

CHAPTER III
PLAN
AND
PROCEDURE

3.0 Introduction

This chapter presents the research questions and description of the sample,, instrumentation and procedures of data collection. A great deal of literature has emerged describing the characteristics of effective professional development, effect on student achievement and the perceptions of teachers. Despite the large body of literature, little research has been conducted to study the different policies formulated by the Federal and the State Government, for Professional development of teachers in the USA, perception of teachers, impact of the professional development programs on teacher development and the relevance of the USA policies and programs of the professional development of teachers, to Indian context.

In this chapter, the researcher has presented a detailed plan and procedure of the study. It gives a clear idea of the type of study, population, sample of the study, data needed for the study, sources of data, tools used for data collection, procedure for data collection and data analysis.

3.1 Statement of the Problem

A Study of the Policies and Programmes for the Professional Development of School Teachers in the United States of America

3.2 Objectives of the Study

1. To study the Federal and State Policies related to Professional Development Programs for the School teachers in the USA, in terms of;
 - a. Guidelines for Teachers
 - b. Professional Standards and Requirements
 - c. Monitoring and Appraisal System
 - d. Career Advancement, if any
2. To study the ongoing Professional Development Programs in USA, in terms of content, methodology and feedback system.

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3. To study the opinions of Teachers and the Principals regarding the Professional Development programs.
4. To study the issues and challenges in managing the Professional Development Programs.
5. To study the relevance and to draw implications to the Indian context.

3.3 Explanation of The Terms Used

1. Policies: Refers the broad guidelines that direct the plan of actions. Policies describe the federal and State Government guidelines for the PD of teachers in the USA.
2. Programs: Refers to the activities evolved from the relevant policies at the Federal and State level.
3. Professional Development Programs: Refers to in-service teacher development programs conducted by federal, state governments and school based for enhancing the teacher competencies.

3.4 Delimitation of the Study

This study was delimited to the three States and the District of Columbia of the USA and selected School Districts and the Teachers and Principals of the high schools from these four States only.

3.5 Methodology

The nature of the problem and the objectives of the study, determines the method of research conducted. Going by the objectives of the study descriptive method is followed in this study. In educational research descriptive survey method is most widely used because of the ease and directness of the method. It is helpful for describing educational phenomena in terms of the conditions or relationships that exists, opinions that are held by principals, teachers and administrators, without expressing value judgment.

3.6.1 Population of the Study

All the secondary schools of USA (Public, Private and Charter Schools) constituted the population of the study. Table 3.1 shows the total number of secondary schools in USA

Table: 3.1 Total Number of Secondary Schools in USA

S.NO	Institutions by Type	No.of Secondary Schools 2009-10
1.	Public Schools	24,348
2.	Charter Schools	5,714
3.	Private Schools	3,040
Total		33,102

SOURCE: U.S. Department of Education, National Center for Education Statistics. *Digest of Education Statistics, 2011* (NCES 2012-001),

3.6.2 Sample of the Study

Purposive sampling technique was used for selecting the states for the study with the following criteria:

1. States where the academic excellence is comparatively higher in the last four years as per American Legislative Exchange Council Report (ALEC). This report is published every year by the Federal Government in USA and places the states according to their educational attainment.
2. Under each selected state one school district was selected where the research study was accepted.
3. Under each school district, schools, where permission was granted for research were chosen.
4. The principals and the secondary school teachers of the selected schools constituted the sample for the present study.

The Table 3.2 indicates the ranking of the four selected States as per the ALEC report.

Table: 3.2 Selected States in USA for the Study

S.no	State	Rank				No.of School Districts	No.of High Schools
		2006-07	2007-08	2008-09	2009-10		
1	Missouri	19	28	28	20	522	609
2	New Jersey	12	09	09	10	603	485
3	Pennsylvania	20	19	19	07	501	598
4	District of Columbia	51	51	51	51	109	32

Source: ALEC Educational Report Card 15th and 16th Edition (2009-10)

The State of Missouri was 19th in the year 2006-07 and in the years 2007-08 and 2008-09 it was ranking 28th. Again in the year 2009-10 it is ranked at 20. The State of New Jersey was ranked 12 in 2006-07 but is seen constantly

within the first 10 ranks in the following years. The State of Pennsylvania was 20th in the year 2006-07 and improved to 7th rank in the year 2009-10. The District of Columbia ranks at 51. Out of the 50 states and districts in the USA, three States where the academic excellence is comparatively improved in the last year were selected. One school district in each state is selected for the study. The State of Missouri has five hundred and twenty two School districts and has six hundred and nine high schools (Department of Education Missouri State). The State of New Jersey has six hundred and three School districts and four hundred and eighty five high schools (New Jersey Department of Education). There are five hundred and one School Districts and five hundred and ninety eight high schools in the State of Pennsylvania (Pennsylvania Department of Education). The District of Columbia has hundred and nine School districts and 32 High Schools (US Department of Education, 1999).

3.6.2.1 Research Context: Description of the Sample States in USA

A brief demographic description and the educational system of the four sample states of USA are presented here.

3.6.2.1.1 State of Missouri

The state of Missouri is located in the Midwestern part of USA. Missouri generally mirrors the demographic, economic and political makeup of the USA and has long been considered a political bell weather state. It is also a transition between the Eastern and Western USA, as St. Louis is often called the "Western-most Eastern city".



