AN ANALYSIS OF THE IMPLEMENTATION STATUS OF PROFESSIONAL DEVELOPMENT PROGRAMS OF NATIONAL ACADEMY OF HIGHER EDUCATION AND DEVELOPMENT OF MECHANISMS FOR THEIR EXPANSION AND IMPROVEMENT

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CERTIFICATE

This thesis entitled "An Analysis of the Implementation Status of Professional Development Programs of National Academy of Higher Education and Development of Mechanisms for their Expansion and Improvement' submitted by Ishrat Siddiqa Lodhi in partial fulfillment of MS degree in Education, has been completed under my guidance and supervision. I am satisfied with the quality of student's research work and allow him to submit this thesis for further process as per IIUI rules and regulations.

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CHAPTER 01

INTRODUCTION

Teachers, like other professionals, need to have ongoing opportunities to deepen and sharpen their knowledge, and keep themselves up to date with advances in the field of teaching and learning. It is obvious that any group of teachers will have multiple learning needs, a single professional development program developed for teachers training, even a lengthy one, may be focused only on a subset of those needs. The very success of whole professional development program is based on the content selection and the strategies used to facilitate teachers in deepening their content based knowledge, understanding how students learn, selecting and using appropriate instructional methods and materials, that can effectively promote learning among all students; and in assessing student performance.

The National Education Policy (1998-2010) strongly endorses that 'The teacher is the central figure of the whole process...Advanced level training of the teachers is, therefore, vital for quality higher education' (p.74). Hence, effective teaching matters in higher education. Participation of teachers in professional development activities in Pakistan is very limited because most of the teachers in higher education do not realize the need for such courses. There is a lack of formal system for providing professional support, and there are no immediate extrinsic incentives provided to participate in such programs.

In the context of UK, a National Committee of Inquiry into Higher Education NCIHE- Daring Report (1997) quoted in Pennington (1999) emphasizes the need for

professional development since it is a 'strategic commitment to upgrading, extending and retaining of teaching skills in an important element in institutions' capacities to respond to changing work environments and to remaining competitive at a regionai, national and international level' (p.7). This report considers that 'competence' is at the heart of professionalism which should be promoted by further developing their practical skills, subject and pedagogical knowledge, values and attitude through the programs of professional development.

Professional development, or professional training in a broad sense, refers to the development of a person in his or her professional role through the program of training. More specifically, "Teacher development is the professional growth a teacher achieves as a result of gaining increased experience and examining his or her teaching systematically" (Glatthorn cited in Villegas-Reimers, p. 11). Professional development includes formal experiences (such as attending workshops and professional meetings, mentoring, etc.) and informal experiences (such as reading professional publications, watching television documentaries related to an academic discipline, etc. (Ganser cited in Villegas-Reimers, p. 11).

This conception of professional development is, therefore, broader than career development, which is defined as "the growth that occurs as the teacher moves through the professional career cycle" (Glatthorn, 1999, p. 41), and broader than staff development, which is "the provision of organized in-service programmes designed to foster the growth of groups of teachers; it is only one of the systematic interventions that can be used for teacher development" (Glatthorn, 1999, p. 41). When looking at

professional development, one must examine the content of the experiences, the processes by which the professional development will occur, and the contexts in which it will take place (Ganser, 2000).

Professional development in higher education institutions is still a new area in the developing countries whereas in the developed countries the professional development in higher education is getting momentum. However, it is being criticized because of the lack of sound theoretical framework' (Zuber-Skerritt, 1992). Elton (1977) rightly mentioned that staff development in higher education is still looking for a sense of direction. The World Bank Report (2000) on Higher Education also reveals that 'Higher education institutions clearly need well–designed academic programmes and a clear mission. Most important to their success, however, are high quality faculty, committed and well-prepared students, and sufficient resources... even at flagship universities in developing countries, many faculty members have little, if any, graduate level training.

It is one of the aims of Education Sector Reforms to provide professional development opportunities for educators to build content and methodological expertise. To make such reforms a reality, there is a growing realization that effective and meaningful professional development opportunities are critical to the successful implementation of any change agenda. Professional Development of the teachers has remained an ignored area at all levels in our educational context. The Higher Education Commission has taken an initiative of faculty development at higher education level. Therefore, the National Academy of Higher Education (NAHE) was made operational for the professional development of university faculty across Pakistan. NAHE was

established in 2004 with the main purpose of empowering the instructional leaders through providing pedagogical skills enhancement knowledge.

The project NAHE established 38 Human Resource Development Centers (HRDCs) across the country and organized training for 3564 faculty members through Staff Development Courses. The content of the Staff Development Courses comprised six modules i.e. Educational Psychology, Advanced Teaching Skills, Curriculum Development, Administrative Planning and Communication Skills, Research Skills and Testing and Assessment. SDC was an intensive in-service one month program conducted at the doorsteps of the universities.

The central focus is not on just providing the professional development at the doorsteps but to ensure the qualitative and result oriented investment in the field. It is an obvious fact that professional-development activities and opportunities, which are appropriate for education systems at one stage, may not be appropriate or effective for university systems at another stage. This contextual variable is crucial when planning and implementing professional development.

So the aim is to facilitate the university system in achieving its goals, not to create hindrances in the usual routine and make these programs an unexplained burden for both the faculty and administration. Now the question is: to what extent these training programs have been implemented successfully and how the future programs can be made more effective regarding qualitative and quantitative paradigms with respect to

implementation. For this purpose, the faculty involved in the process of professional development was targeted to help in strengthening the more focused and need based connection between the universities and Higher Education Commission's initiatives.

All too often evaluation is merely an expensive and time-consuming process that occurs at the end of a professional development course or activity and does not necessarily lead to changes. In contrast, effective evaluation is an opportunity to increase the direct impact on teacher effectiveness of professional development time and funds. Effective evaluation must be built into the process from the beginning. It is a primary source of input about the future direction of professional development. (NCREL, 2008)

A very few studies have been conducted on the topic of professional development at higher education level. Ramalanjaona (2003) stated that evaluation of the effectiveness of any faculty development is crucial to provide assessment of existing programmes and to yield valid recommendations for designing future programmes that better address the needs of the individual faculty members and the sponsoring institutions (p.1). Therefore in order to evaluate the staff development programs and to have amore qualitative implementation in Phase-II programs of NAHE vis-à-vis to assess the on-ground needs of faculty members across different faculties and disciplines, the researcher decided to take up MS level research study in this area with the major objective of probing into the implementation of these training programs and putting forth recommendations for making the professional development programs more realistic and responsive to felt needs of faculty members working in different disciplines.

1.1 Statement of the Problem

This was basically a survey study aiming at a thread-bare analysis of the implementation of professional development programs conducted by NAHE and development of mechanisms for quantitative expansion and qualitative improvement of these programs. It involved a thorough study of the relevant documents of the HEC and also those published by different national and international agencies on the subject. Analysis of the problem further involved the development of tools including questionnaires' to collect data from different stake-holders. Electronic sources were also consulted. Finally the research culminated with the analysis of data and writing of research report.

1.2 Objectives of the Study

The major objectives of the study were:

1. To assess the academic quality of the training Programs conducted by NAHE.
2. To determine the percentage of the faculty members trained in different academic disciplines.
3. To assess the problems faced by faculty members due to their participation in the Staff Development Courses.
4. To assess the problems faced by the Course Coordinators of the Staff Development Courses in managing the program.
5. To develop a workable framework for the future training programs.
6. To make recommendations for making the NAHE program more responsive to felt needs of faculty members.

1.3 Research Questions

1. What was the academic quality of the Staff Development Courses from the perspective of participants and Resource Persons?
2. What problems did faculty members face due to participation in Staff Development Courses and what are the most effective solutions to these problems?
3. What coordination problems were faced by the Course Coordinators of the SDCs?
4. How much percentage of faculty members was imparted SDC training from each discipline?

1.4 Operational Definition

1.4.1 Professional Development Programs: These programs included the Staff Development Courses conducted by NAHE for the professional development of university faculty.

1.4.2 Implementation Status: It included probing into the following:

- Academic quality of these programs
- Problems if any, faced by the faculty members and their institutions because of the involvement of faculty in the programs,
- The problems faced by the Course Coordinators of SDCs
- The facilitation provided to the Resource Persons
- The actual proportionate of the faculty trained in each discipline in comparison with the overall trained figure.

1.4.3 Quantitative Expansion: Development of a framework for conducting these programs in a more convenient mode for all the newly inducted faculty members of the higher education institutions across Pakistan.

1.4.4 Qualitative Improvement: Keeping in view the implementation status, and based on the suggestions of respondents, a mechanism was devised for ensuring more effective implementation of the professional development programs.

1.5 Significance of the Study

The present study was conducted to analyze the academic quality of the staff development courses conducted by the project National Academy of Higher Education (NAHE). Findings of this study are likely to be helpful for the management body of NAHE for the identification of the problems associated with the implementation of Staff Development Courses in the public sector universities.

The planning body of NAHE will be able to use the findings in assessing the academic quality of the programs; the problems are faced by the faculty members due to their participation in the courses and the coordination problems faced by the course coordinators of SDCs. Moreover they will have the valid suggestions to overcome these problems and suggest some measures to be taken for the faculty members who would attend the similar training programs in NAHE, Phase-II.

Moreover through this study HEC would have the valid opinion regarding the possible problems in the way of planning to make these training programs mandatory for the newly inducted faculty of universities. The stakeholders will be able to suggest the mechanisms for the betterment and expansion of the future training programs. The findings of the study may also be used by other public and private agencies working on the professional development of teachers. The findings of the study may also be meaningful for the training programs conducted in the private sector universities, as well.

This research will pave the way and provide a strong baseline for the future researchers working in area of professional development. The future researchers can use these recommendations to assess the effectiveness of the programs conducted under the Ministry of Education, Directorate of Staff Development, Lahore and the programs conducted by the private sector teacher training departments.

1.6 Delimitations of the study

In view of time and resource constraints, this study will be delimited as under:

1. The findings of the study would be generalizable on the SDC training program of NAHE conducted in 38 public sector universities of Pakistan.
2. Academic quality was discussed in detail with respect to the content dimension, and having less focus on the logistics of the program specifically from participants' perspective.

Chapter 02

REVIEW OF RELATED LITERATURE

The present study was conducted to analyze the implementation status of the one month in-service staff development courses conducted by the project NAHE. The objectives of the study were to assess the academic quality of the courses; the problems faced by the participants of the courses due to their participation in SDCs, the problems faced by the Resource Persons and Course Coordinators of the program and develop a workable framework for the future professional development programs.

Professional development is a valuable tool in improving teacher's competency. Changes in the workplace require continual professional development as a means of skill upgrading, even for teachers with degrees in education. New ways of teaching and learning are requiring teachers to assume the roles of a facilitator and to situate student learning in real-world contexts. Teachers must be able to use new technologies, which are continually changing the ways that people live, work, and learn. To respond to these changing roles and responsibilities, teachers need an effective professional development plan that can help them keep current and embrace new ways to improve their practice.

According to the Teacher Preparation International Perspective as published at State University's website, it is reported in a number of developing countries, the need for more teachers and the lack of candidates entering the profession has been fertile ground for the creation of a number of alternative teacher training programmes. These programmes usually include a heavy component of in-service training, and usually

begin with a 'crash course' on pedagogical knowledge that is completed within a very short period of time (Berry, 2001).

2.1 What is Professional Development?

Professional development is not a single model, but rather an evolving process of professional self-disclosure, reflection, and growth that yields the best results when sustained over time in practice and when focused on job-embedded responsibilities.

According to the thesaurus of the Educational Resources Information Center (ERIC) database, *professional development* refers to "activities to enhance professional career growth. These activities may include individual development, continuing education, and in-service education". Considering the meaning of professional development, Grant (n.d.) suggests a broader definition of professional development that includes the use of technology to foster teacher growth:

"Professional development ... includes formal and informal means of helping teachers not only learn new skills but also develop new insights into pedagogy and their own practice, and explore new or advanced understandings of content and resources. [This] definition of professional development includes support for teachers as they encounter the challenges that come with putting into practice their evolving understandings."

Professional development is a continuous process of individual and collective examination and improvement of practice. It should empower individual educators and communities of educators to make complex decisions; to identify and solve problems;

and to connect theory, practice, and student outcomes. Professional development also enables teachers' to offer students the learning opportunities that will prepare them to meet excellent standards in given content areas and to successfully assume adult responsibilities for citizenship and work.

Professional development is defined by the State Board as "a continuous process of improvement in teaching learning process to promote high standards of academic achievement and responsible citizenship for all students. Professional development increases the capacity of all members of the learning community to pursue life-long learning."

2.1.1 Historical Background

Historically, professional development was conducted mostly outside the institutions in fragmented, piecemeal improvement efforts, with no connection to teachers' and students' needs.

Before the mid-1980s, professional development was the object of very little research. Showers, Joyce, and Bennett (cited in Glickman et al.,1998) mentioned that until 1957, only about 50 studies had been conducted on professional development in teaching learning. Now several times that number of studies are being conducted every year; however, some of these studies have attracted negative reviews. McLaughlin & Zarrow (2001) state that staff development and in-service education remains part of a field with few theoretical or conceptual roots. So, there is still no practical background and importance attached to the field.

2.2 Modes of Professional Development

Perhaps the most traditional form of professional development is the typical `in-service staff training' that includes the use of workshops, short seminars and courses. Major criticisms abound in the literature about offering this form of in-service education as the only form of professional development, as traditionally most of these workshops and seminars are `one-shot' experiences, completely unrelated to the needs of teachers and providing no follow-up.

However, given the new understanding of professional development as an ongoing process of growth and learning, there are some cases that show that offering workshops, seminars and courses, when accompanied by other types of professional-development opportunities, can be quite successful.

Workshops/institute training that is development-oriented can be equally as helpful as more modern forms of professional development (Tillema and Imants, 1995). Cutler and Ruopp (1999) explain how the staff at the Education Development Center in the USA designed and implemented a programme of professional development. Teachers evaluated these courses as being very valuable, and this resulted in their changing their practices in the classroom. They also appreciated the benefits both of creating of a network of colleagues, and of their newly learned skills which included time management, resource management, and risk-taking abilities.

2.3 Need and Importance of Professional Development for Teachers

The Education Sector Reforms have placed the component of students learning a prime factor for the success of the education system. It is due to these reforms that the central focus is now on establishing higher expectations for student learning. Achieving these higher expectations for all students requires fundamentally changing what students learn and how they learn it. Professional development becomes a crucial component in these efforts if we want to ensure that teachers are able to make the significant changes in practice required to help students meet the learning challenges of higher standards. Yet these reforms require that we rethink how and what students learn as well as how and what their teachers learn through professional development.

A number of researchers have argued that we must move from the teaching of tedious facts to teaching for understanding. Malik (1991) has described that the training for developing the teachers is essential. The staff development services play a vital role in the development of human resources in supporting the development of a climate of openness and debate; and in providing opportunity to develop a university staff. McLaughlin and Zarrow (2001 note that teaching for understanding requires "pedagogical content knowledge" (p. 3), "knowledge not simply of a subject area, but also of how to teach it--how to select, represent, and organize information, concepts, and procedures...so that subject matter knowledge can be transformed into teaching for understanding" (p. 3).

The teacher is to move out of traditional, repetitious cycle of telling, assigning, reciting and testing to new and more complex role, which is more exhilarating and more

effective. This multidimensional role expected of the teachers has changed the mindset of educationists and to keep their focus on building the professional strengths of instructional leaders.

Quality teaching requires the provision of continuing opportunities for professional development so that teachers can perform all the roles and sub roles effectively. Teachers need:

1. access to new research and knowledge in the teaching of literacy, language development and an integrated curriculum;
2. appropriate, up to date qualifications in both the content area of the subject and in teaching methodology;
3. opportunities to share expertise with other experienced teachers and educators leading to reflection on practice;
4. opportunities for discipline renewal for teachers whose teacher education took place some years ago;
5. a commitment at all levels to time release to attend professional development activities;
6. Recognition at all levels of the value of professional development. (AATE Position Papers, 2001)

Quality teaching is directly related to the development of a strong, well informed and well supported professional body to respond to community and educational concerns and to influence opinion. Access to professional development is crucial in enabling teachers to:

1. improve learning outcomes for students;
2. take a more active role in curriculum planning, constantly develop excellent teaching practices;

2.4 Impact of Professional Development on Teachers

According to Brennen, 2001 Professional development is important for teachers for two main reasons:

1. For improving the entire teaching faculty of a university, and
2. For improving instruction and learning.

2.4.1 For improving the entire teaching faculty of a university

The in-service professional development programs help in improving the quality of teaching faculty with in the university. These programs are equally useful for the novice teachers and for the experienced teachers.

2.41.1 Assistance to Novice Teachers

New teachers are faced with several challenges upon beginning their teaching career:

(1) Class assignments,

(2) A change in institutional culture,

(3) Classroom discipline and management,

(3) Working with a new curriculum they have not established,

(4) Demanding teaching loads with assignment of extra duties,

(5) Motivating students,

(6) Dealing with individual differences among students,

(7) Assessing students, and

(8) Communicating with parents.

First explicit theory describing teachers' professional development was proposed by Fuller and Brown (1975 as cited in Brennen, 2001). According to these studies, "the first stage of teaching is concern with *survival*. . . . The second stage is concern with *teaching situation* . . . and the third stage reflects concern with *students*" (p. 474). An effective professional development program will pay attention to the different needs of novices, and it will include appropriate systemic strategies for long-term support.

2.4.1.2 Assistance to Experienced Teachers

Howey (cited in Brenned, 2001) lists six critical functions to be served by staff development geared toward experienced and successful teachers:

1. Continuing pedagogical development,
2. Continuing understanding and discovery of self,
3. Continuing cognitive development,
4. Continuing theoretical development,
5. Continuing professional development, and
6. Continuing Career Development.

2.4.2 Improvement of Instruction and Learning

The overriding goal of staff development is to improve instruction and student learning. Improvement of instruction means teachers' acquisition of effective and up-to-date techniques and methods of instruction, while improvement of learning refers to

increasing the student ability and capacity to cope successfully with increasingly more *complex academic and social challenges (Brennen, 2001).* Both these goals can only be possible if the professional development programs are arranged with a properly planned framework.

Data collected during the `Cognitively Guided Instruction Project'(CGI) - a multi-year and multi-phase programme of curriculum development, professional development and research - show "powerful evidence that experienced teachers' pedagogical content knowledge and pedagogical content beliefs can be affected by professional-development programmes and that such changes are associated with changes in their classroom instruction and student achievement" (Borko and Putnam, 2004, p. 55).

Similar results were obtained in Pakistan (Warwick and Reimers, 2000), where the formal professional development of teachers was closely associated with the levels of students' achievement. It is interesting to note that the same data showed that students' achievement was not significantly related to whether or not teachers had a teacher certification in that country.

Supovitz and Turner (2007) report that data from the US National Science Foundation Teacher Enhancement programme show that the degree of professional development to which teachers are exposed is strongly linked to both inquiry-based teaching practice and interactive classroom culture.

Teacher preparation is usually separated into two very broad categories: pre-service and in-service teacher preparation. As a result of the current transition from `teacher training' to `teacher professional development', these two categories are adopting new meanings. For the purpose of this study a brief about the in-service training and professional development is described below.

2.5 Teacher's In-service Professional Development

In-service education and training includes "those education and training activities engaged in by teachers, following their initial professional certification, and intended mainly or exclusively to improve their professional knowledge, skills, and attitudes in order that they can educate students more effectively" (Bolam, 1998, p. 3).

2.5.1 Models of Teacher's PD

There are various models that have been developed and implemented in different countries to promote and support teachers' professional development and to make them effective in their classrooms. The chart below summarizes the models included in each category presented by Eleonora, 2003. The chart is followed by detailed descriptions of the model/technique on which this research study is focused.

Organizational Partnership Models

1. Professional-development Colleges
2. University-school partnerships
3. Inter-institutional collaborations
4. Colleges' networks
5. Teachers' networks
6. Distance education

Small group or Individual Models

1. Supervision: traditional and clinical
2. Students' performance assessment
3. Workshops, seminars, courses, etc.
4. Case- based study
5. Self-directed development
6. Co-operative or collegial development
7. Skills-development model
8. Reflective models
9. Portfolios
10. Action research

The Staff Development Courses conducted by NAHE are based on the inter-institutional collaboration. Inter-institutional collaboration is that between institutions and other professional organizations outside of the formal system of education. Bainer, Cantrell, and Barron (2000) describe a partnership (of at least some months to some years but not more than five) between teachers/institutions and natural resource professionals who usually fulfill the role of `informal' teachers in educating the public, and yet have no formal teacher preparation. The purpose of the partnership is to help the natural resource professionals to acquire various teaching skills and practices, and for teachers to develop more skills and knowledge about teacher education. Even though Bainer *et al.'s* analysis focused on identifying the effect of this partnership on the natural resource professionals, the authors report that this type of collaboration has a positive impact on the teachers involved in the training process.

2.6 Content of In-Service Programmes

The content of in-service training and education is a subject which gives rise to much debate which has been fuelled partially by the fact that more research is still needed, firstly in order to understand the nature of teachers' professional knowledge and how it is used (Eraut, as cited in Eleonora, 2009) and, secondly, due to our lack of knowledge about how to provide in-service education and training in an efficient and effective way (Eleonora, 2003). In many countries, in-service education includes traditional courses on subject matter, pedagogy and teaching methods. The new trend is to go beyond the static, one-shot in-service training and offer a variety of opportunities for professional development.

While research evidence has shown that more successful institutions tend to make greater use of internal experts for professional development purposes (Nir, 2008), in many cases on-the-job training processes are carried out by external experts, i.e., supervision instructors, who are familiar with the updated didactic and pedagogical innovations. These professionals are assumed to promote institutional effectiveness by helping teachers to acquire, among other things, new instructional skills and new teaching methods and to increase their self-confidence and classroom efficiency (Nir, 2008).

