teachers to develop the content-based knowledge in English subject at primary school level in Pakistan.

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