Figure 3.1 Map of State of Missouri

Source: <http://geology.com/state-map/missouri.shtml>

The Missouri State Board of Education has general authority over all public education in the state of Missouri. It is made up of eight citizens appointed by the governor and confirmed by the Missouri Senate.

Education is compulsory from ages seven to seventeen per Statute 167.031, RSMO. The district must ensure that the child is enrolled in and regularly attends public, private, parochial school, home school or a combination of schools for the full term of the school year.

The compulsory attendance age for the district is seventeen (17) years of age or having successfully completed sixteen (16) credits towards high school graduation in all other cases. Children between the ages of five (5) and seven (7) are not required to be enrolled in school. Missouri schools are commonly but not exclusively divided into three tiers of primary and secondary education: elementary school, middle school or junior high school and high school. The public schools system includes kindergarten to 12th grade. District territories are often complex in structure. In some cases, elementary, middle and junior high schools of a single district feed into high schools in another district. Home schooling is legal in Missouri and is an option to meet

the compulsory education requirement. It is neither monitored nor regulated by the state's Department of Elementary and Secondary Education.

A supplemental education program, the Missouri Scholars Academy, provides an extracurricular learning experience for gifted high school students in the state of Missouri. The program is based on the premise that Missouri's gifted youth must be provided with special opportunities for learning and personal development in order for them to realize their full potential.

Another highly accepted gifted school is the Missouri Academy of Science, Mathematics and Computing, which is located at the Northwest Missouri State University. The University of Missouri System is Missouri's state wide public university system. Among private institutions Washington University in St. Louis is among the top 20 university.

3.6.2.1.2 State of New Jersey

New Jersey is a state in the North eastern and Middle Atlantic regions of USA. It is also the third wealthiest state in USA by 2011 median household income. The State Board of Education provides opportunities for all students to receive an education that will prepare them to be competitive in the international scenario in the future. The State Board values public input and believes that parents, educators and taxpayers should be informed as the educational policies and programs that are important to New Jersey's citizens. Public schools in New Jersey are dedicated to providing all students with a free public education.



Figure 3.2 Map of State of New Jersey

Source: <http://geology.com/state-map/new-jersey.shtml>

In 1875, the New Jersey Constitution was amended to address the subject of educational opportunity. Public school became free for everyone between ages 5 and 20, and education was made compulsory for all students between the ages of 6 and 16. Special classes and services were developed for gifted students as well as for those who were physically, mentally and emotionally challenged.

The number of public schools in New Jersey is 2500 with an enrolment rate of 1.35 million in the year 2011-2012. The school age of the student is 6-16. The teaching profession was enhanced by many of New Jersey's reforms. Chief among them was the Provisional Teacher Program, or alternate route to certification. In this program, New Jersey became the first state in the nation to create a way for the talented college graduates who could become teachers without attending traditional teacher preparation programs. This alternate route program was a great success, serving as a model for programs in other states and having an international reputation.

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The state's public and independent colleges and universities form a system that efficiently provides broad access to higher education. The overall rate of participation in higher education is high compared to other states, as is the overall level of educational attainment, providing the state with an educated citizenry and workforce. The university lists includes public, private, large, small, women's and Catholic institutions and Princeton is the most prestigious university of New Jersey.

3.6.2.1.3 State of Pennsylvania

Pennsylvania, officially the Commonwealth of Pennsylvania, is a US state that is located in the North eastern and Mid-Atlantic regions of the United States, and the Great Lakes region. It is the 6th most populous, and the 9th most densely populated state among the 50 States in USA.

Pennsylvania has 500 public school districts, thousands of private schools, publicly funded colleges and universities, and over 100 private institutions of higher education. There are 3,303 schools having 1,821,146 students enrolled. According to the state law, school attendance is compulsory from the age of 8 until the age of 17. According to Act 169 of the Pennsylvania General Assembly, home school is an option for compulsory school attendance (<http://www.education.state.pa.us>).