During some instances of in-service training, teachers separate and don't find any relation among the psycho educational theory and the practice they are carrying out in class and show a tendency to generalize and use the same strategy in different subjects (Henning,

2000) and, if the course outline presented is very clear and well structured, it should be put into practice (Cuban, 1992).

According to Nicholls, teachers in higher education should demonstrate knowledge of their subjects and pedagogies and academic practices underpinned by a wide range of professional values and attitude.

Core Knowledge of teachers should include the following:

1. Subject material they will be teaching;
2. Appropriate methods for teaching and learning in the subject area and the level of the academic programme;
3. Models of how students learn, both generically and in their subject;
4. Use of learning technologies appropriate to the context in which they teach;
5. Methods for monitoring and evaluating their own teaching;
6. Implications of quality assurance for practice.

The *Professional Values of teachers* should include the following:

1. a commitment to scholarship in teaching, both generally and within their own discipline;
2. respect for individual learners and for their development and empowerment;
3. a commitment to the development of learning communities, including students, teachers and all those engaged in learning support;
4. a commitment to encourage participation in higher education and to equality of educational opportunities;
5. a commitment to continued reflection and evaluation and consequent improvements of their practice. (Nicholls, G, 2002, p. 6)

2.7 Academic Quality of the Professional Development Programs

Different authors have presented a number of criteria that should guide programmes that promote teachers' professional development. For example, according to Little in Eleonora, 2003, teacher professional development requires growth in knowledge, skills, judgment (classroom-related), and the contribution teachers make to a professional community. Leithwood as cited in Eleonora, 2003, on the other hand, recommends that programmes which promote professional development should focus on the following:

1. developing survival skills;
2. becoming competent in the basic skills of teaching;
3. expanding one's instructional flexibility;
4. acquiring instructional expertise;
5. contributing to the professional growth of colleagues; and
6. exercising leadership and participating in decision-making.

On-the-job professional development programs attempt to bridge this gap by allowing teachers to develop new vision that will enrich their teaching experience (Mtetwa & Thompson, 2000), enhance and update their teaching skills and practices, change their attitudes, beliefs and perceptions (Guskey, 2002). More specifically, the programs are intended to equip teachers with a "toolbox" that will extend their knowledge regarding the subject matter taught, instructional strategies and interpersonal communication skills. In this sense, professional development is considered a key component in improving institutions' performance and students' outcomes (Guskey, 2003; Nir, 2008),

Another advantage of having institution-based instruction programs is related to the institution's organizational learning. "As teachers learn to learn from one another and interact around substantive issues of teaching and learning and their own professional growth, their joint insights may shift the emphasis from individual classroom innovations to contributions to the teaching profession, resulting in organizational learning and change for the benefit of students" (Collinson & Cook, 2004, p. 330). Organizational learning in an institution setting is dependent on the dissemination of each teacher's individual learning that entails the sharing of knowledge, skills and insights achieved during collaborative exchange of ideas.

Reimers, 2003 has described the following four categories of in-service education and training:

1. for unqualified teachers (mainly certification courses);
2. to upgrade teachers;
3. to prepare teachers for new roles, such as teacher educators or principals;
4. curriculum related, particularly when there are curricular changes in the system, or when teachers require some form of refresher course.

Different authors (for example, Grosso de Leon, 2001; Reynolds, 1992; as cited in an international review of literature by Eleonora, 2003) have proposed different kinds of skills, knowledge, dispositions, and values which effective profession al development for teachers must possess. They include:

1. General pedagogical knowledge: this includes knowledge of learning

environments and instructional strategies; classroom management; and knowledge of learners and learning.

2. Subject-matter knowledge: this includes knowledge of content and substantive structures (equivalent to knowledge of a discipline).
3. Pedagogical content-knowledge: a conceptual map of how to teach a subject; knowledge of instructional strategies and representations; knowledge of students' understanding and potential misunderstandings; and knowledge of curriculum and curricular materials.
4. Knowledge of student context and a disposition to find out more about students, their families and their institutions'.
5. Knowledge of strategies, techniques and tools to create and sustain a learning environment/community, and the ability to use them effectively.
6. Knowledge, skills and dispositions to work with students of diverse cultural and social backgrounds (Alidou, 2000; Gay and Howard, 2000; Weisman, 2001).
7. Knowledge and attitudes that support political and social justice, as social realities make teachers very important agents of social change. Norberg (2000), argue that the development of this critical awareness should be integrated as part of teacher preparation, not only in extreme cases, but in all countries and contexts.
8. Knowledge and skills on how to implement technology in the curriculum. It includes "virtual opportunities for professional development," as well as a number of web sites containing information about grant providers who support professional-development efforts to educate teachers in the new technologies used in the classroom.

Quality professional development can lead to important qualitative outcomes such as the creation of a positive institutional culture, improvement in individual teacher skills, and development of opportunities for peer learning. Good quality professional development gives teachers at all experience levels the tools they need to approach classroom challenges with confidence and access to a professional staff that can support their endeavors.

2.7.1 Bolman's Environmental Frames: Theoretical Baseline of study

Bolman and Deal (1993) identified the environmental frames for the categorization of the problems. They suggested the four types of frames in which maximum problems lie i.e. Structural, Human, Political and Symbolic. A detailed analysis of these four frames led us to the conclusion that the structural frame deals with the level of productivity in the organization, the human frame stresses needs and motives including level of trust and commitment, the political frame focuses on the issues of resources, control and authority and the symbolic frames deals with the issues of rewards and recognition. (Kachen, 1996). Bolman's study is assumed as a theoretical frame work of the present research and the problems faced by the course coordinators, faculty members and resource persons have been evaluated according to these four frames and the findings are presented in the analysis portion of the report.

2.8 Challenges and Limitations of In-service PD Programs

In-service teacher preparation, in its most strict definition of courses for on-the-job learning, has also received a number of criticisms in the literature. For example, Berry (2001) have said that in today's time, the content of in-service courses does not cater to the needs of teachers, and teachers do not have a systematic way of communicating to administrators (who are in charge of developing these courses) that which they need. Other criticisms made regarding programmes of in-service training are that: educators in charge of in-service courses are poorly prepared; courses are theory-oriented and do not address practical concerns; courses are offered in locations difficult to reach, particularly by those teachers who need the courses the most and there are few reading materials related to the field available to teachers (Tatto, 2006).

In an international review of literature on professional development, Reimers, 2003 has pointed out that in Western Europe for example, Vonk, 1995 (as cited in Reimers) has identified the following limitations of in-service teacher-preparation programmes:

- there is a lack of clarity on the part of the participants, concerning the aims and objectives of this kind of training;
- many in-service activities do not target the main goal of improving the professional competence of teachers;
- it is too often the case that in-service training providers transmit the knowledge and skills they have, regardless of their relevance to the recipients;
- there is a "lack of insight into the processes of teachers' professional development and of teachers' professional learning" (p. 298).

These criticisms are also mirrored by other authors as they have completed evaluations of in-service programmes in other countries (for example, Kieviet, 1990; Sato and Ushiwata, 1990).

In most parts of the world, the majority of in-service programmes are too short, too unrelated to the needs of teachers, and too ineffective to upgrade teaching knowledge. In a survey of 700 teachers in India, 86 percent reported that they had received professional training at a teacher-training institution. The quality of the teacher education received was not up to par. In-service training and ongoing professional development for practicing teachers is minimal in India. In 1992, in-service training did not reach the majority of teachers. Only 13.6 per cent of university teachers said that they had received in-service training over a period of two years; most of the teachers who attended these training programmes said that they did not learn much (Sharma, 1992).

Despite all these criticisms, it is clear that there is an increased interest in improving teacher education in most countries around the world today, for example in many European countries where the budget for in-service education has increased over recent years, as is the case in France, Italy, Spain and the United Kingdom (Vonk, 1995 as cited in Reimers, 2003).

2.9 Principles for Effective PD Programs

In designing the new models of professional development, we should keep in mind the eight "design principles" proposed by Hawley and Valli (1999, p.138), which

represent the current consensus in the field. These authors suggested that quality PD should:

1. Be driven by analysis of the differences between standards for student learning and student performance;
2. Involve teachers in the identification of their learning needs and in the development of the learning opportunities and processes to be used;
3. Be primarily institution-based and integral to institutional operations;
4. Provide learning opportunities that relate to individual needs but for the most part are organized around collaborative problem solving;
5. Be continuous and ongoing, including support from sources external to the institution when appropriate;
6. Incorporate evaluation of multiple sources of information on outcomes for students and on implementation of lessons learned through professional development;
7. Provide opportunities for teachers to develop theoretical understanding of the content, knowledge, and skills to be learned; and
8. Be integrated with a comprehensive change process that deals with the full range of impediments to and facilitators of student learning.

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Department of Education's Professional Development Team in America identified 10 basic underlying principles of high-quality professional development programs to serve as guidelines to both professional development providers and recipients. These principles

reflect and embody what research identifies as best practice for professional development opportunities.

High-quality professional development programs;

1. Focuses on teachers as central to student learning, yet includes all other members of the institutional community
2. Focuses on individual, collegial, and organizational improvement
3. Respects and nurtures the intellectual and leadership capacity of teachers, principals, and others in the institution
4. Reflects best available research and practice in teaching, learning, and leadership
5. Enables teachers to develop further experience in subject content, teaching strategies, uses of technologies, and other essential elements in teaching to high standards
6. Promotes continuous inquiry and improvement embedded in the daily life of institutions
7. Is planned collaboratively by those who will participate in and facilitate that development
8. Requires substantial time and other resources
9. Is driven by a coherent long-term plan
10. Is evaluated ultimately based on its impact on teacher effectiveness and student learning; and this assessment guides subsequent professional development efforts.

According to the latest literature, some studies have been carried out on the criteria of effectiveness of professional development programs. For example, research

reported by Baker and Smith (2006) identified the following characteristics of professional development as being the most effective in sustaining change in teachers:

1. A heavy emphasis on providing concrete, realistic and challenging goals;
2. Activities that include both technical and conceptual aspects of instruction;
3. Support from colleagues;
4. Frequent opportunities for teachers to witness the effects that their efforts have on students' learning.

The New Jersey Professional Teaching Standards Board believes that educators must be dedicated to a continuous plan of professional development. All professional development plans should incorporate and be consistent with the certain standards: These standards should represent a new vision for professional development and provide guidance for the successful completion of the professional development requirements. According to the standards, an effective professional development program:

1. Enhances knowledge of subject content
2. Improves understanding of the academic, social, emotional, and physical needs of each learner and ensures that educators utilize appropriate teaching skills to enable students to meet or exceed their potential
3. Reflects best available interpretations of relevant knowledge, including empirical research and the consensus of professional opinion in teaching, learning, and leadership
4. Encourages educators to develop a variety of classroom based assessment skills
5. Provides for integrating new learning into the curriculum and the classroom

6. recognizes adult motivation, stages of development, personal goals and needs and levels of knowledge
7. Is periodically assessed to show its impact on teaching practice and/or student learning
8. Results from clear, coherent, strategic planning that is embraced and supported by the the educational governing body and by all levels of the institutional system
9. Develops an institutional culture that fosters continuous improvement and that challenges traditional roles and relationships among educators
10. Empowers educators to work effectively with parent and community partners
11. Is supported by sufficient time during working hours to engage in collegial consultation and learning and to support professional development
12. Is supported by the intellectual and financial commitment which enables the achievement of professional development plans

2.10 Professional Development of Teachers at Higher Education in Pakistan

2.10.1 Historical Perspective

It is a hard fact that vital area of staff development has been ignored in Pakistan. There are a lot of lip services in policies about staff development but it lacked political will and implementation strategy so the result was zero. In 1979 policy, need for the staff development was identified and in 1983 National Academy for Higher Education (NAHE) was established which was functional up to 1987.

2.10.2 National Academy of Higher Education (NAHE)

The National Academy of Higher Education was for the first time established in 1983, under the aegis of the University Grants Commission. The Academy designed and implemented training programme of three months for fresh university teachers. The training programme aimed at providing the background and skills necessary for teachers to participate positively in the academic and administrative functions of the university. The first pre service-training programme started on 7th January 1984. (UGC, 1983b).

Moreover, at that time the Academy organized and conducted teacher training programmes for graduate and post-graduate level teachers; undertook periodic revision of curricula for all graduate and post-graduate level courses taught in Pakistan's colleges and universities; organized and conducted seminars, conferences and work shops on various aspects of professional development. The National Academy of Higher Education conceived as its primary function, the development of human resources. All courses were geared towards this end.

2.10.4 Reconstitution of Academy for Professional Development of Teachers

The National Education Policy (1998-2010) endorses the importance of teachers in the educational process and recommended that the training of teachers must be conducted for having the quality of education. Keeping in view the importance attached to teachers training aspect in the National Education Policy document, it was decided to revive the academy with the sole purpose of providing teacher's professional development at their doorsteps.

HEC has taken an initiative of faculty development at higher education level and once again in September, 2004, the National Academy of Higher Education (NAHE) was made operational for the professional development of university faculty across Pakistan. NAHE's mission statement is:

> *"NAHE is dedicated to strengthen Instructional Leadership by providing sustained, comprehensive, and effective lifelong learning opportunities in order to promote innovative teaching learning strategies that are supported by cutting edge research and technology"*

Its objectives are:

1. To enhance the standards of teaching and learning throughout higher education in Pakistan by promoting practices that demonstrate excellent learning outcomes;
2. To enable institutions to develop approaches to teaching and learning that encourage a deeper understanding of the student learning needs;
3. To encourage collaboration and sharing of good practice so as to enhance the standards of teaching and
4. To contribute to the information available in the teaching and learning in higher education sector. (PC-I of the Project NAHE)

NAHE has conducted various forms of professional development programs for the university faculty. These programs include long duration and short duration professional development courses as:

1. Staff Development Courses

2. International Computer Driving License

3. Learning to Teach with Technology Studio

4. Workshops/ Seminars and Professional Development Conferences

The pedagogical skill enhancement is one of the major objectives of NAHE and for the purpose, the academy conducted staff development courses which included the following modules: Educational Psychology, Advanced Teaching Skills, Curriculum and Material Development, Administrative Planning and Communication Skills, Research Skills and Testing and Assessment.

NAHE had imparted training in these areas to 3564 faculty members from different universities; however, the total number of university faculty is more than **16,000**. Comparing the total strength and the trained figure of teachers, the dire demand for conducting more professional development trainings is obvious. In comparison with the international policies and standards, it is necessary to make these trainings mandatory for the teachers of HEI's, and should be an integral part of the job of faculty members. The research on the impact analysis has proved that these trainings have remarkably improved the pedagogical skills of the university faculty members. (Shafqat, 2007)

2.11 Ten Proposed Professional Standards for Teachers in Pakistan

According to Butt, 2003, in order to launch a successful professional development programs in Pakistani Higher Education Institutes, it is necessary that the following components should be made part of the program.

1. **Subject matter knowledge:** Teachers shall understand the central concepts, tools of inquiry, structures of the discipline, especially as they relate to the National Curriculum/ Content Standards, and design developmentally appropriate learning experiences making the subject matter accessible and meaningful to all students.
2. **Human growth and development**: Teachers shall understand how children and adolescents develop and learn in a variety of institutions, family and community contexts and provide opportunities that support their intellectual, social, emotional and physical development.
3. **Knowledge of Islamic values:** Teacher shall understand the Islamic/Ethical values and practices in the light of Quran / Sunna and other religious contexts.
4. **Instructional planning and strategies:** Teachers shall understand instructional planning, design long- and short-term plans based upon knowledge of subject matter, students, community, and curriculum goals, and shall employ a variety of developmentally appropriate strategies in order to promote critical thinking, problem solving and the performance skills of all learners.
5. **Assessment:** To regularly and continuously assess student progress teachers shall understand and use multiple assessment strategies and interpret results to evaluate and promote student learning and to modify instruction in order to foster the continuous development of students.
6. **Learning environment:** Teachers shall create a supportive, safe and respectful learning environment that encourages positive social interaction, active engagement in learning and self-motivation.

7. **Communication:** Teachers shall use knowledge of effective verbal, nonverbal and written communication techniques and the tools of information to foster the use of inquiry, collaboration and supportive interactions.
8. **Collaboration and partnerships:** Teachers shall build relationships with parents, guardians, families and professional organizations in the larger community to support students' learning and well-being.
9. **Professional Development & Code of Conduct:** Teachers shall participate as active, responsible members of the professional community, engaging in a wide range of reflective practices, pursuing opportunities to grow professionally and establishing collegial relationships to enhance the teaching and learning process. They will develop and subscribe to a professional code of conduct.
10. **ICT Knowledge and cognition:** Teachers are able to use instructional and information communication technologies for curriculum enrichment, instruction, assessment and evaluation of learning outcomes (Butt, 2003)

A review of in-service teacher training programs identified a number of effective and innovative training models in Pakistan in the private sector to improve teacher quality (Jaffer, 1998). The Aga Khan University Institute for Educational Development provides high quality in-service training for teachers through Professional Development Centres which involves a close link between teaching, training and research. A long term training program of the Aga Khan Education Service which combined classroom observations with daily reviews was very effective in improving teacher content knowledge and classroom practices (Bude and Chowdhri, 1989; Bude, 1992; Chowdhri

and Abbas, 1987 as cited in Shafqat, 2007). To internalize the process, trainers and teachers are helped to understand why certain methods are used, and trained to use them creatively and flexibly rather than applying it in a mechanical way (Juma, 1997)

In a study conducted by Jaffer & Hussain (2005) about involving training of Instructors of the Regional Institutes of Teacher Education, comparison of pre and post test scores showed an average increase of 36% in pedagogical skills and 34% in subject skills (Jaffer, Hussain et al, 2005)

On the other hand an evaluation of the Training and Resource Centres (TARCs) of the Ali Institute of Education (AIE) produced mixed results. While training improved teaching skills like providing feedback to pupils, encouraging positive behaviour, using AV aids appropriately, conducting activities, and creating a pleasant environment for learning, teaching was generally teacher-centred, with few questions by pupils, and most of the teachers did not use lesson plans, review previous lesson or link it to the present lesson, state topic and lesson objectives, or summarize lesson. (Jaffer, Hussain et al, 2004).

Another study designed to develop thinking skills found that teachers completing the course used thinking tools in their teaching, and in practical life, and they influenced their personality. Pre and post assessment of teachers showed significant improvement in almost all teaching behaviors of most teachers (Shakir, 1995).

CHAPTER 03

RESEARCH METHODOLOGY

3.1 Design of the Study

This was a survey study aimed to explore the opinions of participants of staff development programs about the academic quality of the courses and the problems they faced due to participation in SDCs. Three questionnaires were used to gather the opinions and these consisted of closed ended questions developed on five point Likert scale and open ended questions for having respondents' personal opinions regarding certain points.

3.2 Procedure of the Study

The study was conducted to analyze the implementation status of staff development courses conducted by NAHE. The data was gathered through questionnaires. Questionnaires were made and for the verification purpose each type was pilot tested on a small group of 08 Faculty Members, 02 Course Coordinators and 03 Resource Persons. The questionnaire was revised keeping in view the suggestions of the pilot test sample group. The first questionnaire was developed for the faculty members/ participants' of the courses to assess the academic quality of the programs and to assess the problems they faced due to their participation in SDCs. The second questionnaire was developed for the course coordinators to assess the problems they faced during the coordination of SDCs and the third questionnaire was for the resource person for having their opinion about academic quality of programs. The last part of all the three questionnaires was similar for all the group of respondents. After piloting, the final version of the first questionnaire was

sent through email and postal service to the selected 425 faculty members of 17 Human Resource Development Centers selected through simple random sampling technique. The second questionnaire was sent to 17 Course Coordinators of the sampled universities. This questionnaire was focused to asses the problems faced by the Course Coordinators in managing the staff development programs. The third questionnaire was sent to 20 Resource Persons for having their opinion regarding the assessment of academic quality of the programs and the facilities provided to them during the sessions. In order to have in time response, reminders were sent to the participants of the study through email and by post as well, moreover personal visits were also made in few cases. In total 384 out of 425 responses were received making a percentage of 90%. After data collection, the data was analyzed using the statistical software.

3.3 Population of the study

The population of the study consisted of all the 38 universities wherein Human Resource Development Centers were established by NAHE and 3564 faculty members trained through 115 Staff Development Courses in these centers. These faculty members were from different academic disciplines ranging from pure sciences, social sciences, humanities, and languages etc. The population of the study was distributed in four provinces of Pakistan and the state of AJ&K. The population was scattered with a proportionate distribution of rural areas as well because there were some HRDCs in Jauharabad, Khairpur and Uthal etc. therefore the results of this study are applicable on the training programs conducted in all parts of the country. The total population table is given at Annex-I.

Table: 01 Province Wise Distribution of Population and Selected Sample

S. No	Province	Total Number of Human Resource Development Centers	Total Number of faculty trained in HRDCs	Sample size of HRDCs	Number of faculty members selected	Resource persons selected	Course Coordinators selected	Total
1.	Punjab	17 (45% of the total 38)	1518	08 (45%)*	200	04	08	212
2.	Sindh	07 (19% of the total 38)	763	03 (19%)	75	04	03	82
3.	NWFP	09 (24% of the total)	787	03 (24%)	75	04	03	82
4.	Balochistan	04 (11% of the total)	353	02 (11%)	50	04	02	56
5.	AJ&K	01 (03% of the total)	143	01 (03%)	25	04	01	30
Total		**38**	**3564**	**17**	**425**	**20**	**17**	**462**

** This is the percentage of centers developed in Punjab Province in comparison with the total number of HRDCs. 08 centers were selected as sample as it becomes 45% of the centers established in Punjab.*

Source: Database of all the courses compiled by the Project NAHE

3.4 Sample of the Study

As described in table 01, twenty five faculty members were selected from each of the selected centers using simple random sampling technique. In this way the sample size was of 425 faculty members. Moreover 17 Course Coordinators and 20 Resource Persons were selected for data collection, through the Random Sampling technique using the table of random numbers. For the resource persons the sample selection was made on the basis of convenient sampling technique and a fixed number of four from each province were selected, because first of all there is no complete database of resource persons and secondly the resource persons are on additional duty when teaching in the SDC sessions and thirdly they are same in most of the training programs that's why equal number was taken from each province. Therefore in total 462 faculty members, resource persons and course coordinators were selected for having their opinion on the range of dimensions i.e. academic quality of the programs, problems faced by the faculty members due to their participation in professional development program, problems faced the course coordinators in managing the programs and designing a better framework for the future professional development programs.