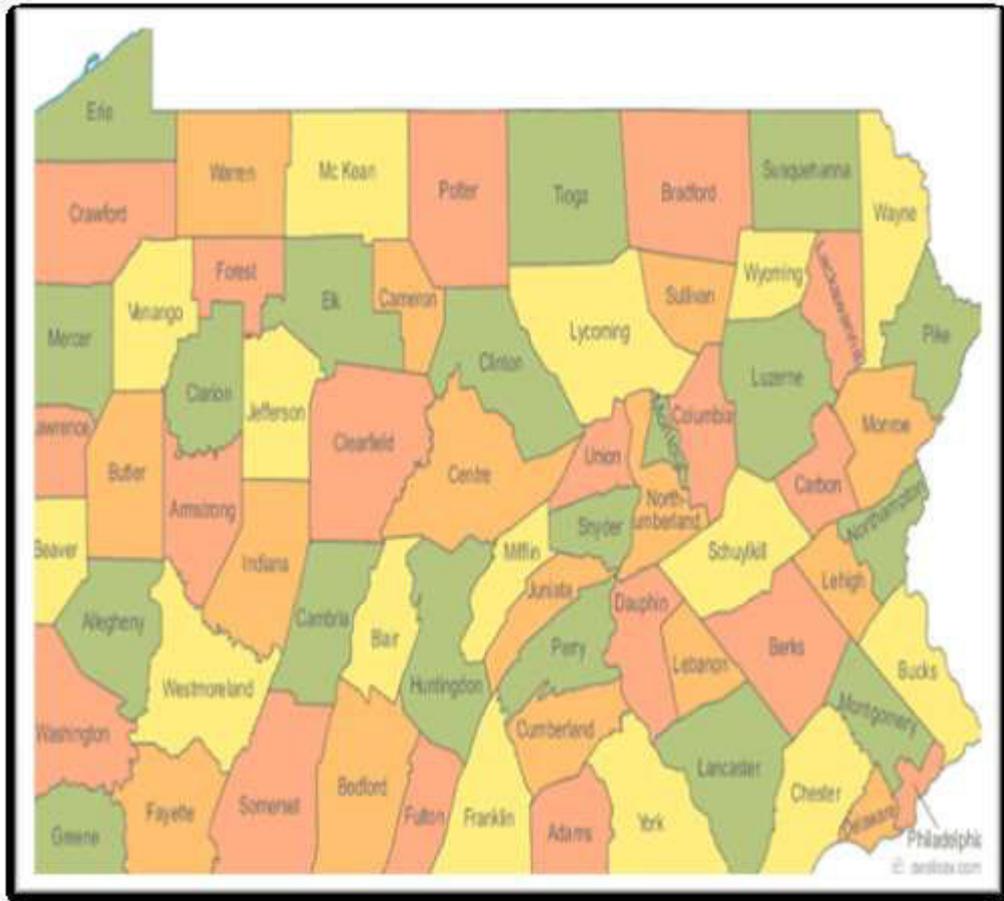


Figure 3.3 Map of State of Pennsylvania

Source: <http://geology.com/state-map/pennsylvania.shtml>

The Pennsylvania State System of Higher Education (PASSHE) is the public university system of the Commonwealth, with 14 state-owned schools. There are 4 state-related schools (organisation of Higher education) which are independent institutions receiving some state funding. There 15 publically funded two year community colleges and technical schools that are separate from the PASSHE.

The University of Pennsylvania, one of the IVY League schools (The Ivy League is an athletic conference composed of sports teams from eight private institutions of higher education in the North-eastern United States. The term Ivy League also has connotations of academic excellence, selectivity in admissions, and social elitism, located in Philadelphia, is the first university in the United States and which also established the first medical school in the United States. The Pennsylvania Academy of the Fine Arts is the first and oldest art school in the United States.

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Pennsylvania has 93 colleges and universities that offer teacher education programs approved by the Department of Education. Pennsylvania requires assessments of all candidates in basic skills, general knowledge, professional knowledge and subject area knowledge before a certificate may be issued to an applicant.

3.6.2.1.4 The District of Columbia

The demographics of District of Columbia (now Washington D.C) reflect an ethnically diverse, cosmopolitan, mid-size capital city of the United States of America.

District of Columbia Public Schools (DCPS) operates the city's 123 public schools. The number of students in DCPS steadily decreased for 39 years until 2009. During the academic year 2010–11, 46,191 students were enrolled in the public school system. DCPS has one of the highest-performing school system yet a few lowest-performing school systems in the country, both in terms of infrastructure and student achievement. The District of Columbia Public Charter School Board monitors the 52 public charter schools in the city.

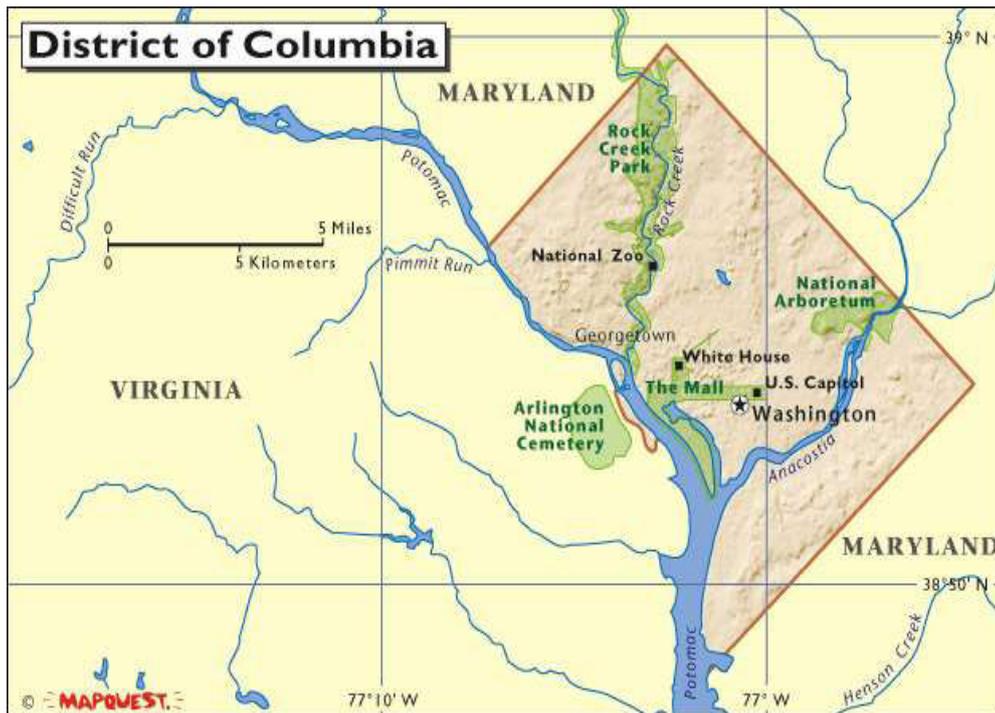


Figure 3.4 Map of District of ColumbiaSource:www.istanbul-city-guide.com

The higher education system is both private and public. The private colleges are well known. There are a few community colleges which cater to the needs of the financially low income students. Private universities include American University (AU), the Catholic University of America (CUA), Gallaudet University, George Washington University (GW), Georgetown University (GU), Howard University, and the Johns Hopkins University School of Advanced International Studies (SAIS). The Corcoran College of Art and Design provides specialized arts instruction and other higher-education institutions offer continuing, distance and adult education.