The sample HRDCs were selected from all the four provinces of Pakistan and the state of AJ&K. The sampling technique for the selection of HRDCs was stratified random sampling. Five strata's were made in accordance with the four provinces and AJ&K. In this way, from all the five strata's, relative percentage of universities/HRDCs was selected using the simple random sampling technique. The relative number was determined on the basis of percentage of universities (HRDCs) in each province in

comparison with the total number of HRDCs. The same percentage was taken into consideration for the sample selection from each province in order to have the relative representation of the HRDCs of each province. *(For example from the total number of centers established throughout the country, Punjab has the share of 45%, therefore 08 centers were selected as sample, keeping in view the 45% weightage).*

Table: 02 Names of the Selected Human Resource Development Centers

S #	Name of the Centre	Number of faculty selected
	Punjab	
1.	University of Agriculture, Faisalabad.	25
2.	University of Education, Dera Ghazi Khan	25
3.	Lahore College for Women University, Lahore	25
4.	University of Sargodha, Sargodha	25
5.	University of Education, Jauharabad	25
6.	Islamia University Bahawalpur	25
7.	COMSATS Institute of Information Technology, Islamabad.	25
8.	University of Education, Attock Campus	25
	Sindh	
9.	Sindh Agriculture University, Tandojam	25
10.	Dow University of Health Sciences, Karachi	25
11.	Quaid-e-Awam University of Engineering Science & Technology, Nawabshah	25
	NWFP	
12.	IER Deptt University of Peshawar, Peshawar	25
13.	Karakurum International University, Gilgit	25
14.	Hazara University, Mansehra	25
	Balochistan	
15.	Balochistan University of Information Technology & Management Sciences, Quetta	25
16.	University of Balochistan, Quetta	25
	Azad Jammu and Kashmir	
17.	University of Azad Jammu & Kashmir, Muzaffarabad.	25
	Grand Total	**425**

3.5 Research Instruments

This study was based on the experiences of the faculty members (participants), Course Coordinators and Resource Persons of the Staff Development Courses (SDCs) held in the HRDCs established in the public sector universities of Pakistan. In order to have their opinion different types of tools of data collection were developed.

3.5.1 Questionnaire

The data was collected using questionnaires filled in by **425** faculty members, **20** Resource Persons and **17** Coordinators from 17 universities (Centers) across Pakistan. Three questionnaires were administered to get the views of the faculty members, Resource Persons and Course Coordinators.

3.5.1.1 For faculty members

The questionnaire consisted of three parts:

1. one major portion was developed to analyze the academic quality of the programs; the statements were developed keeping in view the objectives of modules
2. the other portion was used to analyze the problems faced by the faculty members due to their participation in SDCs and
3. The third part was developed to have an opinion of the participants regarding development of a workable framework for future staff development programs least problematic

3.5.1.2 For Resource Persons'

The questionnaire consisted of two parts:

- The first part was developed to assess the academic quality of the programs.
- The second part was built to develop a workable framework for future staff development programs least problematic

3.5.1.3 For Coordinators'

- The questionnaire consisted of one major portion to analyze the problems faced by the University Coordinators of the program.
- Third portion of first two questionnaires was administered on the sampled Course Coordinators of the program as well.

All the three questionnaires are attached at Annexure B, C and D of the study.

3.5.1.4 Structure of the Questionnaire

The questionnaires had open ended and close ended questions. The close ended questions were developed on five point Likert scale. The open ended questions were developed in order to have the opinion of the Faculty Members, Coordinators and Resource Persons, regarding implementation status of these programs and their suggestions for the improvement of qualitative and quantitative mechanisms of the professional development programs organized by NAHE.

3.5.2 Study of Relevant Documents

Study of relevant documents was also used as a tool of data collection. These documents inter alia, included different types of reports and documents compiled by Higher Education Commission and National Academy of Higher Education. The database of the participants was used to locate the sampled faculty members and course coordinators. Their email IDS, Postal Addresses and telephone numbers were taken to reach them for the purpose of gathering the information. Moreover the Yearly Achievement reports of HEC, Medium Term Development Framework document, PC-I & PC-IV of NAHE and other related documents were used for the purpose of data collection.

3.6 Pilot Test of the Questionnaires

All the three questionnaires were pre-tested on the mini-sample to assess the effectiveness of the questions asked; to test the time required to complete; to check the clarity of questions and instructions and to eliminate questions that are not useable for the analysis. The respondents were required to interpret the statements and reproduce these in their own words in order to check the clarity of the respondents understanding about the statements. If any statement was misinterpreted, it was rephrased and made clearer. Participants were requested to give their feedback openly, so that the questionnaire may be improved and made clear and understandable. Piloting was done on 08 participants/faculty members; 02 Course Coordinators and 03 Resource Persons. Their suggestions were duly taken into consideration and amendments were made in the

questionnaires in the light of comments given by participants/faculty members, Course Coordinators and Resource Persons.

3.7 Data Collection

The questionnaires were circulated through email to the faculty members/participants. Interviews were conducted telephonically. In case of non response or delayed response from the faculty members on the questionnaires, telephonic reminders were sent to them for having prompt response. The researcher made the sample group realized about the importance of this research as a national cause and persuaded that how their contribution can be instrumental for the betterment of the whole system. Reminders through email were sent to all the participants for having quick data collection. In case of local participants researcher visited the universities personally and gathered participants for filling in the questionnaire. Sometimes an official visit was scheduled in due course of time; in that case the researcher visited the sampled universities of that particular area and gathered data in person. The researcher sent 425 questionnaires in total and in response to that 384 questionnaires from the participants were returned.

3.8 Data Analysis

Data collection stage was followed by data cleaning, coding and feeding. After feeding data was analyzed using Software Statistical Package for Social Sciences. The major statistical tool included percentages, Chi Square. Data was analyzed and presented in tabular form followed by interpretation thereof. Graphs and curves were also constructed

for further explanation. Although the questionnaire were developed on the five point Likert scale, but in order to avoid thin distribution, the data was combined in three categories treating/combining the Strongly Disagree and Disagree option, and Strongly Agree and Agree option as one and the third option of neutral/undecided..

3.9 Report Writing

After data analysis the report was written on technical grounds. The results of the study and the analysis of the data were presented in a simplified and understandable manner, the conclusion of the study was written and the recommendations were made on the basis of the data gathered.

CHAPTER 04

ANALYSIS AND INTERPRETATION OF DATA

This chapter presents analysis and interpretation of the data gathered from the faculty members who were the participants of the staff development courses, Course Coordinators of the programs and resource persons of the program. The basic objective of the study was to assess the implementation status of the staff development programs and to analyze the problems faced by the faculty members and course coordinators during the staff development courses; to have a disciplines based analysis of the faculty members trained through SDCs, to devise a mechanism for making the staff development programs mandatory for the university faculty. The results of the study have been presented in the form of tables and graphical representation. The sequence of the data presentation and analysis is as:

1. Discipline based analysis of the faculty members trained through SDCs
2. Analysis and Interpretation of Data collected on questionnaire "A"
3. Analysis and Interpretation of Data collected on questionnaire "B"
4. Analysis and Interpretation of Data collected on questionnaire "C"

4.2.1 Consolidated Analysis of the Problems faced by the Participants, Course Coordinators and Resource Persons during Staff Development Programs

5. Analysis of the last part of all the three questionnaires (Making SDCs Mandatory)
6. Analysis of open ended questions of all the questionnaires

4.1 Percentage of Faculty trained in different Academic Disciplines'

In order to analyze the percentage of faculty members trained in different academic disciplines, the database of the participants was compiled having the following information:

{Name; Institution's name; Department; Telephone number (mobile and office); Email address}. The information about the department was used to analyze the number of faculty trained in each discipline through 115 staff development courses.

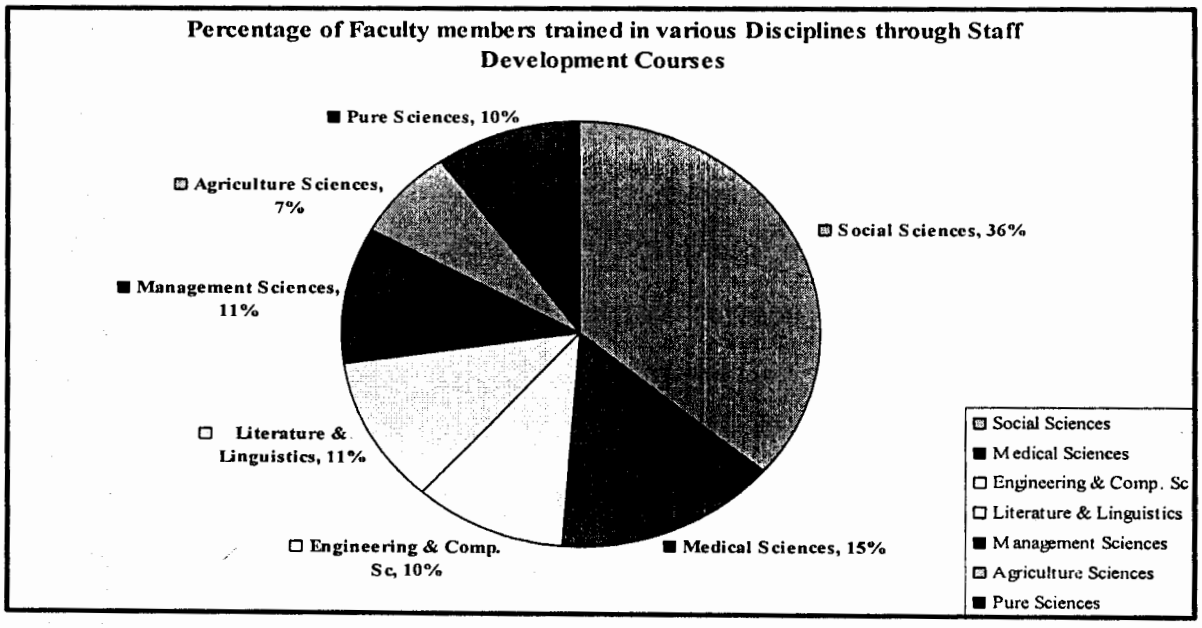
Table 03 Discipline Based Analysis of the Faculty Members Trained (Year 2004-08)

S. No	Discipline	Number of Faculty Trained	Percentage
1	Social Sciences	1283	36
2	Medical Sciences	535	15
3	Linguistics & Literature	392	11
4	Management Sciences	377	11
5	Engineering & Comp. Sc.	371	10
6	Pure Sciences	356	10
7	Agriculture Sciences	249	7
Total		**3564**	**100**

From the analysis of results it was revealed that out of 3564 faculty members, 1283, making up a percentage of 36%; were from the Social Sciences discipline; 535 faculty members making the percentage of 15 were from the discipline of Medical Sciences; surprisingly this percentage of medical sciences was so much high because one of NAHE's center was Dow University of Health Sciences, Karachi in which 10 batches of the Staff Development Courses were conducted, the third majority group was of Linguistics and Literature discipline which got the share of 11% and 392 faculty members from this discipline benefited from Staff Development Course; 11 percent i.e.

377 faculty members were from Management Sciences programs; 371 faculty members; or 10% of the total 3564 were from Engineering and Computer Science disciplines; the discipline of Pure Sciences got the share of 10% i.e. in total 356 faculty members were trained from this discipline; only 07% were from the Agriculture Sciences discipline making a number of 249 faculty members in total. So it can be concluded that the discipline of Sciences was a bit ignored while catering to the training needs of the faculty and this gap needs to be addressed in future.

Figure 01: Graphical Representation of the Percentage of faculty members trained in various academic disciplines through SDCs



4.2 Questionnaire "A"

Part 01: Academic Quality of the Staff Development Courses

The first part of the questionnaire "A" was developed for the faculty members in order to assess the academic quality of the staff development courses with specific emphasis on the quality of modules. The results of the study are presented below along with the

analysis of each question separately and the consolidated analysis of all the six modules as well. For the purpose of analysis and interpretation, the percentages corresponding to the options High Extent and Very High Extent have been combined as one percentage and the percentages against the options Low Extent and Very Low Extent have been added together.

Table 04: Learned to integrate new learning/knowledge in the classroom

Options	Observed N	Percent	Expected N	Statistics
Very low extent	41	10.6	76.8	Chi-Square(a)
Low extent	89	23.2	76.8	71.599
Uncertain	49	12.6	76.8	df
High extent	151	39.3	76.8	4
Very high extent	54	14.0	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 53% respondents were of the view that the content of staff development programs contributed to a very high or high extent in learning to integrate new knowledge in the classroom. Moreover 34% respondents were of the view that this course contributed to low or very low extent in this regard. Therefore it is evident from the table 01 that more than half of the participants found the course effective in helping them to integrate new knowledge into the classroom. From the statistical analysis of the results it is evident that the chi square $\chi^2 = 71.599 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned to integrate new knowledge in the classroom and we reject our null hypothesis

Table 05: Learned to apply motivational techniques on college/university level students

Options	Observed N	Percent	Expected N	Statistics
Very Low Extent	52	13.5	76.8	Chi-Square(a)
Low Extent	66	17.2	76.8	128.88
Uncertain	30	7.8	76.8	df
High Extent	160	41.7	76.8	4
Very High Extent	76	19.8	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 62% respondents were of the view that staff development programs contributed to a very high or high extent in learning to apply the motivational techniques for the university students learning. Moreover 30% respondents were of the view that this course contributed to low extent towards strengthening their learning about the application of motivational techniques for enhancing the university students learning. .

From the statistical analysis of the results it is evident that the value of chi square $\chi^2 = 128.188 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned to apply motivational techniques on university level students and we reject our null hypothesis.

Table 06: Gained Academic/professional skills for counseling the students

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	36	9.0	76.8	Chi-Square(a)
Low Extent	50	13.0	76.8	125.818
Uncertain	26	6.7	76.8	df
High Extent	191	49.7	76.8	4
Very High Extent	81	21.0	76.8	Table Value
Total	384	100.0		9.4888

This table shows that in total 70.7% respondents were of the view that through staff development programs participants gained academic/professional skills for counseling the students. Moreover 21% were of the view that SDC contributed low extent in gaining

the academic/professional counseling skills. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 125.818 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants gained academic/professional skills for counseling the students, so we reject our null hypothesis.

Table 07: Learned about multidimensional learning difficulties of students

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	22	5.7	76.8	Chi-Square(a)
Low Extent	56	14.6	76.8	262.849
Uncertain	19	4.9	76.8	df
High Extent	191	49.7	76.8	4
Very High Extent	96	25.0	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 75% respondents were of the view that through SDC, participants learned about multidimensional learning difficulties of students. Moreover 20% respondents were of the view that this course contributed to a low extent in learning about multidimensional learning difficulties of students. From the statistical analysis of the results it is evident that the chi square $\chi^2 = 262.849 > 9.4888$ at $\partial = 0.05$ & df = 4,, therefore the result is positively significant that the course participants learned about multidimensional learning difficulties of students, so we reject our null hypothesis.

Table 08: Gained skills in dealing with the Academic needs of students

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	37	9.6	76.8	Chi-Square(a)
Low Extent	78	20.3	76.8	153.943
Uncertain	44	11.5	76.8	df
High Extent	170	44.3	76.8	4
Very High Extent	55	14.3	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 58% respondents were of the view that staff development programs contributed to a very high or high extent in enhancing skills for dealing with the academic needs of students Moreover 30% respondents were of the view that this course contributed to low extent towards this end. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 153.943 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants gained skills in dealing with the academic needs of students, so we reject our null hypothesis.

Table 09: Gained skills in dealing with the Social needs of the students

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	120	31.3	76.8	Chi-Square(a)
Low Extent	98	25.5	76.8	71.391
Uncertain	32	8.3	76.8	df
High Extent	89	23.2	76.8	4
Very High Extent	45	11.7	76.8	Table Value
Total	384	100.0		9.4888

This table shows that only 43% respondents were of the view that staff development programs contributed to a very high or high extent in enhancing skills for dealing with the social needs of students Moreover 57% respondents were of the view that this course contributed to low extent in dealing with the social needs of students. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 71.391 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and the course participants didn't gain skills in dealing with the social needs of students, so we accept our null hypothesis.

Table 10: Gained skills in dealing with the Emotional needs of students

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	36	9.4	76.8	Chi-Square(a)
Low Extent	65	16.9	76.8	138.786
Uncertain	25	6.5	76.8	df
High Extent	148	38.5	76.8	4
Very High Extent	110	28.6	76.8	Table Value
Total	384	100.0		9.4888

The above table shows that 67% respondents were of the view that staff development programs contributed to a very high or high extent in enhancing skills for dealing with the emotional needs of students Moreover 26% respondents were of the view that this course contributed to low extent towards this end. . From the statistical analysis of the results it is evident that the chi square $X^2 = 138.786 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants gained skills in dealing with the emotional needs of students, so we reject our null hypothesis.

Table 11: Learned about the psychological principles of adult learning

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	41	10.7	76.8	Chi-Square(a)
Low Extent	56	14.6	76.8	152.754
Uncertain	38	9.9	76.8	df
High Extent	169	44.0	76.8	4
Very High Extent	80	20.8	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 65% respondents were of the view that staff development programs contributed to a very high or high extent in making the participants understand about the psychological principles of adult learning. Moreover again 25% respondents were of the view that this course contributed to low extent in fostering psychological principles of adult learning. . From the statistical analysis of the results it is evident that the chi square $X^2 = 152.745 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant

that the course participants learned to apply motivational techniques on university level students and we reject our null hypothesis.

Table 12: Learned to apply Instructional methodologies relevant to your own discipline(s)

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	82	21.4	76.8	Chi-Square(a)
Low Extent	161	41.9	76.8	139.568
Uncertain	35	9.1	76.8	df
High Extent	72	18.8	76.8	4
Very High Extent	34	8.9	76.8	Table Value
Total	384	100.0		9.4888

The above mentioned table shows that 27% respondents were of the view that staff development programs contributed to a very high or high extent in the learning of various instructional methodologies relevant to the participants' particular disciplines. Moreover 61% respondents were of the view that this course contributed to a very low or low extent in the application of discipline based instructional strategies. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 139.568 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and the course participants didn't learn to apply instructional methodologies relevant to their own discipline(s), so we accept our null hypothesis.

Table 13: Learned about professional code of conduct for teachers

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	93	24.2	76.8	Chi-Square(a)
Low Extent	143	37.2	76.8	110.401
Uncertain	48	12.5	76.8	df
High Extent	78	20.3	76.8	4
Very High Extent	22	5.7	76.8	Table Value
Total	384	100.0		9.4888

This table shows that only 26% respondents were of the view that they learned professional code of conduct for teachers through the staff development programs while 61% respondents were of the view that this course contributed to low extent in learning about the professional code of conduct. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 110.401 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and the course participants didn't learn about professional code of conduct for teachers, so we accept our null hypothesis.

Table 14: Learned to adjust instructional strategies based on knowledge of students learning styles

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	67	17.4	76.8	Chi-Square(a)
Low Extent	211	54.9	76.8	318.188
Uncertain	25	6.5	76.8	df
High Extent	63	16.4	76.8	4
Very High Extent	18	4.7	76.8	Table Value
Total	384	100.0		9.4888

This table shows that only 21% respondents were of the view that they learned to adjust the instructional strategies based on the knowledge of students learning; rest of the sampled faculty 73% were of the view that they still don't know about how to adjust the instructional strategies according to the varying styles of students learning. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 318.188 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and the course participants didn't learn to adjust instructional strategies based on knowledge of students learning styles, so we accept our null hypothesis.

Table 15: Learned to evaluate your own teaching style competencies

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	77	20.1	76.8	Chi-Square(a)
Low Extent	69	18.0	76.8	106.781
Uncertain	24	6.3	76.8	df
High Extent	149	38.8	76.8	4
Very High Extent	65	16.9	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 55% respondents were of the view that they learned about their own teaching styles competencies through the staff development programs. Moreover 38% respondents were of the view that they didn't learn to evaluate their teaching styles competencies. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 106.781 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned to evaluate your own teaching style competencies, so we reject our null hypothesis.

Table 16: Learned to evaluate your own teaching style weaknesses

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	29	7.6	76.8	Chi-Square(a)
Low Extent	49	12.8	76.8	279.490
Uncertain	16	4.2	76.8	df
High Extent	197	51.3	76.8	4
Very High Extent	93	24.2	76.8	Table Value
Total	384	100.0		9.4888

The above table shows that 75% respondents were of the view that they learned about their own teaching styles weaknesses through the staff development programs. Moreover 20% respondents were of the view that they didn't learn to evaluate their teaching styles weaknesses. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 279.490 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that

the course participants learned to evaluate their own teaching weaknesses and we reject our null hypothesis.

Table 17: Learned techniques for enhancing the instructional leadership skills

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	129	33.6	76.8	Chi-Square(a)
Low Extent	154	40.1	76.8	188.370
Uncertain	26	6.8	76.8	df
High Extent	45	11.7	76.8	4
Very High Extent	30	7.8	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 19% respondents were of the view that staff development programs contributed to a very high or high extent in learning the techniques for enhancing their instructional leadership skills. Moreover 74% respondents were of the view that this course contributed to low extent towards enhancing their leadership skills. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 188.370 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and the course participants didn't learn techniques for enhancing the instructional leadership skills, so we accept our null hypothesis.