3.6.3 Selected School Districts of the Four States of USA

Table 3.3 indicates the name of the city and the name of the school district and the number of high schools. In the State of Missouri St. Louis Public School District (SLPS) in St. Louis was selected. SLPS has fourteen high schools. Hoboken Public School District in the city of Hoboken in New Jersey State has five high schools. In the State of Pennsylvania, Philadelphia city has one school district the School District of Philadelphia (SDP). SDP has forty five high schools. The District of Columbia has one school district, District of Columbia Public Schools with thirty two high schools.

TABLE: 3.3 Selected School Districts and the No. of high Schools in that School District

S.no	State	City	No.of School Districts	Name of the School District	No.of High Schools
1	Missouri	St. Louis	1	St. Louis Public School District	14
2	New Jersey	Hoboken	1	Hoboken Public School District	5
3	Pennsylvania	Philadelphia	1	School District of Philadelphia	45
4	District of Columbia	Washington DC	1	District of Columbia Public Schools	32

Convenient random sampling was used to select the cities. The school districts in the sample states were selected where permission has been procured. The researcher approached the Research Review committee of the school districts for permission to conduct research in their school districts. The following documents were sent to the committee for approval, as per the regulation of the state: (Appendix –A1-9)

Application to conduct research

1. Abstract of the study
2. Research Proposal
3. Reference of the Study
4. Supporting documents
 - a. Consent Forms for Principals and teachers
 - b. Interview Protocol for Principals and the Directors of Professional Development
 - c. Questionnaire for Principal
 - d. Questionnaire for Teachers
5. Research Proposal Data Form
6. Department Letter

The research committee comprises of the superintendent of the School district, director of Professional development, senior educationists and members of the School District education. The committee meets once in a month to review the research proposals and gives their consent if the proposal meets the standards of the district. The researcher received permission from two school districts to conduct research in their school district (School District of

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Philadelphia and St. Louis Public School districts). Copies of the permission letters are attached in the Appendix (Appendix –B). In the other two states permission was given orally. After that the researcher approached the school principals with the formal letter of request for permission to perform the research study in their school. A copy of this letter is attached in Appendix (Appendix - F). The nature of the study and the required data for it was explained orally also by the researcher to the principals. A few principals readily granted permission to conduct the research.

Each principal adopted different ways of informing the staff of the school about the researcher. Two principals called for a meeting of the teachers and introduced the researcher. Two principals took the researcher for a tour of the school and introduced the researcher to the teachers. Three principals sent notice to the teachers about the presence of the researcher. They were asked to help the researcher with whatever information she wanted. The different ways of introducing the researcher however, did not affect the working of the school. A consent letter was given (Appendix – A) to the teachers also informing about the purpose, nature and the type of data required from them.

The following table 3.4 gives the sample distribution.

TABLE: 3.4 Distribution of the Sample

S.no.	State	City	No.of School Districts	No.of Directors of Professional Development in the School Districts	No.of Schools	No.of Principals	No. of Teachers
1.	Missouri	St.Louis	1	1	2	2	30
2.	New jersey	New York city	1	-	1	1	16
3	Pennsylvania	Philadelphia	1	1	3	3	43
4	District of Columbia	Washington DC	1	-	1	1	19
Total	4	4	4	2	7	7	108

- I. In the State of Missouri, St. Louis Public School District review committee reviewed the proposal and permitted the researcher to conduct the research study in their school district (Appendix-B).

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- The Principals of two schools (School A and School B) consent to participate in the research (Appendix-C). Fifteen teachers in each school were the sample for the study.
- II. In the State of New Jersey, Hoboken school district was selected. One high school principal responded (School C)
- One Principal and 16 teachers from that school were the respondents for the study.
- III. In the State of Pennsylvania, the School District of Philadelphia review committee permitted the researcher for the research study (Appendix-E). Three secondary school Principals agreed to respond to the research. (Appendix-C).
- In School D, one Principal and fourteen teachers responded.
 - In School E, one Principal and nine teachers responded.
 - In School F, one Principal and twenty teachers responded.
 - Overall in the State of Pennsylvania, three principals of the three schools and forty three teachers from the three schools were the respondents for this study.
- IV. In the District of Columbia, one private school agreed (School G).
- One Principal and nineteen teachers responded the questionnaire.
- V. The professional development directors of the School District of St. Louis and the School District of Philadelphia agreed for the interview.

Over all four States in the USA were selected for the study. The sample consisted of one hundred and eight teachers, seven Principals from seven schools and two professional development directors from two school districts. Figure 3.5 describes the sample and the sampling techniques used for selection of the sample.