Table 18: Enhanced skills in verbal communication within the classroom

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	68	17.7	76.8	Chi-Square(a)
Low Extent	139	36.2	76.8	87.849
Uncertain	39	10.2	76.8	df
High Extent	94	24.5	76.8	4
Very High Extent	44	11.5	76.8	Table Value
Total	384	100.0		9.4888

The above table shows that 36% respondents were of the view that staff development programs contributed to a very high or high extent in enhancing verbal communication skills. Moreover 50% respondents were of the view that this course contributed to low or very low extent in enhancing the verbal communication skills. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 87.85 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant which means that the course participants didn't enhance skills in verbal communication within the classroom, so we accept our null hypothesis

Table 19: Enhanced skills in non-verbal communication within the classroom

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	81	21.1	76.8	Chi-Square(a)
Low Extent	197	51.3	76.8	259.333
Uncertain	31	8.1	76.8	df
High Extent	49	12.8	76.8	4
Very High Extent	26	6.8	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 19% respondents were of the view that staff development programs contributed to a very high or high extent in enhancing non-verbal communication skills. Moreover 72% respondents were of the view that this course contributed to low extent or very low extent in enhancing the non verbal communication skills. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 259.333 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and the course participants didn't enhance skills in non-verbal communication within the classroom, so we accept our null hypothesis

Table 20: Enhanced skills in written communication within the classroom

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	60	15.6	76.8	Chi-Square(a)
Low Extent	176	45.8	76.8	164.255
Uncertain	47	12.2	76.8	df
High Extent	61	15.9	76.8	4
Very High Extent	40	10.4	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 26% respondents were of the view that staff development programs contributed to a very high or high extent in enhancing written communication skills. Moreover 61% respondents were of the view that this course contributed to low extent or very low extent in enhancing the written communication skills. . From the statistical analysis of the results it is evident that the chi square $X^2 = 164.255 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and the course participants didn't enhance skills in written communication within the classroom, so we accept the null hypothesis.

Table 21: Enhanced time management skills in classroom

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	66	17.2	76.8	Chi-Square(a)
Low Extent	149	38.8	76.8	108.474
Uncertain	26	6.8	76.8	df
High Extent	85	22.1	76.8	4
Very High Extent	58	15.1	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 37% respondents were of the view that staff development programs contributed to a very high or high extent in enhancing their time management skills in the classroom. Moreover 56% respondents were of the view that this course contributed to low or very low extent towards this dimension. . From the statistical analysis of the

results it is evident that the chi square $\chi^2 = 108.474 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and the course participants didn't learn to enhance time management skills in classroom, so we accept the null hypothesis.

Table 22: Learned to maintain meaningful interaction strategies in Teacher-Student Relationship

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	81	21.1	76.8	Chi-Square(a)
Low Extent	56	14.6	76.8	142.276
Uncertain	16	4.2	76.8	df
High Extent	159	41.4	76.8	4
Very High Extent	72	18.8	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 59% respondents were of the view that staff development programs contributed to a very high or high extent in having a better relationship with their students. Moreover 36% respondents were of the view that SDC contributed to low or very low extent towards this dimension. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 142.276 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned to maintain meaningful interaction strategies in teacher-student relationship, so we reject our null hypothesis.

Table 23: Learned to maintain meaningful interaction strategies in Teacher-Teacher Relationship

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	83	21.6	76.8	Chi-Square(a)
Low Extent	145	37.8	76.8	99.385
Uncertain	40	10.4	76.8	df
High Extent	79	20.6	76.8	4
Very High Extent	37	9.6	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 30% respondents were of the view that the content of SDC contributed to a very high or high extent in maintaining a good working relationship with their colleagues. Moreover 59% respondents were of the view that this course contributed to low or very low extent in fostering techniques for maintaining a good working relationship with their colleagues. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 99.385 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and majority of the course participants didn't learn to maintain meaningful interaction strategies in teacher-teacher relationship, so we accept the null hypothesis.

Table 24: Learned to maintain meaningful interaction strategies in Teacher-Head Relationship

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	185	48.2	76.8	Chi-Square(a)
Low Extent	97	25.3	76.8	241.521
Uncertain	22	5.7	76.8	df
High Extent	59	15.4	76.8	4
Very High Extent	21	5.5	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 21% respondents were of the view that the content of SDC contributed to a very high or high extent in maintaining a good working relationship with their heads. Moreover 73% respondents were of the view that this course contributed to low or very low extent in fostering techniques for maintaining a good working relationship with their heads. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 241.521 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and majority of the course participants didn't learn to maintain meaningful interaction strategies in teacher-head relationship, so we accept the null hypothesis.

Table 25: Learned strategies for integrating new learning into the curriculum

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	33	8.6	76.8	Chi-Square(a)
Low Extent	64	16.7	76.8	194.255
Uncertain	28	7.3	76.8	df
High Extent	179	46.6	76.8	4
Very High Extent	80	20.8	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 66% respondents were of the view that the content of SDC contributed to a very high or high extent in integrating new learning into the curriculum. Moreover 25% respondents were of the view that this course contributed to low or very low extent in helping the faculty to integrate newly leaned material into the existing curriculum. . From the statistical analysis of the results it is evident that the chi square X^2 = 194.255 > 9.4888 at ∂ = 0.05 & df = 4, therefore the result is positively significant that the course participants learned to strategies for integrating new learning into the curriculum, so we reject our null hypothesis.

Table 26: Learned to design curriculum based assignments that promote critical thinking among students

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	47	12.2	76.8	Chi-Square(a)
Low Extent	60	15.6	76.8	89.802
Uncertain	43	11.2	76.8	df
High Extent	143	37.2	76.8	4
Very High Extent	91	23.7	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 61% respondents were of the view that the content of SDC contributed to a very high or high extent in helping the faculty to assign projects that promote critical thinking in the students. Moreover 27% respondents were of the view that this course contributed to low or very low extent in designing challenging

assignments. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 89.802 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned to design curriculum based assignments that promote critical thinking among students, so we reject our null hypothesis.

Table 27: Learned to apply information communication technologies for curriculum implementation

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	20	5.2	76.8	Chi-Square(a)
Low Extent	36	9.4	76.8	320.141
Uncertain	14	3.6	76.8	df
High Extent	195	50.8	76.8	4
Very High Extent	119	31.0	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 81% respondents were of the view that the content of SDC contributed to a very high or high extent in the application of ICT for curriculum enrichment. Moreover 11% respondents were of the view that this course contributed to low or very low extent in ICT integration in the curriculum. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 320.141 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the participants learned to apply ICT for curriculum implementation, so we reject our null hypothesis.

Table 28: Learned to relate the content according to the needs and abilities of students

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	42	10.9	76.8	Chi-Square(a)
Low Extent	86	22.4	76.8	116.859
Uncertain	41	10.7	76.8	df
High Extent	155	40.4	76.8	4
Very High Extent	60	15.6	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 66% respondents were of the view that the content of SDC contributed to a very high or high extent in helping to relate the content according to the needs and abilities of students. Moreover 33% respondents were of the view that this course contributed to low or very low extent in this regard. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 116.859 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned to relate the content according to the needs and abilities of students, so we reject our null hypothesis.

Table 29: Got hands on training in designing the curriculum for teaching the concerned areas

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	77	20.1	76.8	Chi-Square(a) 70.844
Low Extent	129	33.6	76.8	
Uncertain	33	8.6	76.8	df 4
High Extent	92	24.0	76.8	
Very High Extent	53	13.8	76.8	Table Value 9.4888
Total	384	100.0		

This table shows that 37% respondents were of the view that to a very high or high extent they got hands on training in designing curriculum. Moreover 54% respondents were of the view that this course contributed to low or very low extent in helping them to get hands on training in designing curriculum. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 70.844 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and majority of the course participants didn't get hands on training in designing the curriculum for teaching the concerned areas, so we accept the null hypothesis.

Table 30: Explored different methods of conducting educational research

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	49	12.8	76.8	Chi-Square(a)
Low Extent	65	16.9	76.8	146.833
Uncertain	11	2.9	76.8	df
High Extent	114	29.7	76.8	4
Very High Extent	145	37.8	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 68% respondents were of the view that the content of SDC contributed to a very high or high extent in exploring different methods of conducting educational research. Moreover 30% respondents were of the view that this course didn't help in this regard. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 146.833 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned to explore different methods of conducting educational research, so we reject our null hypothesis.

Table 31: Learned the construction of the research tool

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	66	17.2	76.8	Chi-Square(a)
Low Extent	71	18.5	76.8	54.776
Uncertain	37	9.6	76.8	df
High Extent	126	32.8	76.8	4
Very High Extent	84	21.9	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 55% respondents were of the view that the content of SDC helped to a very high or high extent in the construction of research tool. 36% respondents were of the view that through this course they learned the construction of research tool to a low or very low extent. . From the statistical analysis of the results it is evident that the chi

square χ^2 = 54.776 > 9.4888 at ∂ = 0.05 & df = 4, therefore the result is positively significant that the course participants learned the construction of the research tool, so we reject our null hypothesis.

Table 32: Got hands on experience on statistics for quantitative date analysis

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	80	20.8	76.8	Chi-Square(a)
Low Extent	179	46.6	76.8	207.693
Uncertain	28	7.3	76.8	df
High Extent	76	19.8	76.8	4
Very High Extent	21	5.5	76.8	Table Value
Total	384	100.0		9.4888

This table shows that only 25% respondents were of the view that the content of SDC contributed to a very high or high extent in learning and getting hands on experience for quantitative data analysis. While 68% respondents were of the view that this course contributed to low or very low extent in making them learn about the statistical analysis tools for qualitative data. . From the statistical analysis of the results it is evident that the chi square χ^2 = 207.693 > 9.4888 at ∂ = 0.05 & df = 4, but the result is negatively significant and majority of the course participants didn't get hands on experience on statistics for quantitative date analysis, so we accept the null hypothesis.

Table 33: Learned the techniques of writing of the research report on technical grounds

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	34	8.9	76.8	Chi-Square(a)
Low Extent	190	49.5	76.8	225.245
Uncertain	38	9.9	76.8	df
High Extent	79	20.6	76.8	4
Very High Extent	43	11.2	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 32% respondents were of the view that the content of SDC contributed to a very high or high extent in learning about the techniques of writing the research reports. Moreover 59% respondents were of the view that this course contributed to low or very low extent in this regard. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 225.245 > 9.4888$ at $\partial = 0.05$ & df = 4, but the result is negatively significant and majority of the course participants didn't learn the techniques of writing of the research report on technical grounds, so we accept the null hypothesis.

Table 34: Learned using assessment tools for effectively monitoring students' learning

Options	Observed N	Percent	Expected N	Statistics3
Very Low extent	34	8.9	76.8	Chi-Square(a)
Low Extent	52	13.5	76.8	228.526
Uncertain	29	7.6	76.8	df
High Extent	190	49.5	76.8	4
Very High Extent	79	20.6	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 71% respondents were of the view that the content of SDC contributed to a very high or high extent in learning about the use of assessment tools for effectively monitoring students learning progress. Moreover 23% respondents were of the view that this course contributed to low or very low extent in this regard. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 228.526 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned using assessment tools for effectively monitoring students' learning, so we reject our null hypothesis.

Table 35: Enhanced skills for providing meaningful feedback to students on their academic progress

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	46	12.0	76.8	Chi-Square(a)
Low Extent	69	18.0	76.8	116.104
Uncertain	45	11.7	76.8	df
High Extent	159	41.4	76.8	4
Very High Extent	65	16.9	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 58% respondents were of the view that the content of SDC contributed to a very high or high extent in enhancing their skills for providing meaningful feedback to the students' academic progress. Moreover 30% respondents were of the view that this course contributed to low or very low extent in helping them to provide a meaningful feedback on assessment results of students. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 116.104 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants enhanced their skills for providing meaningful feedback to students on their academic progress, so we reject our null hypothesis

Table 36: Learned to apply method of modifying instruction in the light of assessment results

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	56	14.6	76.8	Chi-Square(a)
Low Extent	77	20.1	76.8	51.651
Uncertain	56	14.6	76.8	df
High Extent	131	34.1	76.8	4
Very High Extent	64	16.7	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 51% respondents were of the view that the content of SDC contributed to a very high or high extent regarding how to modify the instruction in the light of students assessment result. Moreover 35% respondents were of the view that this course contributed to low or very low extent in modifying instruction in the light of assessment result. Surprisingly 15% of the participants were uncertain about the above mentioned statement in relation to the content of SDC. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 51.651 > 9.4888$ at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants learned to apply method of modifying instruction in the light of assessment results, so we reject our null hypothesis.

Table 37: Enhancement of skills for the construction of various types of tests as given below:

Test Types	Very Low extent	Low Extent	Uncertain	High Extent	Very High Extent
Multiple Choice Question	9.4	16.9	6.5	38.5	28.6
True False test items	12.5	17.2	8.1	37.2	25.0
Short Answers test	13.8	18.5	6.8	40.1	20.8
Match the column test	15.1	15.9	13.8	13.8	41.4
Subjective Type or Essay Type test	10.2	15.1	16.9	38.3	19.5

In response to this question regarding the enhancement of skills for the construction of various types of tests, 68% participants were of the view that they learned o develop Multiple Choice Questions, 62% were of the view that they learned the rules to develop the true false items. Moreover, 61% respondents said that the course was useful to a very high or high extent in enhancing their practical learning in developing short answer questions. 55% responded that they learned match the column test through the module on testing and assessment. Moreover 58% were of the view that learned the techniques of making subjective type or essay questions through the content of SDCs.

Table 38: Application for Islamic/Ethical practices of teaching

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	68	17.7	76.8	Chi-Square(a)
Low Extent	169	44.0	76.8	194.724
Uncertain	22	5.7	76.8	df
High Extent	101	26.3	76.8	4
Very High Extent	24	6.3	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 32% respondents were of the view that the concept of teaching was linked with the Islamic/ethical practices of the profession, while 62% respondents said that the concept of Islamic teaching was not covered in any of the modules. Although this was not directly the objective of the program, but still it should have been considered as an obligations on the Resource Persons to link this concept with the methodologies and holy spirit of our Prophet Muhammad and Islam.

. From the statistical analysis of the results it is evident that the chi square X^2 = 194.724 > 9.4888 at ∂ = 0.05 & df = 4, but the result is negatively significant and majority of the course participants were against the statement that the course included application for Islamic/Ethical practices of teaching, so we accept the null hypothesis.

Table 39: Resource Persons of the program delivered the content efficiently

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	49	12.8	76.8	Chi-Square(a)
Low Extent	93	24.2	76.8	114.177
Uncertain	19	4.9	76.8	df
High Extent	143	37.2	76.8	4
Very High Extent	80	20.8	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 58% respondents were of the view that to a very high or high extent the resource persons delivered the content in an efficient way, while 37% respondents said to a very low or low extent the resource persons delivered the content delivery. This shows that although majority of the participants favored the resource person's quality of delivery, but it is alarming that a huge minority were not satisfied with the quality of their instructional method. From the statistical analysis of the results it is evident that the chi square χ^2 = 114.177 > 9.4888 at ∂ = 0.05 & df = 4, therefore the result is positively significant that the course participants were satisfied from the content delivery by the resource persons, so we reject our null hypothesis.

Table 40: There was sufficient time for having in depth understanding of the content knowledge

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	104	27.1	76.8	Chi-Square(a)
Low Extent	208	54.2	76.8	349.099
Uncertain	10	2.6	76.8	df
High Extent	41	10.7	76.8	4
Very High Extent	21	5.5	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 17% respondents were of the view that to a very high or high extent the time was sufficient understanding of the course content, while 81% respondents strongly disagreed or disagreed with the statement that there was sufficient time allocated for the course keeping in view the breadth and depth of content. . From the statistical analysis of the results it is evident that the chi square X2 = 349.099 > 9.4888 at ∂ = 0.05 & df = 4, but the result is negatively significant and majority of the course participants didn't accept the statement that there was sufficient time for having in depth understanding of the content knowledge, so we accept the null hypothesis.

Table 41: The training program was well organized

Options	Observed N	Percent	Expected N	Statistics
Very Low extent	40	10.4	76.8	Chi-Square(a)
Low Extent	57	14.8	76.8	218.135
Uncertain	3	.8	76.8	df
High Extent	119	31.0	76.8	4
Very High Extent	165	43.0	76.8	Table Value
Total	384	100.0		9.4888

This table shows that 58% respondents were of the view that to a very high or high extent the resource persons delivered the content in an efficient way, while 37% respondents said to a very low or low extent the resource persons delivered the content delivery. . From the statistical analysis of the results it is evident that the chi square $\chi^2 = 218.135 >$ 9.4888 at $\partial = 0.05$ & df = 4, therefore the result is positively significant that the course participants were satisfied with the quality of course organization, so we reject our null hypothesis.

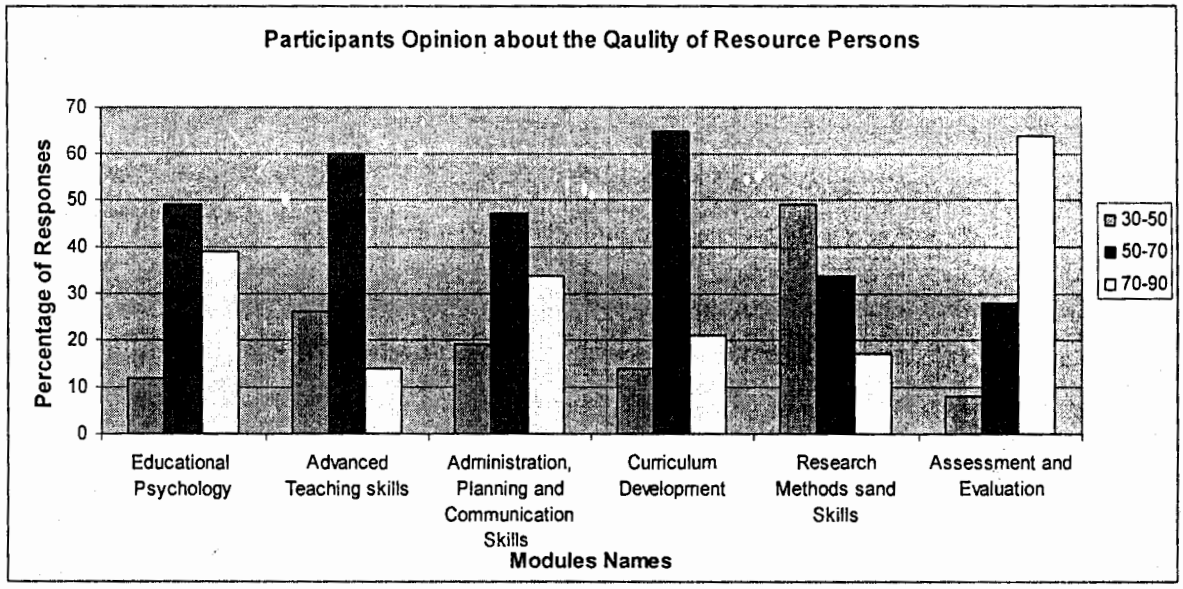
Table 42: Rate the quality of content delivery by resource persons against each of the following modules

In response to the question regarding the quality of content delivery by the resource persons, following were the responses by the faculty members:

Modules	Quality Criteria		
	30-50	50-70	70-90
Educational Psychology	12%	49%	39%
Advanced Teaching skills	26%	60%	14%
Administration, Planning and Communication Skills	19%	47%	34%
Curriculum Development	14%	65%	21%
Research Methods sand Skills	49%	34%	17%
Assessment and Evaluation	8%	28%	64%

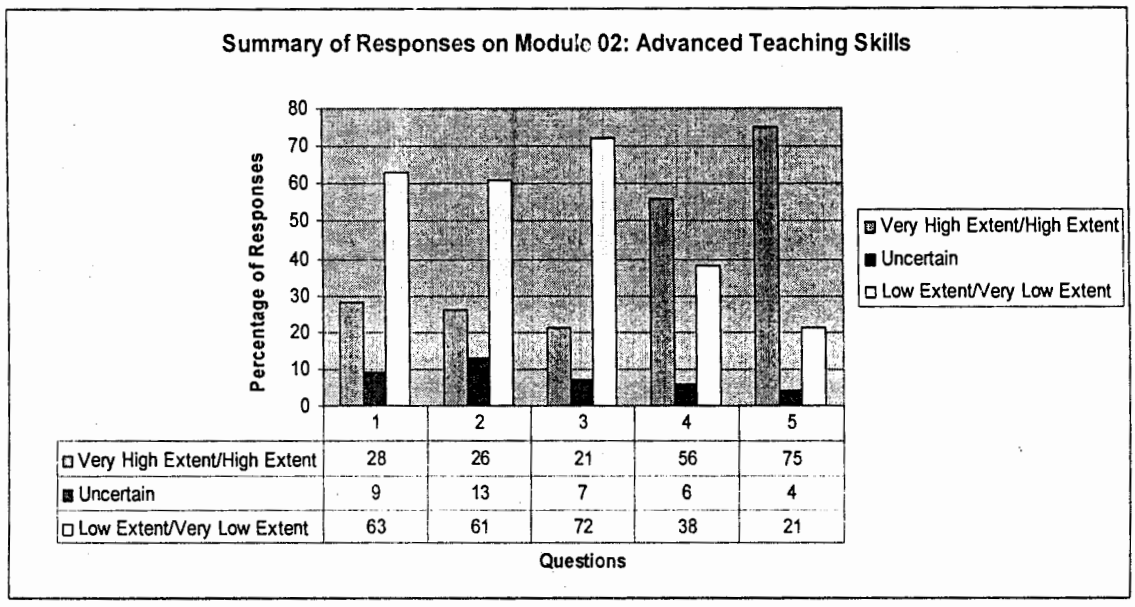
The table shows that in the according to the rating the best resource persons were available for the module Testing and Assessment with 64% lying between the rating line of 70-90. The second best resource persons were available for the module Curriculum Development with 65% opinions lying between the rating of 50-70. The third best resource persons were available for the module Advanced Teaching Skills with 60% opinions lying between the rating of 50-70. The resource persons for the module Research Methods and Skills were the least rated in quality because 45% respondents selected the option of 30-50 for them.