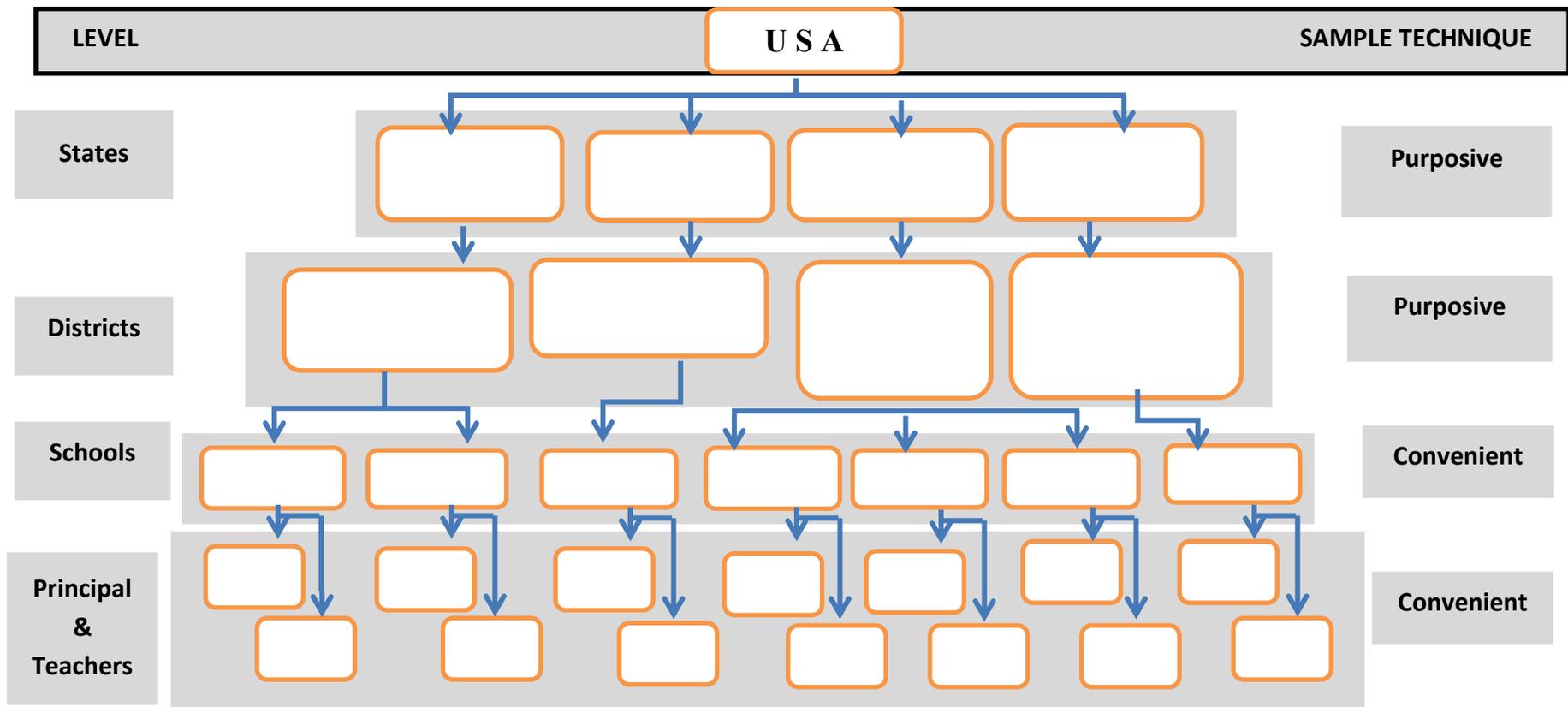


Figure. 3.5 Sample and Sampling Techniques used for Selection

3.7 Procedure for Data Collection

Various forms of data were gathered from the different sources to analyse to answer the research objectives. The following table describes the procedure for data collection- in terms of objectives, source of information and the research tools used. Researcher personally visited the sample institutions and collected data.

Table – 3.5 Procedures for Data Collection

S.no	Area of Inquiry (objectives)	Data collection method	Source of Data
1.	Federal, State and School District policies for the professional development of teachers	Documents (Reports, Documents, relevant material)	Documents procured from the Education office of the School Districts and web sites Interview of the Administrators
2.	On-going professional development programs conducted by State, School district and the Schools	Participant Observation Focus group discussion Interview	Professional development program Teachers Principal
3.	Perception of teachers on the programs, in content, methodology, logistics and incentives	Questionnaire Focus Group discussion	Teachers
4.	Perception of principals on the programs, implementation of the programs and challenges	Questionnaire Interview	Principal
5.	Perception of the Administrators of the School Districts	Interview	Directors of Professional Development for teachers, of the School Districts

3.8 Methods of Obtaining Data

In order to collect relevant and authentic data, one has to device appropriate tools and suitable techniques. Tools form a very important part of research. There are several research tools varying in design, operation and complexity of features. Researcher used document analysis, participant observation, interviews, focused group discussion with teachers and questionnaires for teachers and principals in this study. The tools were prepared with adequate care.

The present study gathered information regarding the policies and the programs for the professional development of school teachers in USA, in

terms of objectives, its relevance to emerging educational context, its content and its mode of presentation. In designing the tools, major aspects of the content area could be covered by its appropriate proportion and due care was taken for validity of the tools used. Review of the related literature indicated that many such studies also used questionnaires, interview schedules and participant observation and document analysis collection of data.

In the present study following tools were used for collecting the required data.

1. Document Analysis
2. Participant Observation
3. Questionnaire for teachers
4. Questionnaire for principals
5. Focus group discussion with teachers
6. Interview Schedule for principals
7. Interview Schedule for the professional development directors of the school districts

3.8.1 Document Analysis

The researcher used document analysis in this study as a method for qualitative inquiry. The researcher collected the reports of the policies of the federal and state government from the respective Web sites and also from School Districts Office of the selected school districts for the present study personally as a primary source of information. Another primary source was the documents from the Professional Development Programs, beginning teachers mentor programs and the implementation and evaluation records. Documents were also collected from Principals about the professional development programs in the school site. Since the review of the documents was an unobtrusive process and did not interfere with the school day, it was feasible to review and discuss with the principals. In order to increase the validity of documents analysis, the researcher recorded field notes. The relevant documents were analysed for the purpose of the nature of policies pertaining to the Professional development of teachers, guidelines for implementation and specific rules and regulations for the teacher development in school education.

3.8.2 Participant Observation

The researcher personally visited the centre where Professional development program was taking place and observed the on-going Professional development program to understand the actual transaction of the programs in terms of content, methodology and feedback system. This gave the researcher the first hand information about the actual transaction of the program, perception of the teachers regarding the nature of the program, need of the program, the logistics of the programs, impact of the programs on the teachers, adoptability of the program in the classroom practice and in their teaching learning process. This also gave the information of the resource persons.

The researcher attended the Math teachers' content knowledge workshop conducted by the St. Louis Public School District. The school district's goal was that all students improve in math curriculum. Based, on this a math content and methodology improvement course was offered to teachers from grade 8 to grade 10, to gain knowledge and implement strategy. The researcher's interest to attend the program was to understand how participation in this program helped the teachers in improving their knowledge and how does participation impacted in the implementation of the instructional practices addressed during the professional development.

The information about the professional development program had been given in the calendar of events to the teachers during the summervacation. The program was conducted in the office of the St. Louis Public School district. The course instructor was the professor in the department of mathematics in the university. He had been in the field for more than 20 years and had been taking course work for teachers.

There were 10 beginning teachers, 8 teachers in their 4th and 5th year of teaching and 8 tenured teachers, teaching grade 8 to grade 10, the researcher and the instructor in attendance.

3.8.3 Interviews

School districts were always called upon to document that they met the state mandates. Surveys and documents could provide only the "facts" reported to

the state. Through qualitative research, the researcher could learn the “truth” about the mandate and what was truly happening in the school level. As the researcher was physically present during the whole proceedings, an element of authenticity is added to the study and lends itself to a high level of credibility. The director of professional development of the school districts and the principals of the schools which were under study were interviewed.

3.8.3.1 The Director of Professional Development of the School District

The researcher interviewed the Director of Professional Development of the school district to understand the policies for the professional development of teachers and to understand how the programs were conducted, implemented and evaluated.

After the researcher obtained consent from the administrator, interview sessions were arranged at the office of the school districts. It was estimated that the interview session lasted approximately two to three hours, with the understanding that the participants had an advance copy of the questions. The interview questions remain open-ended in order to avoid leading the participants. Follow up interviews were conducted over the phone and e-mail. Since the directors’ consent was not given, interviews were not tape-recorded and so a written account in the form of field notes was maintained.

3.8.3.2 Principals

The researcher interviewed the Principals to understand the policies of the federal and state government for the professional development of teachers, the on-going professional development programs, the issues and challenges associated with the planning and implementation of the Professional development programs. After the researcher obtained the consent from the principal, the interview session was arranged in the school building. The interview lasted approximately for one to one and a half hour. The follow up interview were conducted through telephone and e-mail. Interviews began with a brief introduction of the researcher and the intentions and purpose of the study. This led to the general open ended questions about their institutions, the recruitment and development of the teachers. A sample of the interview protocol and question guide can be seen in AppendixD. The

interview schedule of the principles is enclosed in the appendix (Appendix – D)

3.8.4 Focus Group Discussion with Teachers

A goal of the focus group was to highlight the understandings and meanings that may be revealed by participants and the several explanations articulated by the participants. In order to encourage active involvement by all members, participants were given an advance copy of the topics of discussion. This may have offered more opportunities for participants to be actively involved with time to reflect prior to the focus group. It was recognized by the researcher that there would be less control over the data as the participants may ask questions and express opinions, but the researcher kept participants focused on the open-ended pre-determined questions. When organizing a focus group, suggested membership is around six to ten participants. The role of the researcher in the focus group is critical. It is the researcher who will set the tone, the purpose, and facilitate interaction of the participants. Overall, the collaborative nature, multiple perspectives, and empowerment of participants of the focus group are some of the greatest benefits of this method of qualitative inquiry.

For focus group discussion the teachers who had responded to the questionnaires were chosen based on their interest and availability. The researcher gained permission from each building principal to invite teachers to participate in the focus group. The teachers were invited either through phone or e-mail. The researcher explained the nature, purpose, time-line and confidentiality of the study. The list of teachers who agreed to participate was prepared by the researcher. A Table presenting the number teachers who participated in the focus group discussion is attached in the appendix (APPENDIX-E). Their names were not mentioned to maintain confidentiality.

3.8.5 Questionnaires

Questionnaire as a tool for a particular study depends upon the objectives of the study, the amount of time at the disposal of the investigator, the availability of time of the participants and the competency of the researcher.

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Based on these criteria, the researcher developed questionnaires for teachers and principals to meet the demands of the objectives.