Figure 02 Quality of Resource Persons



1. Learned about multidimensional learning difficulties of students (75%)
2. Gained Academic/professional skills for counseling the students (71%)
3. Gained skills in dealing with the emotional needs of students (66%)
4. Learned about psychological principles of adult learning (65%)
5. Learned to apply motivational techniques on college/university level students (62%)
6. Gained skills in dealing with the academic needs of students (58%)
7. Learned to integrate new learning/knowledge in the classroom (53%)
8. Gained skills in dealing with the social needs of students (35%)

Figure 04 Module 02: Advanced Teaching Skills



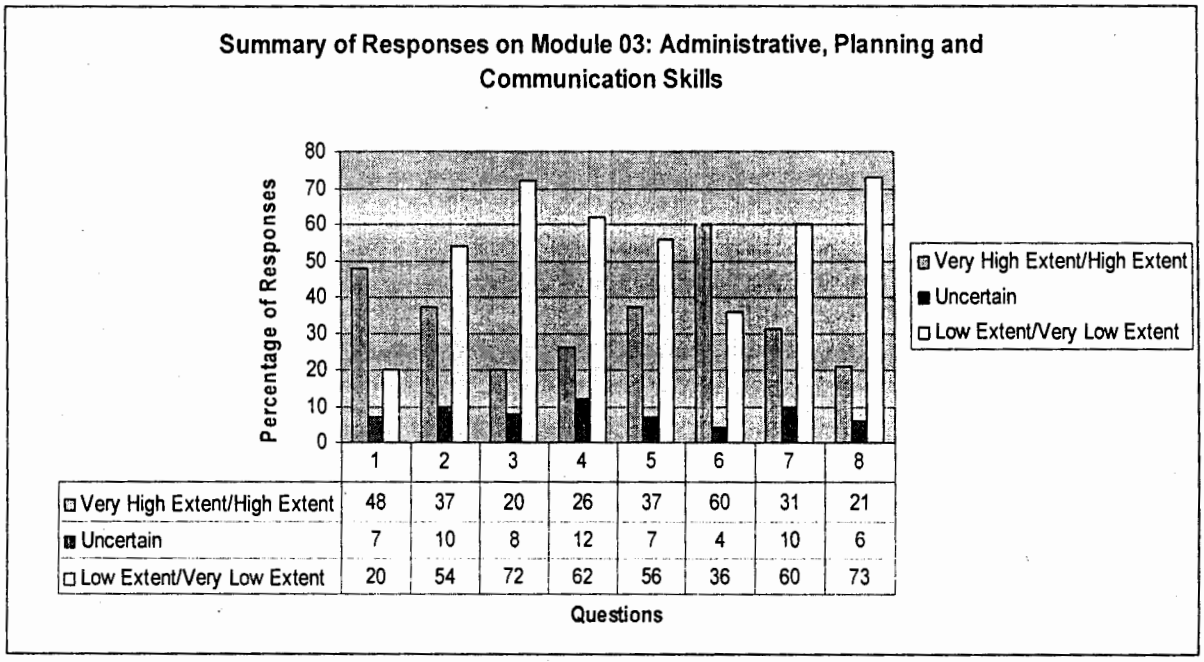
	1	2	3	4	5
Very High Extent/High Extent	28	26	21	56	75
Uncertain	9	13	7	6	4
Low Extent/Very Low Extent	63	61	72	38	21

In the summary analysis of Module 02, it is evident that most of statements are tilted towards the agreement at a very low or low extent having a mean percentage of 2.06. It is evident from the above mentioned graphical representation that three out of five statements are skewed on negative side. Keeping in view the cut off ranges only one statement lies in satisfactory category and one in average category while rest of the three are rated as below average. Therefore it can be concluded that the module on Advanced Teaching Skills was less than the satisfactory range keeping in view the academic quality of the content.

For the purpose of clarity the statements are written in hierarchical format ranging from most learned to least learned:

1. Learned to evaluate your own teaching weaknesses. (75%)
2. Learned to evaluate your own teaching competencies (56%)
3. Learned to apply Instructional methodologies relevant to your own discipline(s). (28%)
4. Learned about professional code of conduct for teachers (26%)
5. Learned to adjust instructional strategies based on knowledge of students learning styles. (21%)

Figure 05 Module 03: Administrative, Planning and Communication Skills



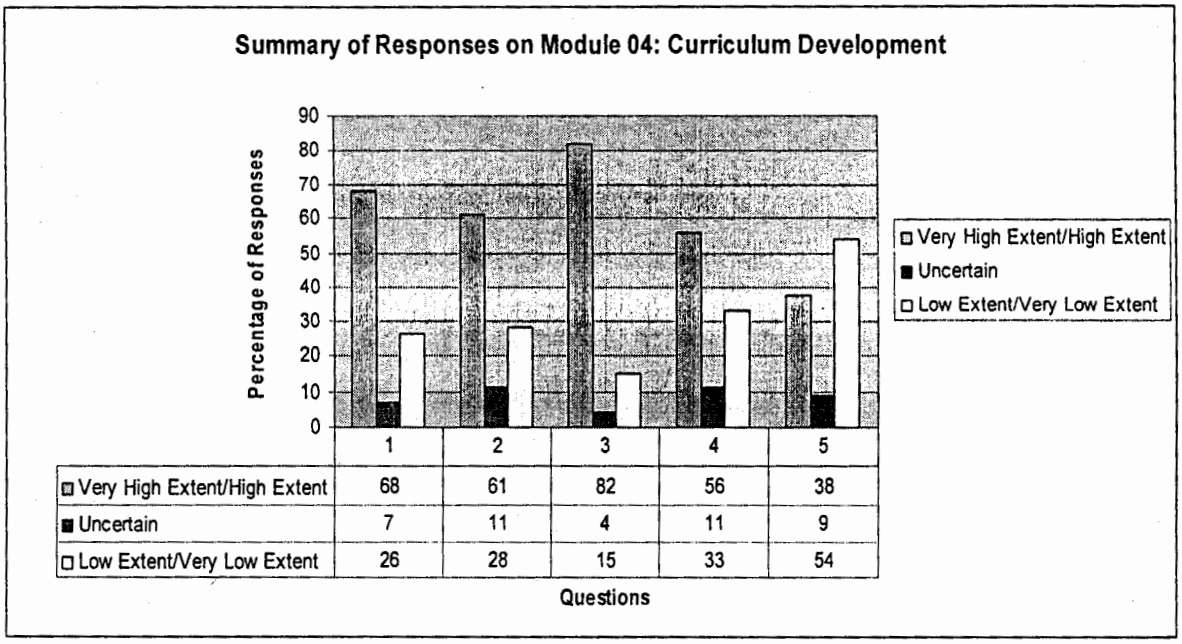
	1	2	3	4	5	6	7	8
Very High Extent/High Extent	48	37	20	26	37	60	31	21
Uncertain	7	10	8	12	7	4	10	6
Low Extent/Very Low Extent	20	54	72	62	56	36	60	73

In the summary analysis of Module 03, it is evident that most of statements are tilted towards the agreement at a very low or low extent having a mean percentage of 2.8. It is evident from the above mentioned graphical representation that 05 out of 08 statements are skewed on negative side. Keeping in view the cut off ranges, it can be easily said that not a single statement lies in the category of satisfactory range. Therefore it can be concluded that the module on Administrative, Planning and Communication Skills was one of the poorest contributor towards the academic quality of the program

For the purpose of clarity the statements are written in hierarchical format ranging from most learned to least learned:

1. Learned to maintain meaningful teacher-student interaction strategies. (60%)
2. Learned techniques for enhancing the instructional leadership skills (48%)
3. Enhanced skills in verbal communication within the classroom. (37%)
4. Enhanced time management skills in the classroom (37%)
5. Learned to maintain meaningful teacher-teacher interaction strategies. (31%)
6. Enhanced skills in written communication skills. (26%)
7. Learned to maintain meaningful teacher-head interaction strategies. (21%)
8. Enhanced skills in non-verbal communication skills. (20%)

Figure 06 Module 04: Curriculum Development



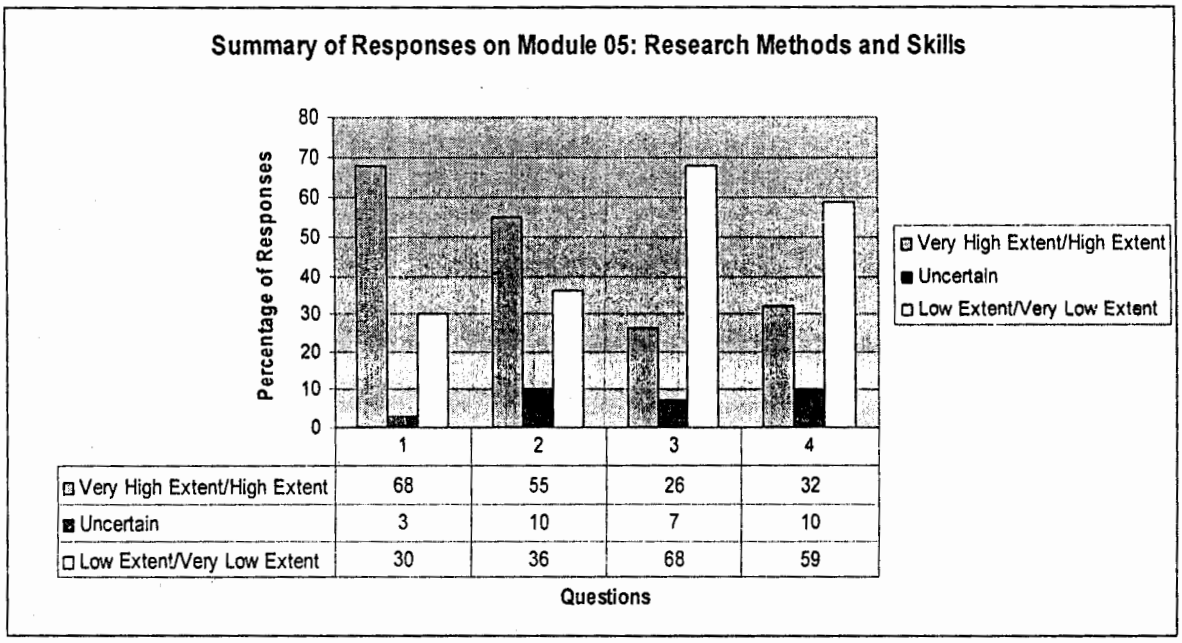
	1	2	3	4	5
Very High Extent/High Extent	68	61	82	56	38
Uncertain	7	11	4	11	9
Low Extent/Very Low Extent	26	28	15	33	54

In the summary analysis of Module 04, it is evident that most of statements are tilted towards the agreement at a very high or high extent with the mean percentage of 4.85. It is evident from the above mentioned graphical representation that 05 out of 08 statements are skewed on negative side. Keeping in view the cut off ranges, two out of five statements are in above average category and all the other lies in average category. Therefore it can be concluded that the module on Curriculum Development was a good depiction of academic quality of the content.

For the purpose of clarity the statements are written in hierarchical format ranging from most learned to least learned:

1. Learned to apply information communication technologies for curriculum implementation (82%)
2. Learned strategies for integrating new learning into the curriculum (68%)
3. Learned to design curriculum based assignments that promote critical thinking among students. (61%)
4. Learned to relate the content according to the needs and abilities of students (56%)
5. Got hands on training in designing the curriculum for teaching the concerned areas. (38%).

Figure 07 Module 05: Research Methods and Skills



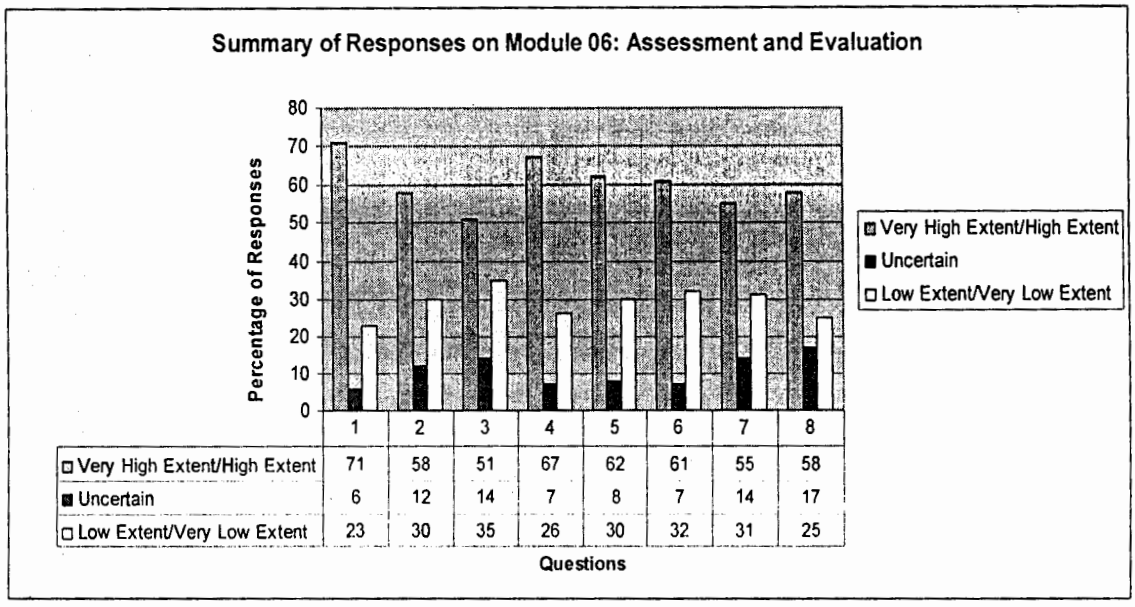
	1	2	3	4
Very High Extent/High Extent	68	55	26	32
Uncertain	3	10	7	10
Low Extent/Very Low Extent	30	36	68	59

In the summary analysis of Module 05, it is evident that half of the statements are tilted towards the agreement to a very low or low extent. It is evident from the above mentioned graphical representation that 02 out of 04 statements are skewed on negative side. Keeping in view the cut off ranges, only one statement lies in the category of above average and one in average category while the others lie in below average category. Therefore it can be concluded that the module on Research Methods and Skills was at an average rating keeping in view the academic quality of the content.

For the purpose of clarity the statements are written in hierarchical format ranging from most learned to least learned:

1. Explored different methods of conducting educational research. (68%)
2. Learned the construction of the research tool (55%)
3. Learned the techniques of writing of the research report on technical grounds (32%)
4. Got hands on experience on statistics for quantitative data analysis (26%)

Figure 08 Module 06: Assessment and Evaluation



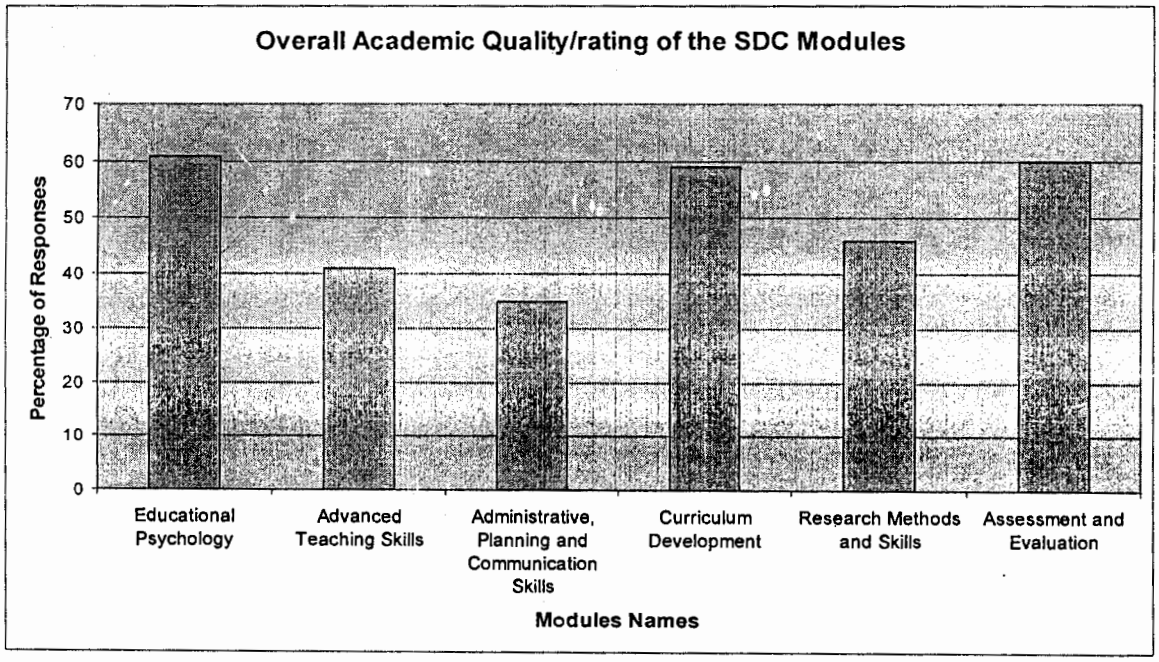
	1	2	3	4	5	6	7	8
Very High Extent/High Extent	71	58	51	67	62	61	55	58
Uncertain	6	12	14	7	8	7	14	17
Low Extent/Very Low Extent	23	30	35	26	30	32	31	25

In the summary analysis of Module 06, it is evident that all the statements, except one, are tilted towards the agreement at a very high or high extent. It is evident from the above mentioned graphical representation that all 07 statements are skewed on positive side. Keeping in view the cut off ranges, two out of eight statements are in above average category and rest of all the six statements' lie in the average category as mentioned below. Therefore it can be concluded that the module on Assessment and Evaluation was the best module w.r.t. academic quality of the content.

For the purpose of clarity the statements are written in hierarchical format ranging from most learned to least learned:

1. Learned using assessment tools for effectively monitoring student's learning (71%)
2. Enhancement of skills for the construction of Multiple Choice type tests items (67%)
3. Enhancement of skills for the construction of true-false types of items. (62%)
4. Enhancement of skills for the construction of short answers type of tests (61%)
5. Enhanced skills for providing meaningful feedback to students on their academic progress. (58%)
6. Enhancement of skills for the construction of subjective or essay type of tests items (58%)
7. Enhancement of skills for the construction of match the column type of tests items (55%)
8. Learned to apply method of modifying instruction in the light of assessment results (51%)

Figure 09: Summary of Modules Rating



The summary of the responses shows that the module on Educational Psychology was rated first with the mean percentage of 61%, the module on Assessment and Evaluation was rated second with the average percentage of 60%, the module on Curriculum Development was rated third with the average percentage of 59%, the module on Research Method and Skills was rated as fourth with the average percentage of 46%, the module of advanced teaching skills was rated fifth with the average percentage of 41%, and the least rated module was Administrative Planning and Communication Skills having the average percentage of 35%.

4.3 Part 02: Analysis of the problems Faced by the Faculty Members due to their participation in SDCs

The second part of the questionnaire "A" was developed for the faculty members in order to assess the problems faced the faculty members due to their participation in staff development courses. The researcher assumed 11 problems that may be faced by the participants, and the data was collected to analyze the existence of these problems and the intensity of these problems. The response for each question has been converted in a confidence interval at the alpha value of 0.05, to determine the true percentage of the population who would pick that answer. The wider the confidence interval is, the more certain we can be that the whole population answers would be within that range. Therefore the alpha value would go on decreasing with a corresponding increase in the probability of occurrence. But on the other hand if the confidence interval increases, the level of significance decreases. (Garrett, 1997). The results of the study are presented

below along with the analysis of each question separately and the consolidated analysis of all questions.

Table 43: Faculty members are overloaded with too many responsibilities even during the course

Options	Frequency	Percent
Disagree & Strongly Disagree	62	17.3
Agree & Strongly agree	297	82.7
Total	359	100.0

This table shows that 83% respondents agreed or strongly agreed that faculty members are overloaded with too many responsibilities even during the staff development course. Moreover 17% disagreed or strongly disagreed about the existence of the problem of work overload. The alpha value being fixed at 0.05, we can conclude that the confidence interval $\{82.7 \pm 1.96 \times 1.99(SE)\}$ i.e. $78.8 < 82.7 < 86.60$ was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 78.8 to 86.6.

Table 44: There are not enough faculty members at the university who can take up responsibilities as alternative arrangements

Options	Frequency	Percent
Disagree & Strongly Disagree	116	33.82
Agree & Strongly agree	227	66.18
Total	343	100.0

This table shows that 66% respondents agreed or strongly agreed that there is dearth of staff and if they are attending the SDC off campus, there are not enough faculty members who can take up their responsibilities as contingent / alternative arrangements. Moreover 34% were disagreed or strongly disagreed about the existence of the problem alternative arrangements. This is evident that majority of the participants faced the problem of

alternative arrangements, and in one third of cases, either the faculty members don't needed alternative arrangements or there were enough members in the departments to fill the gap of trainee faculty.

The alpha value being fixed at 0.05, we can conclude that the confidence interval {66.18 ± 1.96 x 2.55(SE)} i.e. 61.182 < 66.18< 71.178 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 61.182 to 71.178.