Questionnaire consisting of both open ended and closed ended questions were developed by the researcher, based on a thorough review of the literature. The questionnaires were validated. This questionnaire helped to understand the teachers' perception of the Professional development programs, need of the programs, their freedom to choose the programs, impact of the programs, issues and challenges.

3.8.5.1 Questionnaire for Teachers

The first step in the preparation of questionnaire was to attain a thorough grasp of the field, objective and nature of data needed. In the present study the guidelines from the related articles were gathered to have an in depth knowledge about the area of investigation. The researcher had gone through the review of related literature which showed that there were some questions which could help the researcher to form new questions. The researcher took help for a few subtopics and questions from Sylvia (1995) and Suski (2009) studies, to form new questions.

The second step in the preparation, researcher delimited the study to a point that the researcher was able to get a reasonable answer to the questions. Researcher eliminated all questions from which data cannot be found readily.

Third step in the preparation was to take into consideration the length of the questions and some of the items were deleted. Further it was examined to ensure that every item must serve a definite purpose.

In the fourth step the researcher made the rough outline of the questions and subtopics were grouped and finally 8 components with 100 questions were prepared. The components of the questionnaire consists of the profiles of teachers and principals, Educational and Professional competencies, Nature of programs participated, Perception on different policies, Perception regarding the Professional Development efforts by the state and school districts, the on-going PD Programs in USA, in terms of content, methodology and feedback system, the opinions of Teachers and regarding

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the Professional Development programs and the issues and challenges in managing the Professional Development Programs.

In the next step the length and the grouping of question was taken into consideration. More general questions were kept first and detail and specific questions towards end.

Next the questionnaires were shown to the guide and after discussion some questions were deleted and some modifications or additions were made. The first draft of questionnaires for teachers covering different aspects of policies and programs of the professional development of the teachers in the USA was prepared.

Realising the importance of the scholarly construction of tool, the draft questionnaires were thereafter sent to different individuals related to the field; experts in order to obtain their views regarding the questions. Following points were kept in view – whether the questionnaire covered all the aspects regarding the policies and programs of the school teachers in USA, whether the items were clear and easy to understand, whether the questionnaires were adequate or in- adequate about the mode of responses. There were four categories of personnel (Teacher Educators of Universities, Resource persons, Research Scholars and Language experts) to whom the questionnaire were given to elicit their view content validity and language aspect. The total numbers of experts were twelve (Appendix -F).

The opinion of the experts was collected through their responses. Through discussions with guide and based on experts suggestions the questionnaires were finalised. Going by the objective of this study the final questionnaire was designed consisting of ten sections of questions in closed ended or open ended format (Appendix G). For the closed ended questions a five point scale was used. The respondents indicated how closely their perceptions matched the question or statement on a rating scale. The number at one end of the scale represented least agreement or *strongly disagree*, and the number at the other end of the scale represented most agreement or *strongly agree* (Gall, Borg, & Gall, 2003). The open- forms of the questions were constructed to provide greater depth of the response and freedom given to the respondent

to reveal his/her opinion and to clarify his/her responses. From the responses, the researcher could make a generalization of the opinions.

Table 3.6 Dimensions of Final Draft of Questions for Teachers

S.no	Components	Total Questions	Types of Questions	
			Open	Closed
1.	Profile details	04	04	-
2	Professional experience	13	13	-
3	Perception on the design and development of professional development programs	11	01	10
4	Perception on the content and methodology of professional development program	13	01	12
5	Perception on the logistics of the professional development program	10	01	09
6	Perception on the impact of professional development program	13	01	12
7	Perception on incentives for participation in professional development programs	11	01	10
8	Perception on the issues and challenges of professional development program	12	02	10
9	Suggestion for the improvement of professional development programs	09	09	-
10	Miscellaneous	01	01	-
	Total	97	34	63

Table 3.6 indicates the dimensions of the final draft of questions which consisted of ten components with 97 questions.

The first and the second questions were designed to collect the personal information from the respondent regarding position, level of education, experience, the number of professional development programs attended in last two years, nature and type of program and the source of information for continuous professional development. The next six sections consisting of multiple choice questions were designed to assess the perception of teachers on the design and development, content and methodology, logistics, impact,

incentives for participation and the issues and challenges of professional programs.

The following is a description of the purpose of each of the items.

- Question III explored the perceptions on the design and development of professional development programs were included to explore the extent to which teachers were involved, whether it was a part of educational improvement plan of the school, whether the professional development program was need based, whether it was relevant or provided opportunity for collaborative learning and reflective teaching and creative problem solving. A response on the five point scale was required for each of the questions.
- Question IV contained 10 sub questions which explored the content and methodology of teachers' professional development experience. Whether the programs focused on research based content which improved their subject knowledge and familiarised them with other subjects. Did the programs include research based teaching methodology, use of ICT in teaching learning process. Whether the programs were helpful to teachers to develop skills to support students of diverse group and effectively interpret learning outcomes of the students. A response on the five point scale was required for each of the questions.
- Question V solicited information about the logistics of the programs. The purpose of the question was to understand the administrative support given, information about the professional development programs, location, accommodation, and student free days for participation. The questions also revolved around whether the time was convenient for the teachers to participate in the programs.
- Question VI explored the perceptions on the impact of professional development programs. The questions were developed to explore the extent to which the programs had a positive impact on the teachers, improved their classroom management, classroom organisation and resources, pedagogical skill, teaching capacity and on personal

appraisal. A response on the five point scale was required for each of the questions.