Table 45: Meeting both the expectations of the university and program requirements is very difficult

Options	Frequency	Percent
Disagree & Strongly Disagree	110	29.56
Agree & Strongly agree	262	70.43
Total	372	100.0

This table shows that 70% respondents agreed or strongly agreed that meeting the demands of university and the program requirements simultaneously is very difficult for them. Moreover 30% were disagreed or strongly disagreed about the problem of maintaining the balance of fulfilling the requirements. This means that majority of the participants faced the problem of meeting the expectations of both sides i.e. university and course requirements.

The alpha value being fixed at 0.05, we can conclude that the confidence interval {70.43 ± 1.96 x 2.365(SE)} i.e. 65.795 < 70.43 < 75.065 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 65.795 to 75.065.

Table 46: Rescheduling of university classes seems difficult to manage

Options	Frequency	Percent
Disagree & Strongly Disagree	278	77.01
Agree & Strongly agree	83	22.99
Total	361	100.0

This table shows that 23% respondents agreed or strongly agreed that for the faculty members rescheduling the classes is difficult to manage during the staff development course. Moreover 77% disagreed or strongly disagreed about the existence of the problem of rescheduling the classes. This means that for the majority of participants rescheduling the university classes during the course is not a big deal.

The alpha value being fixed at 0.05, we can conclude that the confidence interval $\{22.99 \pm 1.96 \times 2.214(SE)\}$ i.e. $18.651 < 22.99 < 27.329$ was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 18.651 to 27.329.

Table 47: University doesn't consider staff development course as part of the faculty workload

Options	Frequency	Percent
Disagree & Strongly Disagree	59	15.60
Agree & Strongly agree	319	84.39
Total	378	100.0

This table shows that 84% respondents agreed or strongly agreed that their university doesn't consider staff development as part of their additional workload. Moreover 16% respondents disagreed or strongly disagreed about the existence of this problem. This means that a huge majority of the participants agreed that universities

consider participation in SDCs as the faculty members own prerogative and doesn't treat it as an additional workload.

The alpha value being fixed at 0.05, we can conclude that the confidence interval {84.39 ± 1.96 x 1.865(SE)} i.e. 80.735 < 84.39 < 88.05 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 80.735 to 88.05.

Table 48: Conflicting schedules causes missing of either university or the course

Options	Frequency	Percent
Disagree & Strongly Disagree	283	81.08
Agree & Strongly agree	66	18.91
Total	349	100.0

This table shows that 19% respondents agreed or strongly agreed that due to the participation in SDCs the conflicting schedules caused missing of either university classes or course sessions. Moreover 81% were disagreed or strongly disagreed about missing either the university or course session due to the conflicting schedules. It is evident that conflicting schedule was not a big problem for majority of the faculty members. The alpha value being fixed at 0.05, we can conclude that the confidence interval {18.91 ± 1.96 x 2.096(SE)} i.e. 14.80 < 18.91 < 23.02 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 14.80 to 23.02.

Table 49: Covering longer distances to reach the course venue is a problem (geographically distant places)

Options	Frequency	Percent
Disagree & Strongly Disagree	85	39.91
Agree & Strongly agree	128	60.09
Total	213	100.0

This table shows that 60% respondents agreed or strongly agreed that covering longer distances to reach the course venue is a problem. Moreover 40% disagreed or strongly disagreed about the existence of the problem about geographically distant locations. In addition to that 177 participants selected the option of neutral because these faculty members would be attending the course on-campus, so they don't have any idea about the existence of this problem. The alpha value being fixed at 0.05, we can conclude that the confidence interval $\{60.09 \pm 1.96 \times 3.36(SE)\}$ i.e. $53.51 < 60.09 < 66.68$ was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 53.51 to 66.68.

Table 50: Accommodation arrangements are not sufficient

Options	Frequency	Percent
Disagree & Strongly Disagree	216	76.60
Agree & Strongly agree	66	23.4
Total	282	100.0

This table shows that 23% respondents agreed that the accommodation arrangements for the outstation faculty members were not sufficient. Moreover 77% were disagreed or strongly disagreed about the existence of the problem of accommodation. 102 participants' remained undecided about the existence of this particular problem

because may be they had attended the course on-campus. The alpha value being fixed at 0.05, we can conclude that the confidence interval {23.4 ± 1.96 x 2.52(SE)} i.e. 18.47 < 23.4 < 28.34 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 18.47 to 28.34.

Table 51: Absence of longer and fulltime commitment as per the course requirement, by the faculty members

Options	Frequency	Percent
Disagree & Strongly Disagree	254	72.57
Agree & Strongly agree	96	27.42
Total	350	100.0

This table shows that 27% respondents agreed or strongly agreed that there was a problem of participants' fulltime commitment with the course. Moreover 73% were disagreed or strongly disagreed about the existence of the problem longer or fulltime commitment. This means that a huge majority of the participants reported about the absence of this problem among the participants. The alpha value being fixed at 0.05, we can conclude that the confidence interval {27.42 ± 1.96 x 2.38(SE)} i.e. 22.74 < 27.42 < 32.11 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 22.74 to 32.11.

Table 52: Lack of reward/ acknowledgement or visible recognition i.e. promotion or any sort of bonus on good performance

Options	Frequency	Percent
Strongly agree & Agree	384	100.0
Total	384	100.0

This table shows that interestingly all the sampled respondents agreed or strongly agreed upon the lack of any reward or visible recognition for the participation in staff development courses. It is evident that faculty members/participants are of the opinion that there is lack of any type of reward either promotion or bonus attached with attending the one month program.

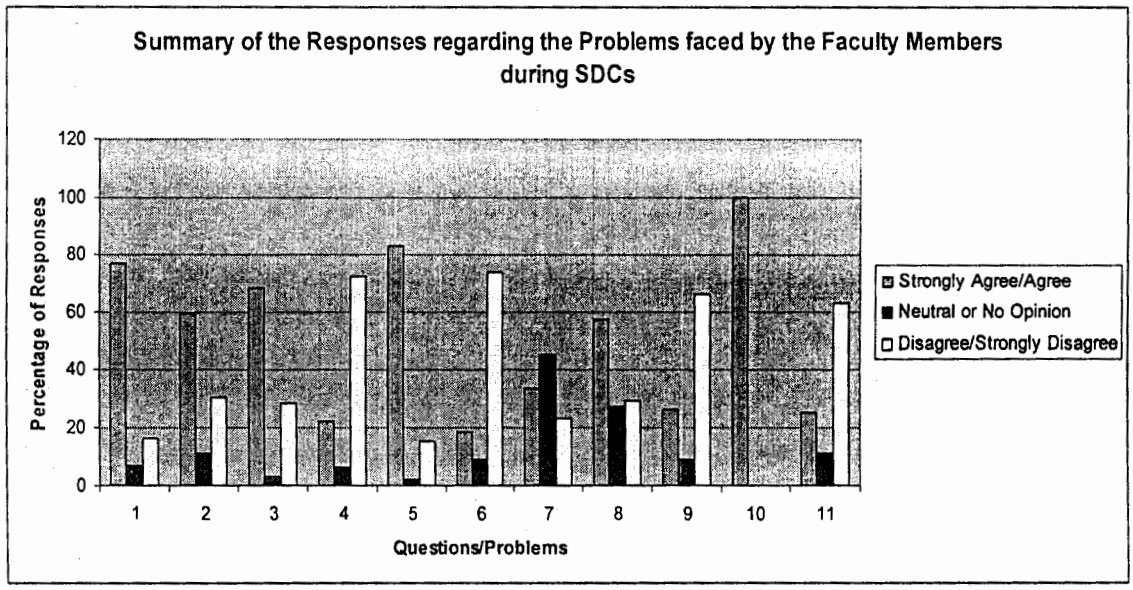
Table 53: Implementing the new ideas in the University environment sometimes become problematic

Options	Frequency	Percent
Disagree & Strongly Disagree	244	71.55
Agree & Strongly agree	97	28.45
Total	341	100.0

This table shows that 28% respondents agreed or strongly agreed that if they like to plant new idea in the university set up, they face problems at implementation stage. Moreover 72% were disagreed or strongly disagreed about any sort of implementation hurdle for bringing innovation in the system. This means that a huge majority of the participants don't consider the implementation of innovative ideas a big problem in the university setup. The alpha value being fixed at 0.05, we can conclude that the confidence interval {28.45 ± 1.96 x 2.44(SE)} i.e. .66 < 28.45 < 33.23 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from .66 to 33.23.

4.3.1 Summary of Responses regarding the Problems Faced by the Faculty Members during SDCs

Figure 10: Graphical Representation of the Problems Faced by the Participants' of SDCs



The above mentioned graphical representation shows that out of eleven problems assumed by the researcher, considering the cut point of 55%, six problems really existed in the actual implementation of staff development programs in the centers. The hierarchical intensity of the problems is shown below:

1. Lack of reward / acknowledgement or visible recognition i.e. promotion or any sort of bonus on good performance. (100%)
2. University doesn't consider Staff Development Course as part of the faculty workload. (83%)
3. Faculty members are overloaded with too many responsibilities even during the course. (77%)
4. Meeting both the expectations of the university and the program requirements is very difficult. (68%)
5. There are not enough faculty members at the university who can take up responsibilities as alternative arrangements. (59%)
6. Accommodation arrangements are not sufficient. (57%)

7. Covering longer distances to reach the course venue is a problem (geographically distant places) (33%)
8. Absence of longer & fulltime commitment as per the course requirement, by the faculty members. (26%)
9. Implementing the new ideas in the university environment sometimes become problematic (25%)
10. Rescheduling of university classes seems difficult to manage (22%)
11. Conflicting Schedules cause missing of either university or the course (18%)

4.4 Questionnaire "B" (Filled in by Course Coordinators)

Part 01: Problems faced by the Course Coordinators of the Staff Development Courses

In the Part 01 of the questionnaire "B", the researcher indicated 13 problems based on the assumption that these are most probably faced by the Course Coordinators of Staff Development Courses. The coordinators view point about the existence/intensity of existence of these problems is presented in detail as under:

Table 54: Drop-out of the participants during the course is a problem

Options	Frequency	Percent
Disagree & Strongly Disagree	9	56.25
Agree & Strongly agree	7	43.75
Total	16	100.0

This table shows that 44% of the Course Coordinators agreed or strongly agreed that participants drop out during the course is a problem for them. Moreover 57% has strongly disagreed or disagreed with the existence of this particular problem of participants drop out. The alpha value being fixed at 0.05, we can conclude that the confidence interval $\{43.75 \pm 1.96 \times 12.40(SE)\}$ i.e. . $19.45 < 43.75 < 68.05$ was significant at 0.05 level.

Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 19.45 to 68.05.

Table 55: Call for nominations or gathering a group of 35 faculty members is difficult

Options	Frequency	Percent
Disagree & Strongly Disagree	5	31.25
Agree & Strongly agree	11	68.75
Total	16	100.0

This table shows that 69% of the Course Coordinators agreed or strongly agreed that calling nominations of 35 faculty members is a problem for them. Moreover 31% has strongly disagreed or disagreed with the existence of this particular problem of gathering a group of 35 persons for one-month training program. It is evident that a huge majority of the course coordinators faced with the problem of gathering and retaining a group of 35 faculty members for imparting SDC training. The alpha value being fixed at 0.05, we can conclude that the confidence interval $\{68.75 \pm 1.96 \times 11.59(SE)\}$ i.e. $46.03 < 68.75 < 91.47$ was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 46.03 to 91.47.

Table 56: Attendance of the participants is not regular till the end of program

Options	Frequency	Percent
Disagree & Strongly Disagree	12	80.0
Agree & Strongly agree	3	20.0
Total	15	100.0

This table shows that 20% of the Course Coordinators agreed or strongly agreed that attendance of the participants is a problem during SDC sessions. Moreover 80% has strongly disagreed or disagreed that attendance was any issue during the program. It is evident from the tabulated data that attendance was not a major concerning problem. The alpha value being fixed at 0.05, we can conclude that the confidence interval {20.0 ± 1.96 x 10.33(SE)} i.e. 0.24 < 20.0 < 40.25 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 0.24 to 40.25.

Table 57: Difficulty in engaging expert Resource Persons having specialization in the course modules

Options	Frequency	Percent
Disagree & Strongly Disagree	6	37.5
Agree & Strongly agree	10	62.5
Total	16	100.0

This table shows that 63% of the Course Coordinators agreed that they faced difficulty in engaging expert resource persons. Moreover 37% has strongly disagreed or disagreed with the existence of the problem of engaging the expert resource persons. So it becomes evident that involving expert resource persons for different modules was the problem faced by some of the coordinators. The alpha value being fixed at 0.05, we can conclude that the confidence interval {62.5 ± 1.96 x 12.10(SE)} i.e. 38.78 < 62.5 < 86.21 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from 38.78 to 86.21.

Table 58: Maintaining the participants' interest in the program for the whole month is difficult

Options	Frequency	Percent
Disagree & Strongly Disagree	10	28.57
Agree & Strongly agree	4	71.43
Total	14	100.0

This table shows that 29% of the Course Coordinators agreed or strongly agreed that maintaining the participants' interest through the month is difficult. Moreover 71% has strongly disagreed or disagreed with the existence of this particular problem of maintaining participants' interest. Interestingly 02 coordinators remained undecided about this particular problem. The alpha value being fixed at 0.05, we can conclude that the confidence interval {28.57 ± 1.96 x 12.07(SE)} i.e. 47.77 < 28.57 < 95.09 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 47.77 to 95.09.

Table 59: In time start of sessions becomes problematic

Options	Frequency	Percent
Disagree & Strongly Disagree	14	87.5
Agree & Strongly agree	2	12.5
Total	16	100.0

This table shows that only 13% of the Course Coordinators agreed that timely start of the sessions becomes problem on daily basis. Moreover 88% has strongly disagreed or disagreed with the existence of the problem of timely start of session. It is evident that majority of the course coordinators doesn't consider timely start of the sessions a big problem. The alpha value being fixed at 0.05, we can conclude that the confidence interval {12.5 ± 1.96 x 8.27(SE)} i.e. -3.71 < 12.5 < 28.71 was significant at 0.05 level.

Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from -3.71 to 28.71.

Table 60: Accommodation for the resource persons is difficult to mange

Options	Frequency	Percent
Disagree & Strongly Disagree	9	69.23
Agree & Strongly agree	4	30.77
Total	13	100.0

This table shows that 31% of the Course Coordinators agreed or strongly agreed that accommodating the outstation resource persons was a problem. Moreover 69% has strongly disagreed or disagreed with the existence of this particular problem of accommodation. In addition, 03 coordinators remained neutral in responding to this question may be due to the fact that their centers didn't require accommodation for the resource persons. It is evident that accommodation can be considered a problem because those 25% respondents agreeing the statement actually involved outstation resource persons in their programs. The alpha value being fixed at 0.05, we can conclude that the confidence interval $\{30.77 \pm 1.96 \times 12.8(SE)\}$ i.e. $-5.68 < 30.77 < 55.86$ was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that the confidence interval would range from -5.68 to55.86.

Table 61: Transport facility for the resource persons is difficult to mange

Options	Frequency	Percent
Disagree & Strongly Disagree	11	91.66
Agree & Strongly agree	1	8.33
Total	12	100.0

This table shows that 8% of the Course Coordinators agreed or strongly agreed that transport facility for the resource persons was difficult to manage. Moreover 91% has strongly disagreed or disagreed with the difficulty in the arrangement of transport for resource persons pick and drop. 04 Course Coordinators remained undecided because they didn't call the resource persons outside the university. It is evident that provision of transport facility was not a big problem for coordinators to manage. The alpha value being fixed at 0.05, we can conclude that the confidence interval {8.33 ± 1.96 x 7.98(SE)} i.e. -7.31 < 8.33 < 23.97 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from -7.31 to 23.97.

Table 62: There are procedural delays in collecting advance amount from their university

Options	Frequency	Percent
Disagree & Strongly Disagree	2	12.5
Agree & Strongly agree	14	87.5
Total	16	100.0

This table shows that 88% of the Course Coordinators agreed or strongly agreed on the problems of procedural delays in getting advance amount from their universities. Moreover only 13% has strongly disagreed or disagreed with the existence any procedural delay. The alpha value being fixed at 0.05, we can conclude that the confidence interval {87.5 ± 1.96 x 8.27(SE)} i.e. 71.29 < 87.5 < 103.71 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 71.29 to 103.71.

Table 63: There are Coordination problems with NAHE

Options	Frequency	Percent
Disagree & Strongly Disagree	15	93.75
Agree & Strongly agree	1	6.25
Total	16	100.0

This table shows that only 06% of the Course Coordinators agreed that there were coordination problems with NAHE. Moreover 94% has strongly disagreed or disagreed about the existence of any sort of coordination problem with NAHE. The alpha value being fixed at 0.05, we can conclude that the confidence interval {6.25 ± 1.96 x 6.05(SE)} i.e. -5.61 < 6.25 < 18.11 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from -5.61 to 18.11.

Table 64: Handling accounts of the entire program is difficult to manage

Options	Frequency	Percent
Disagree & Strongly Disagree	4	25.0
Agree & Strongly agree	12	75.0
Total	16	100.0

This table shows that 75% of the Course Coordinators agreed or strongly agreed that handling accounts of the entire program was difficult to manage. Moreover 25% has disagreed with the existence of the problem of handling accounts. It is evident that the accounts handling was a problem for the huge majority of the coordinators of SDC program. The alpha value being fixed at 0.05, we can conclude that the confidence interval {75.0 ± 1.96 x 10.83(SE)} i.e. 53.77 < 75.0 < 96.23 was significant at 0.05 level.

Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 53.77 to 96.23.

Table 65: Getting the accounts clearance by the internal auditors becomes problematic

Options	Frequency	Percent
Disagree & Strongly Disagree	3	18.8
Agree & Strongly agree	13	25.0
Total	16	100.0

This table shows that 81% of the Course Coordinators agreed or strongly agreed that getting the accounts clearance by the internal auditors was a problem for them in the university set-up. Moreover 19% has strongly disagreed or disagreed with any sort of accounts clearance problems. It is evident that almost all the coordinators faced the problem of accounts clearance by their internal auditors. The alpha value being fixed at 0.05, we can conclude that the confidence interval {81.25± 1.96 x 9.76(SE)} i.e. 62.12 < 81.25 < 100.38 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 62.12 to 100.38.

Table 66: Problem in the clearance of the accounts from HEC

Options	Frequency	Percent
Disagree & Strongly Disagree	6	37.5
Agree & Strongly agree	10	62.5
Total	16	100.0

This table shows that 63% of the Course Coordinators agreed or strongly agreed that getting accounts clearance from HEC is also a big problem. Moreover 37% has strongly

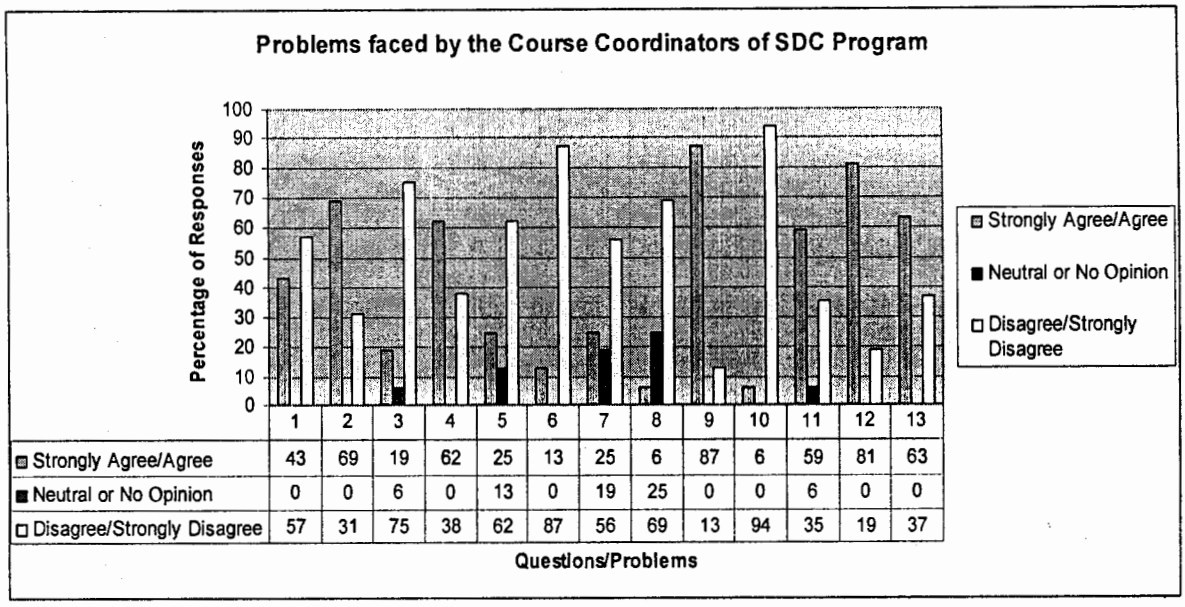
disagreed or disagreed that accounts clearance from HEC is a problem. It is evident that most of the course coordinators faced the problems of accounts clearance by the HEC. The alpha value being fixed at 0.05, we can conclude that the confidence interval {62.5± 1.96 x 12.1(SE)} i.e. 38.78 < 62.5 < 86.22 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 38.78 to 86.22.

Table 67: Managing Expenses for Different Sub-Heads of Expenditure

Options	Stationary and Photocopy	Contingencies	Honorarium for Lectures	Support Staff	Course Coordinator
Easily Manageable / Sufficient	25 (N 04)	56 (N 9)	25 (N 4)	38 (N 6)	29 (N 5)
Difficult to Manage / Non-Sufficient	75 (N 12)	44 (N 7)	75 (N 12)	62 (N 10)	71 (N 11)
Total	100	100	100.0	100	100

In response to the question regarding managing expenses within different subheads the result shows that only 25% course coordinators were of the view the expenses within Stationary & Photocopy was sufficient, 56% were of the view that the amount allocated for contingences was sufficient. Moreover 25% were of the view that honorarium for Lectures for easy to manage/sufficient, 38% were of the view that remuneration for support staff was sufficient. 29% were of the view that honorarium allocated of Coordinator was sufficient. Considering the cut point of 55%, only the contingencies were rated as acceptable in terms of amount allocation. The amount allocated for other subheads was rated as non-sufficient or difficult to manage during the implementation of staff development courses.