- Question VII solicited information about the incentives for participation in professional development programs. The questions also revolved around whether the participation helped in carrier advancement, job security, helped in accreditation, recertification and evaluation. A response on the five point scale was required for each of the questions. The questions also explored the information on subsidised conference fee, sabbatical leave and stipends for participation.
- Question VIII contained 10 sub questions which explored the issues and challenges of professional development programs. These sub questions solicited information on the issues like time off from work, pupil free days, challenges in implementation, loss of instructional time, financial support given by school and school districts.
- Question IX was an open ended question inviting suggestions on the improvement of professional development programs on content, methodology, implementation, evaluation, incentives, resource persons and logistics.
- Question X was an open ended question which encouraged the teachers to share anything else other than the information given from question III to question IX.

3.8.5.2 Questionnaires for Principals

The questionnaires for the principals were directed towards the principals' perception on the teachers' professional development. The questionnaires were designed to study the Principal's perception on the on-going programs, the need of the programs, does the program have an impact on the school development, teachers' professional growth and the issues and challenges faced in the implementation of the programs.

The first step was to attain a grasp of the field, the objectives of the study and the nature of data to be collected. The researcher studied the books, articles and some dissertations to have in-depth knowledge about the area. The researcher reviewed the related literature, which showed that there were some questionnaires which could help the researcher to formulate new questions.

Plan and Procedure

The study was delimited to a point where the researcher would be able to get reasonable answers to the objectives. Thus the researcher eliminated all questions which pertained to data which can be found readily and often more accurately from other sources. The length of the questions was taken into consideration in the next step and a rough outline of the questionnaires was prepared. Questions on the subtopics were grouped and a total of ten components were prepared. The first and the second questions were designed to collect the personal information from the respondent regarding position, level of education, experience, and responsibility as an academician or administrator. Third, fourth and the fifth questions were designed to gather information about the school such as the management structure, establishment of the school, number of teachers and the kind of curriculum. The sixth through eighth questions contained both multiple choice questions and open ended questions which assessed the policies for professional development of teachers, design and development of professional development programs and the evaluation of the implementation of the professional development programs. The ninth question addressed the issues and challenges in the implementation of the programs.

In the next step the questionnaires were shown to the guide and after discussions few questions were deleted. And few were modified. Then the first draft of the questionnaires was ready.

In the next step, recognising the importance of the study, the draft questionnaire was sent to experts working in the field of education in order to obtain their views regarding the questionnaire. It was kept in view whether the questionnaire covered all aspects; whether the questions were clear, correct and easy to follow.

There were four categories of personnel Teacher Educators of the Universities, Resource persons in the field of administration, research scholars and language experts to whom the questionnaires were given for seeking the opinions on the content validity and language aspect. The total number of experts was twelve.

The opinions of the above experts were collected through their responses. After reviewing the suggestions the final draft questionnaire was prepared.

Plan and Procedure

Through discussions with guide and based on experts suggestion the questionnaires were finalised. Going by the objective of this study the final questionnaire was designed consisting of ten sections of questions in closed ended or open ended format (Appendix - H).

Table 3.7 Dimensions of Final Draft of Questionnaire for Principals

S.no	Components	Total Questions	Types of Questions	
			Open	Closed
1.	Profile	04	04	-
2.	Educational and Professional competencies	04	04	-
3.	Management structure	03	03	-
4.	Policies for the professional development of teachers	05	-	05
5.	Design and development of professional development programs for teachers	05	04	01
6.	Evaluation of the PD programs for teachers	07	02	05
7.	Feedback and appraisal	06	06	-
8.	Issues and Challenges	02	02	-
9.	Key achievements of the school	01	01	-
Total		37	26	11

3.9 Data Analysis Procedure

The researcher collected the data from the professional development policy documents of the three states and the District of Columbia in USA, questionnaires from teachers and principals, interviews of principals and the directors of professional development and focus group interviews of the teachers. A combination of qualitative and quantitative methods was used to analyze data relative to the research questions and objectives.

While many researchers see quantitative and qualitative methodologies as dichotomous, the researcher chose to bring together these two types of data during analysis. Maxwell and Loomis (2003) argue for an integrative mixed methodology that focuses on the fit between the purpose and methods of the study but cautions that one must maintain "paradigmatic integrity" within a study. They call for a synthesis of methodologies that is not homogeneous but

maintains the 'culture' of each approach. "Researchers [should] become bicultural," he writes, they must learn to inhabit the borderlands between the two paradigms (Maxwell & Loomis, 2003). On the other hand, Greene (2003) calls for a dialectical approach to mixed methodology that recognizes the paradigmatic in different kinds of data, but uses these differences, "through the tension they invoke—to generate meaningfully better understandings" (Greene & Caracelli, 2003).; however, the researcher would also look for convergence and divergence between analyses of quantitative and qualitative data to make high-level inferences relating the study.

3.10 Conclusion

Chapter III established a detailed account of the research methodology, research design, population and sampling, instrumentation, data collection procedure and data analysis procedure in order to gather information and study the policies and programs for professional development of school teachers in USA. The steps outlined in chapter III were followed to ensure the integrity of the study. A total of one hundred and eight teachers, seven principals and two professional development directors from the states of Missouri, New Jersey, Pennsylvania and the District of Columbia in USA, formed the sample of the study.

The next chapter, Chapter IV discloses the results of the analysis of the data collected through different sources in order to answer the research questions.