Figure 11: Graphical Representation of the Problems faced by the Course Coordinators



	1	2	3	4	5	6	7	8	9	10	11	12	13
Strongly Agree/Agree	43	69	19	62	25	13	25	6	87	6	59	81	63
Neutral or No Opinion	0	0	6	0	13	0	19	25	0	0	6	0	0
Disagree/Strongly Disagree	57	31	75	38	62	87	56	69	13	94	35	19	37

The above mentioned graphical representation shows that out of thirteen problems assumed by the researcher, considering the cut point of 55%, six problems really existed in the actual implementation of staff development programs in the centers. The hierarchical intensity of the problems is shown below:

1. Procedural delays in collecting advance amount from their university. (87%)
2. Getting the accounts clearance by the internal auditors becomes problematic. (81%)
3. Call for Nominations or gathering a group of 35 members is difficult. (69%)
4. Problem in the clearance of the accounts from HEC. (63%)
5. Difficulty in engaging expert resource persons having specialization. (62%)
6. Handling accounts of the entire program is difficult to manage. (59%)
7. Drop-out of the participants during the course is a problem. (43%)
8. Accommodation for the resource persons is difficult to manage. (25%)
9. Maintaining the participants' interest in the program for the whole month is difficult. (25%)
10. Attendance of the participants is not regular till the end of program. (19%)
11. In time start of sessions becomes problematic. (13%)
12. There are coordination problems with NAHE. (6%)
13. Transport facility for the resource persons is difficult to manage. (6%)

4.5 Questionnaire "C" (Filled in by Resource Persons)

Part 01: Academic Quality of the Staff Development Courses

The first part of questionnaire "C" was based on assessing the academic quality of the programs from the viewpoint of resource persons. Overall 11 questions were included in this part out of which seven questions were based on assessing the content quality of the modules. The resource person view point is presented below.

Table 68: Usefulness in enhancing the communication skill

Options	Frequency	Percent
Disagree & Strongly Disagree	12	63.15
Agree & Strongly agree	7	36.85
Total	19	100.0

This table shows that only 37% respondents were of the view that the staff development course was helpful for the participants in enhancing their communication skills. Moreover 63% respondents were of the view tat course was not useful in the enhancement of communication skills. The alpha value being fixed at 0.05, we can conclude that the confidence interval {36.85± 1.96 x 11.07(SE)} i.e. 15.14 < 36.85< 58.54% was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 15.14 to 58.54.

Table 69: Skills in psychologically understanding student's learning variations

Options	Frequency	Percent
Disagree & Strongly Disagree	5	25.0
Agree & Strongly agree	15	75.0
Total	20	100.0

This table shows that only 75 % respondents were of the view that the staff development course was helpful for the participants in psychologically understanding their students learning. Moreover only 25% respondents were of the view that course was not useful in this dimension. The alpha value being fixed at 0.05, we can conclude that the confidence interval {75.0± 1.96 x 9.68(SE)} i.e. 56.03 < 75.0 < 93.97 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 56.03 to 93.97

Table 70: Skills in applying instructional methodologies

Options	Frequency	Percent
Disagree & Strongly Disagree	8	44.44
Agree & Strongly agree	10	55.56
Total	18	100.0

This table shows that only 56% respondents were of the view that the staff development course was useful for the participants in gaining skills regarding instructional methodologies. Moreover only 44% respondents were of the view that course was not useful in this dimension. The alpha value being fixed at 0.05, we can conclude that the confidence interval {55.56± 1.96 x 11.71(SE)} i.e. 32.60 < 55.56 < 78.51 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 32.60 to 78.51.

Table 71: Instructional Planning Skills

Options	Frequency	Percent
Disagree & Strongly Disagree	6	31.58
Agree & Strongly agree	13	68.42
Total	19	100.0

This table shows that only 68 % respondents were of the view that the staff development course was helpful for the participants in instructional planning skills. Moreover only 32% respondents were of the view that the course was not useful in this area. The alpha value being fixed at 0.05, we can conclude that the confidence interval {68.42 ± 1.96 x 10.67(SE)} i.e. 47.51 < 68.42 < 89.33 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 47.51 to 89.33

Table 72: The course was useful in fostering Time Management Skills

Options	Frequency	Percent
Disagree & Strongly Disagree	13	76.47
Agree & Strongly agree	4	23.53
Total	17	100.0

This table shows that only 24% resource persons were of the view that the staff development course was helpful for the faculty members in learning time management skills. Moreover 76% were of the view that the course was not useful in this area. The alpha value being fixed at 0.05, we can conclude that the confidence interval {23.53 ± 1.96 x 10.29(SE)} i.e. 3.36 < 23.53 < 43.70 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 3.36 to 43.70.

Table 73: Skills in assessing the students learning

Options	Frequency	Percent
Disagree & Strongly Disagree	2	10.0
Agree & Strongly agree	18	90.0
Total	20	100.0

This table shows that 90% respondents were of the view that the staff development course was helpful for the participants in assessing their students learning. Moreover only 10% respondents were of the view that the course was not useful in this area. The alpha value being fixed at 0.05, we can conclude that the confidence interval {90.0 ± 1.96 x 6.71(SE)} i.e. 69.83 < 90 < 110.17 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 69.83 to 110.17.

Table 74: Strengthening Research Skills

Options	Frequency	Percent
Disagree & Strongly Disagree	13	72.22
Agree & Strongly agree	5	27.78
Total	18	100.0

This table shows that only 28% respondents were of the view that the staff development course was helpful for the participants in strengthening their research skills. Moreover 72% respondents were of the view that the course was not useful in promoting research skills. The alpha value being fixed at 0.05, we can conclude that the confidence interval {27.78 ± 1.96 x 10.56(SE)} i.e. 14.63 < 27.78 < 40.93 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 14.63 to 40.93.

Table 75: The number of sessions was enough according to the breadth and depth of the content.

Options	Frequency	Percent
Disagree & Strongly Disagree	15	75.0
Agree & Strongly agree	5	25.0
Total	20	100.0

This table shows that only 25% of the resource person strongly agreed or agreed that the number of sessions for staff development course was enough keeping in view the breadth and depth of the content. Moreover 75% respondents were of the view that the time duration was not sufficient. The alpha value being fixed at 0.05, we can conclude that the confidence interval {25.0 ± 1.96 x 10.56(SE)} i.e. 43.97 < 25.0 < 6.03 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 43.97 to 6.03.

Table 76: The facilities provided in the centre were satisfactory.

Options	Frequency	Percent
Disagree & Strongly Disagree	3	15.79
Agree & Strongly agree	16	84.21
Total	19	100.0

This table shows that 84% respondents were of the view that the facilities provided to them in the training centre were satisfactory. Moreover 16% respondents were of the view that facilities were not satisfactory. The alpha value being fixed at 0.05, we can conclude that the confidence interval {84.21 ± 1.96 x 10.56(SE)} i.e. 67.92 < 84.21 < 100.41 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 67.92 to 100.41.

Table 77: The required AV aids were provided in the Training Hall

Options	Frequency	Percent
Disagree & Strongly Disagree	6	31.57
Agree & Strongly agree	13	68.42
Total	20	100.0

This table shows that only 68 % respondents were of the view that in the training hall the required Audio-Visual aids were provided by the course coordinators. Moreover 32% respondents were of the view that in their centers the required AV aids were not provided to the resource persons. The alpha value being fixed at 0.05, we can conclude that the confidence interval {68.42 ± 1.96 x 10.66(SE)} i.e. 47.53 < 68.42 < 89.31 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 47.53 to 89.31.

Table 78: Throughout the course, in time management and coordination was made by the Course Coordinator.

Options	Frequency	Percent
Disagree & Strongly Disagree	2	10.0
Agree & Strongly agree	18	90.0
Total	20	100.0

This table shows that 90% respondents were of the view that throughout the staff development course, the coordinator made in time management and coordination of different activities. Moreover 10% respondents were of the view that coordinator didn't made in time management. The alpha value being fixed at 0.05, we can conclude that the confidence interval {90.0 ± 1.96 x 6.71(SE)} i.e. 69.83 < 90.0 < 110.17 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 69.83 to 110.17.

- **Table 79: The participants of the program were eager learners**

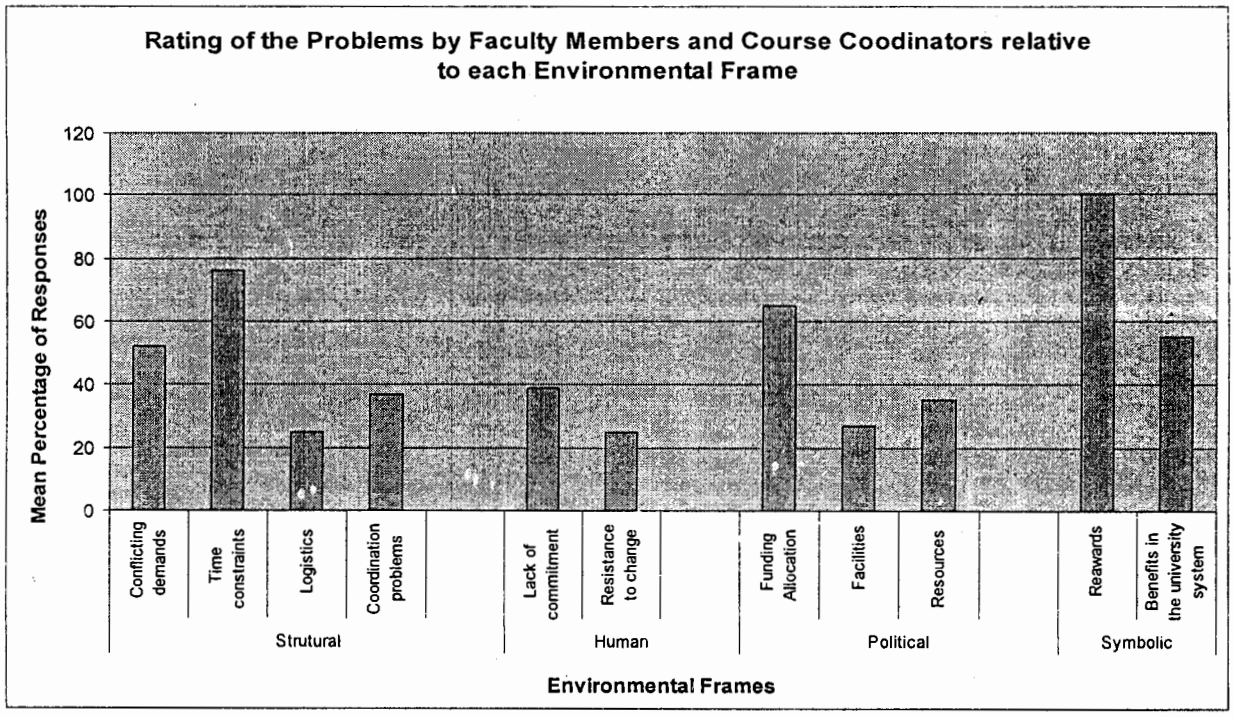
Options	Frequency	Percent
Disagree & Strongly Disagree	6	33.33
Agree & Strongly agree	12	66.66
Total	18	100.0

This table shows that 67% respondents were of the view that the participants of the staff development courses were very active and eager learners Moreover 33% respondents were of the view that the course participants were not eager to learn. The alpha value being fixed at 0.05, we can conclude that the confidence interval {66.67 ± 1.96 x 6.71(SE)} i.e. 44.89 < 66.67 < 88.44 was significant at 0.05 level. Therefore it was determined that with the given percentages of response, we were 95% sure that confidence interval would range from 44.89 to 88.44.

4.6 Consolidated Analysis of the Problems faced by the Participants, Course Coordinators and Resource Persons during Staff Development Programs:

If we analyze the problems faced by the SDC participants, course coordinators and Resource Persons, we can easily categorize these problems according to the environmental frames identified by Bolman and Deal, 1993. These authors suggested that in order to deal with the issues we must have to make them meaningful. They suggested four frames i.e. Structural, Human, Political and Symbolic. In this study the researcher categorized the problems faced by the faculty members/participants, Resource Persons and Course Coordinators in these four frames and then the analysis is presented. All the problems were categorized around these four frames and then analysis about the intensity of problems was made.

Figure 12 Graphical Representation of Problems faced by Faculty Members and Course Coordinators' relative to each Environmental Frames



4.6.1 • Problems categorized in Structural Frame

Structural frames deals with the level of productivity in the organization. It examines rules, coordination problems, time constraints, conflicting problems and logistics etc. The respondents including the faculty members and course coordinators; mentioned that in the structural frame time constraints was the most reported problem with the opinions that Faculty members are overloaded with too many responsibilities even during the course and the number of sessions allocated for the course were not enough keeping in view the breadth and depth of the content. In the structural frame, the second major problem category reported was conflicting demands with the opinion that Faculty members are often overwhelmed with all that is being required of them, (77%); There are not enough faculty members at the university who can take up responsibilities as alternative arrangements, (59%); Meeting both the expectations of the university and the program requirements is very difficult, (68%); Rescheduling of university classes seems difficult to manage, (22%); University doesn't consider Staff Development Course as part of the faculty workload, (83%); Conflicting Schedules cause missing of either university or the course, (18%).

The third dimension of the problems categorized in the structural frame were coordination problems with the following problems as Call for Nominations or gathering a group of 35 faculty members is difficult, (69%); Difficulty in engaging expert resource persons having specialization in the course modules, (62%); There are coordination problems with NAHE, (6%). The fourth dimension of the problem included in the structural framework is the logistics related problem Drop-out of the participants during

the course is a problem, (43%); Attendance of the participants is not regular till the end of program, (19%); In time start of sessions becomes problematic, (13%).

4.6.2 Problems categorized in Human Frame

The human frame stresses motives and interest of the faculty members. It examines the problems relating to lack of commitment by the faculty members, and resistance to change. In the detailed analysis of the problems reported by the faculty members and course coordinators it is evident that there was absence of longer & fulltime commitment as per the course requirement, by the faculty members, (26%); some resource persons reported that another problem was the lack of seriousness amongst the participants as there was no visible penalty for non-participation/poor performance; Some course coordinators were of the view that maintaining the participants' interest in the program for the whole month was difficult (25%). Another dimension of the problems categorized in the human frame is resistance to change, because according to the faculty members there was status-quo attitude of Heads of Departments/ senior faculty members; therefore implementing the new ideas in the university environment sometimes become problematic, (25%).

4.6.3 Problems categorized in Political Frame

The political frame emphasizes on financial issues, resources, and their control. There were three problems identified in this category. These include funding allocation, resources and facilities. The problem related to funding allocation includes procedural delays in collecting advance amount from their university, (87%); handling accounts of the entire program is difficult to manage. (59%); getting the accounts clearance by the

internal auditors becomes problematic, (81%); Problem in the clearance of the accounts from HEC, (63%); Managing expenses within the allocated budget was difficult. The second category of the problems included resources in which it was reported that the required AV aids were not provided in the classroom, (35%). The third category of problems was related to facilities provided during the staff development course in which covering of longer distances to reach the course venue was a problem (geographically distant places), (33%); Accommodation arrangements for participants are not sufficient, (57%); Accommodation for the resource persons was difficult to manage, 25%; Transport facility for the resource persons was difficult to manage, 6%

4.6.4 Problems categorized in Symbolic Frame

The political frame emphasizes on the incentives and rewards related problems and the benefits attached in the university system for the faculty members inducted in the training programs. Interestingly 100% faculty members reported the problem of lack of reward / acknowledgement or visible recognition i.e. promotion or any sort of bonus on good performance. Moreover the faculty reported that Institutionally provided professional development in the eyes of most faculty is perceived as irrelevant, or if not irrelevant, has having very low priority in the demand on their time, particularly as compared to the priority they give to academic research. After having the analysis of the intensity of problems, the respondents were required to suggest some workable solutions to overcome these problems. These are included in the recommendations of the study.

4.6.5 Summary Analysis of Problems:

In the summary analysis it is evident that the highest percentage of problems were categorized in the Symbolic frames with the problem of rewards as the highest rated problem, the second highest category was in the structural frame having the problem of conflicting demands rated highest, the third highest rating was the political frame in which the funding related problems were reported with highest frequency and fourth was the human frame in which lack of commitment by the faculty members was a problem in few cases.

4.7 Data Findings from the Participants, Course Coordinators and Resource Persons

(Part 03: Developing a Mechanism for Making SDC Mandatory)

This part of all the three questionnaires was based on developing a framework for the future staff development programs in the university. For the purpose of having different perspectives, this part was administered on the faculty members, course coordinators and resource persons. The viewpoint of all the three sampled groups is presented below:

Table 80: Staff Development Courses should be made mandatory for all the faculty members at university level.

Respondents	Faculty members		Course Coordinators		Resource Persons	
Options	Frequency	Percent	Frequency	Percent	Frequency	Percent
Workable	321	83.6	13	81.3	17	85.0
Non workable	38	10.2	2	12.5	03	15.0
Total	**384**	**100.0**	**16**	**100**	**20**	**100**

In response to this question 84% faculty members, 81% course coordinators and 85% resource persons; (mean % = 83.3) were of the view that it is workable to make the staff development courses mandatory for the faculty members of universities and DAIs. Moreover, 38% faculty members, 13% course coordinators and 15% resource persons were of the view that it is not workable. Therefore, it can be comfortably concluded that it is workable to make the training programs mandatory for the faculty members.

• **Figure 13 Opinion about making SDCs Mandatory for the Faculty**

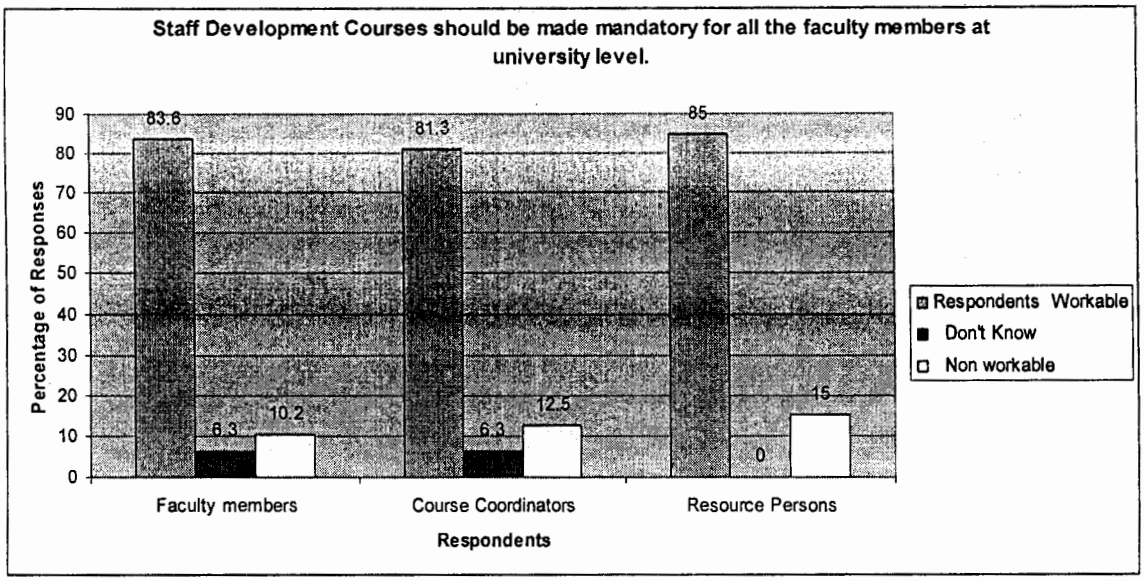


Table 81: Staff Development Programs should be conducted during any of the two breaks i.e. July-August or December-January.

Respondents	Faculty members		Course Coordinators		Resource Persons	
Options	Frequency	Percent	Frequency	Percent	Frequency	Percent
Workable	234	60.9	11	68.8	10	50.0
Don't Know	88	22.9	0	0	3	15.0
Non workable	62	16.1	5	31.3	7	35.0
Total	**384**	**100.0**	**16**	**100**	**20**	**100**

In response to this question 61% faculty members, 69% course coordinators and 50% resource persons were of the view that it is workable to conduct staff development courses in any of the two seasons i.e. July-August or December-January (Mean % 60). Moreover, 16% faculty members, 31% course coordinators and 35% resource persons were of the view that this is not workable. It is evident that a huge majority of the teachers are in favor of conducting these programs in the semester breaks either after spring or after the fall semester.

Figure 14: Conducting Staff Development courses in Summer Breaks

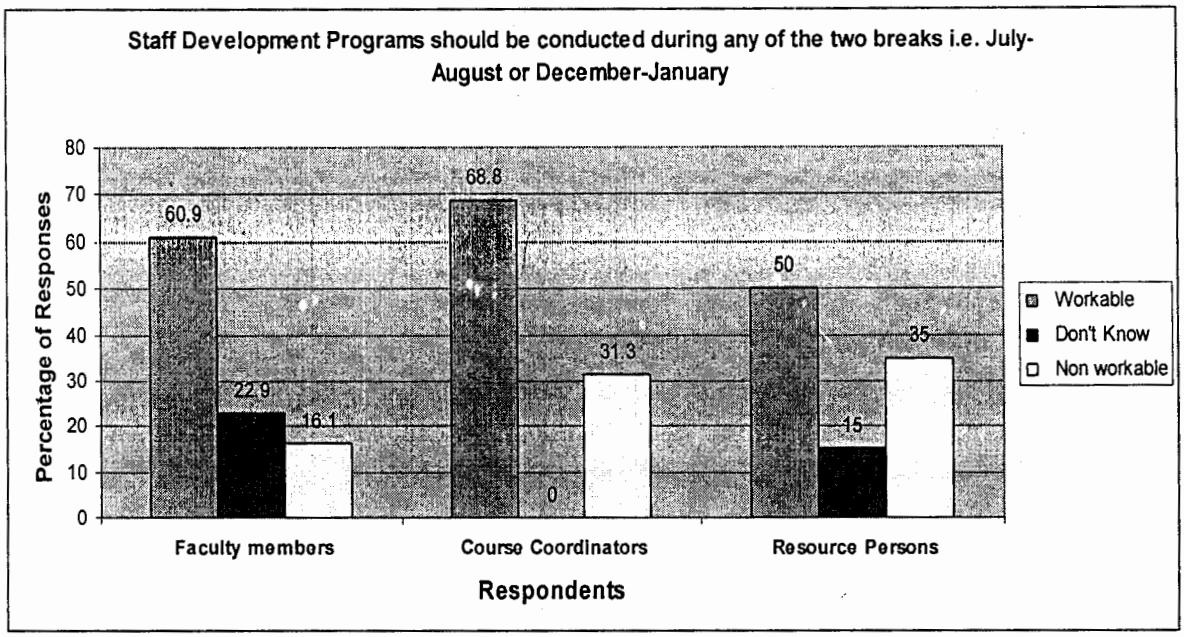


Table 82: Inducting new staff before the month of July and December so that they can get training offered in any two off seasons.

Respondents	Faculty members		Course Coordinators		Resource Persons	
Options	Frequency	Percent	Frequency	Percent	Frequency	Percent
Workable	198	51.6	11	68.8	10	50.0
Don't Know	103	26.8	1	6.3	4	20.0
Non workable	83	21.6	4	25.0	6	30.0
Total	**384**	**100.0**	**16**	**100**	**20**	**100**

In response to this question 52% faculty members, 69% course coordinators and 50% resource persons were of the view that it is workable to induct new staff before the month of July and December so that they can get training offered in any two breaks, Mean % 57). Moreover, 22% faculty members, 25% course coordinators and 20% resource persons were of the view that this is not workable. It is important to note that 27% faculty members and 20% Resource Persons opted the option of don't know. The reason may be that the academic faculty don't have a fair idea of workability of this administrative matter of induction, so they preferred the middle choice of don't know.

• Figure 15: Induction of new faculty before the month of December

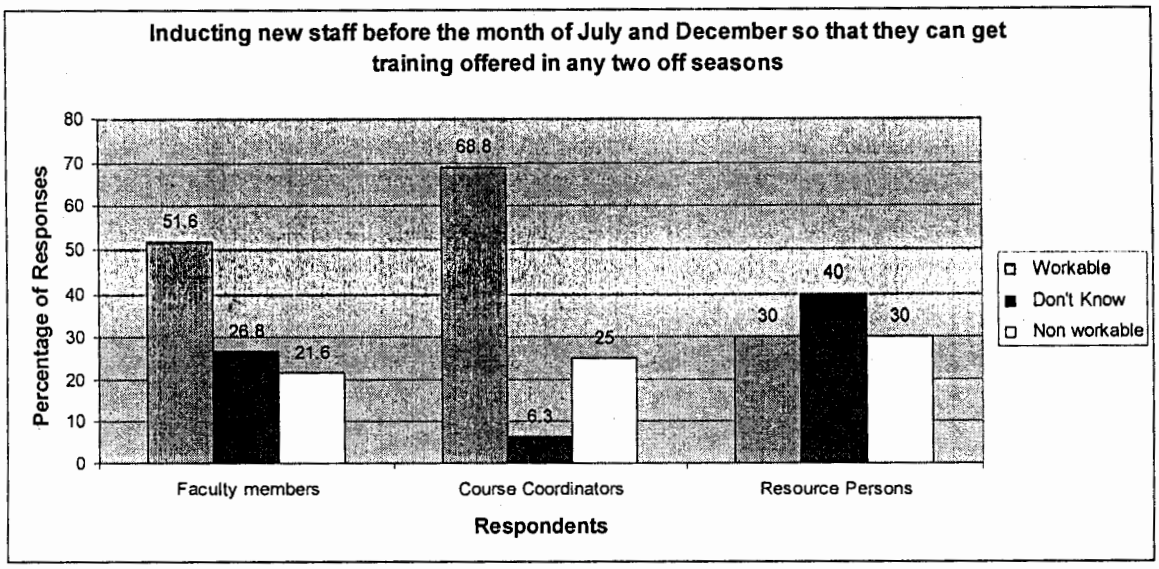


Table 83: The mandatory staff training program should be subject specific.

Respondents	Faculty members		Course Coordinators		Resource Persons	
Options	Frequency	Percent	Frequency	Percent	Frequency	Percent
Workable	187	48.7	3	18.8	16	80.0
Don't Know	55	14.3	2	12.5	1	5.0
Non workable	142	37.0	11	68.8	3	15.0
Total	**384**	**100.0**	**16**	**100**	**20**	**100**

In response to this question, 49% faculty members, 19% course coordinators and 80% resource persons were of the view that it is workable to conduct the subject specific mandatory staff development courses (Mean% 49). Moreover, 37% faculty members, 69% course coordinators and 15% resource persons were of the view that this is not workable to conduct the subject specific trainings (Mean % 40). It is evident that a majority of the resource persons were of the view that trainings should be subject specific, while majority of the course coordinators were of the view that is non-workable to conduct subject specific trainings.

- **Figure 16: Mandatory staff training should be subject specific**

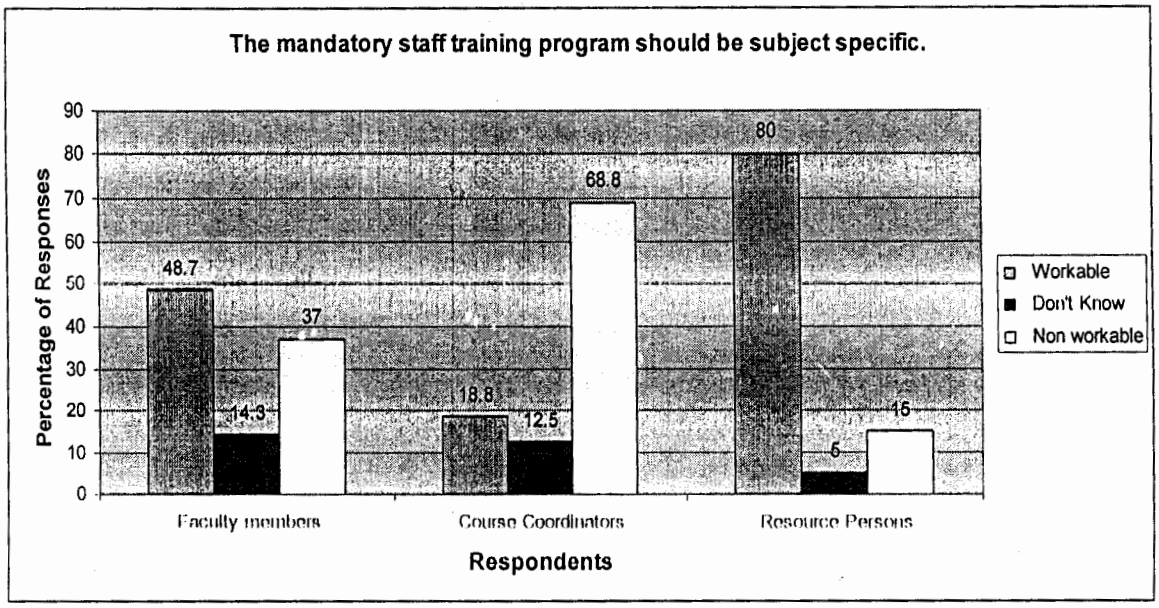


Table 84: The teaching performance of the faculty trained through the Staff Development programs should be monitored during the semester.

Respondents	Faculty members		Course Coordinators		Resource Persons	
Options	Frequency	Percent	Frequency	Percent	Frequency	Percent
Workable	79	20.6	3	18.8	3	15.0
Don't Know	66	17.2	0	6.3	2	10.0
Non workable	239	62.2	13	81.3	15	75.0
Total	**384**	**100.0**	**16**	**100**	**20**	**100**

In response to this question 20% faculty members, 19% course coordinators and 15% resource persons were of the view that it is workable that the performance of the trained faculty should be monitored during the semester. (Mean % 18). Moreover, 62% faculty members, 81% course coordinators and 75% resource persons were of the view that this is not workable (Mean% 73). It is evident that a huge majority of the respondents is of the view that it is not workable to monitor the teaching performance of the faculty trained through the SDCs.

Figure 17: Performance of the Teaching Faculty should be monitored

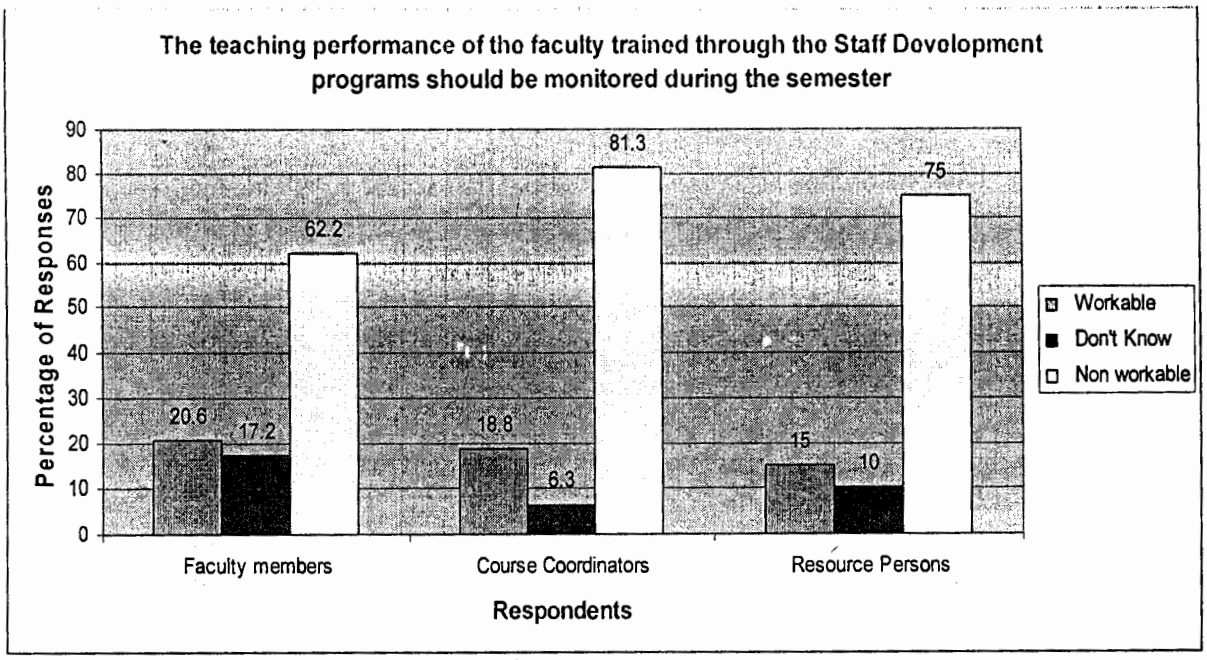


Table 85: What should be the duration of the program?

Respondents	Faculty members		Course Coordinators		Resource Persons		Consolidated Percentage
Options	Frequency	%	Frequency	%	Frequency	%	
Less than one month	90	23	3	19	3	15	19
One month	224	58	12	75	13	65	66
Two months	46	12	0	0	0	0	4
Three months	24	6	1	6	2	10	7
Six Months	0	0	0	0	0	0	0
Any Other	0	0	0	0	2	10	3
Total	**384**	**100**	**16**	**100**	**20**	**100**	**100**

In response to the question regarding duration of the program, in total 66% respondents were of the view that the program should be of one month duration, 19% were of the view that it should be of less than one month duration. Only 12% of the faculty members were of the view that it should be of two months duration. 6% course coordinators and 10% resource persons were of the view that three months duration program is workable. Moreover 10% of the resource persons selected the option any other and specified six weeks as the workable duration for the program.

Figure 18 Graphical Representation of Opinion about the duration of SDCs

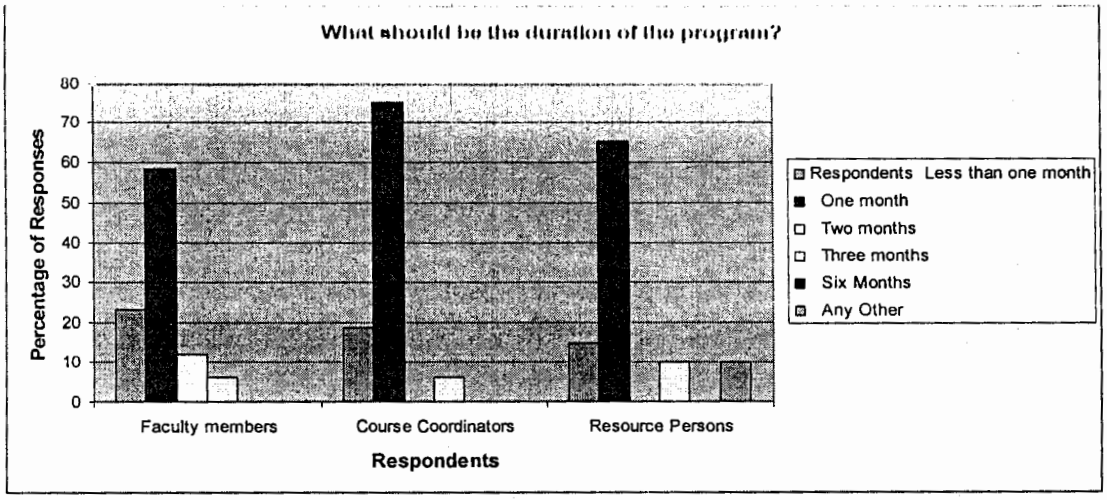


Table 86: What reward / priority should be given to those who attend the NAHE's training program?

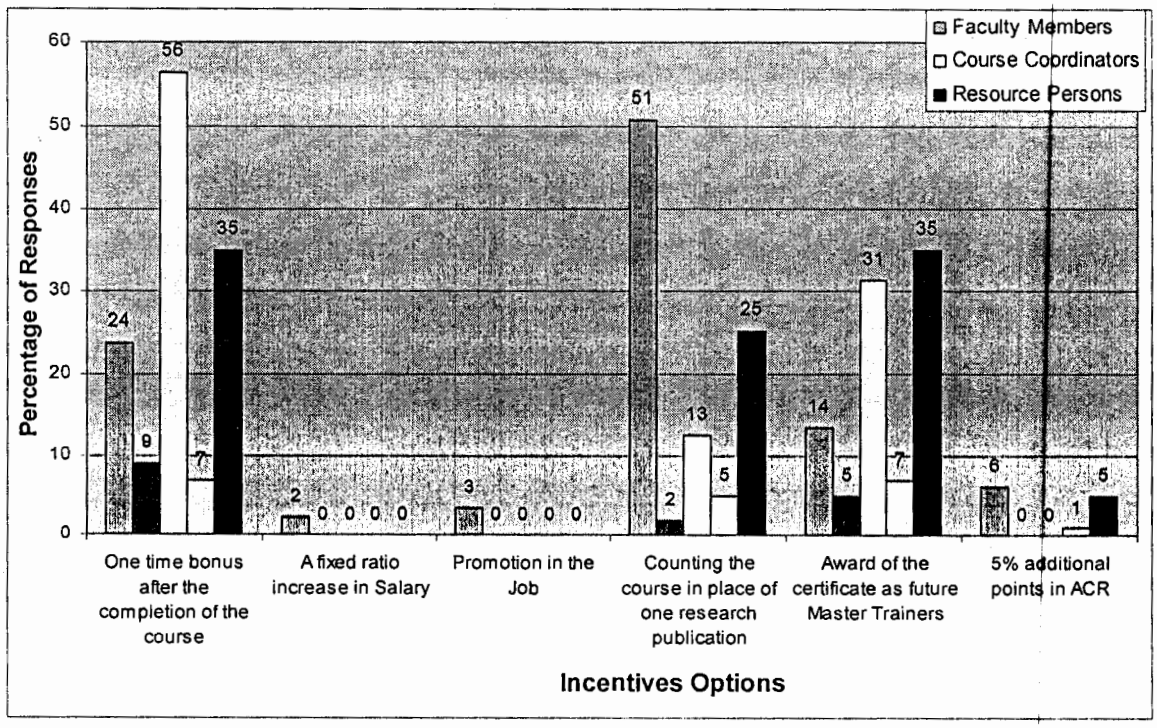
Respondents	Faculty members		Course Coordinators		Resource Persons		Consolidated Percentage
Options	Frequency	%	Frequency	%	Frequency	%	
1. One time bonus after the completion of the course	91	23.7	9	56.25	7	35	38
2. A fixed ratio increase in Salary	9	2.3	0	0	0	0	1
3. Promotion in the Job	13	3.4	0	0	0	0	1
4. Counting the course in place of one research publication	195	50.8	2	12.5	5	25	29
5. Award of the certificate as future Master Trainers	52	13.5	5	31.25	7	35	27
6. 5% additional points in ACR	24	6.3	0	0	1	5	4
Total	**384**	**100.0**	**16**	**100**	**20**	**100**	**100**

In response to the question regarding the type of reward most workable for the NAHE's training participants, 51% participants were of the view that the course should be counted as one research publication; 24% were of the view that one time bonus at the end of the course is most effective as reward. Moreover 56% course coordinators were of the view

that one time bonus is most effective; 31% were of the view that award of certificate as future Master Trainers is the most workable option for rewarding the trainees. The detailed analysis of the Resource Persons responses showed that 35% respondents favored the option of one time bonus and award of certificate as equally effective reward to be given to the participants of Staff Development Courses. Fixed ratio increase in salary and promotion in the job is categorized as most non-workable option among all.

From the analysis of the graphical representation it is obvious that most of the responses were concentrated on the three options i.e. one time bonus after the completion of course having a mean percentage of 39%, counting the course in place of one research publication having a mean percentage of 29%, and award of the certificate as future Master Trainers having a mean percentage of 27%.

Figure 19: What reward or priority should be given to the Trainees of SDCs



4.8 Analysis of Open Ended Questions

In response to the question regarding "what aspects of the program did you find beneficial?" participants were of the view that the whole program is a beneficial one but only care should be taken in planning the lectures and some model audio video presentations should also be included so that the newly inducted or less experience faculty members could have a fair idea about what are the standards of preparing lectures and what level of communication skills may be regarded as ideal for teaching the higher education faculty members (36). The participants voted in favor of Micro-teaching activity because they learned to know their weaknesses and assessed themselves and got meaningful suggestions about how to makeup deficiencies of their teaching, (66).

They were of the view that the program helped them to design the objectives and goals of the program with the factor of periodical assessment of the learning in relation to the objectives (12). Some participants were of the view that they found curriculum development an effective module for understanding the issues related to the curriculum and the process of curriculum development (21). A few participants highlighted the concept of hidden curriculum and its application and importance learned through the module (13).

Some participants were of the view that they got confidence in teaching through this program actually. Because of the mix group effect they learned from each others experiences. These findings are in accordance with evidence presented by Garet et al. (2001) showing that the collective participation of groups of teachers from different

backgrounds is related to "coherence and active learning opportunities, which in turn are related to improvements in teacher knowledge and skill and changes in classroom practice" (p. 936). Participants were of the view that they learned time management skills in the classroom and how to manage time when you are running short of time and in some circumstances when they have enough time left after the completion of planned activity. Participants were of the view that this kind of time management was although not directly taught by the resource persons but by their own style of teaching they leaned this specific skill. According to some of the respondents they found guest speakers as the most beneficial part of the program because it gave a very unique form of exposure regarding sharing the experiences of people from different walks of life.

According to majority of respondents, this had been a wonderful experience, because they had never been given the opportunity to really plan an integrated unit. It was through this course that they were given the chance to learn and apply skills used in the classroom teaching and it was highly relevant to their professional needs. Some faculty members were of the view that it was so very valuable experience to work as a team with adequate time and limited interruptions. Participants said that we were treated as professionals and enjoyed the sharing of ideas with other leaders. It was an invaluable and life-changing experience for them, (24).

In response to the question regarding the least beneficial aspects of the program, some of the respondents said that the program was a lecture type so the mode of delivery made it a little traditional, boring and impracticable. Some participants declared the module on

research methodology as the least beneficial component. Some participants pointed out that the component of ethical issues was not at all included in the overall content and they were of the view that newly appointed or less experienced teachers need the orientation about the importance of ethics in teaching learning process. 44 participants pointed out the immature behavior of some of the resource persons as they used to reprimand the participant faculty members in a way as they are teaching school level students, so the undue strictness on mature level of students caused some form of lackadaisical attitude towards the course.

51 participants wrote that Resource Persons of the program were from Social Sciences or Arts Subjects; hence they were unable to teach from the perspective of Science teachers or any other subject teachers. This was the most attention seeking drawback because the Humanities and Social Science teachers used to deliver lectures on how to teach these subjects, how to assess the learning related to these disciplines and how to do research in Humanities and Social Sciences disciplines. In that case the science teachers sitting in the session suffered overall and it became a time wastage activity for the teachers from pure sciences, Management Sciences, Medical sciences or other disciplines. So discipline specific training should be provided, especially in the module of Advanced Teaching Skills they were not exposed to the teaching methods effective for pure science, and similar case was with the research methods module

Some of the respondents were of the view that there was less focus on hands on experiences and more on the delivering the content knowledge throughout the program

(26). Regarding the module on Educational Psychology; 03 participants responded that it was just based on the theoretical knowledge of psychological principles with no coverage on the practical application of how to make use of theories in the classroom situation more specifically from the perspective of adult learning environment.

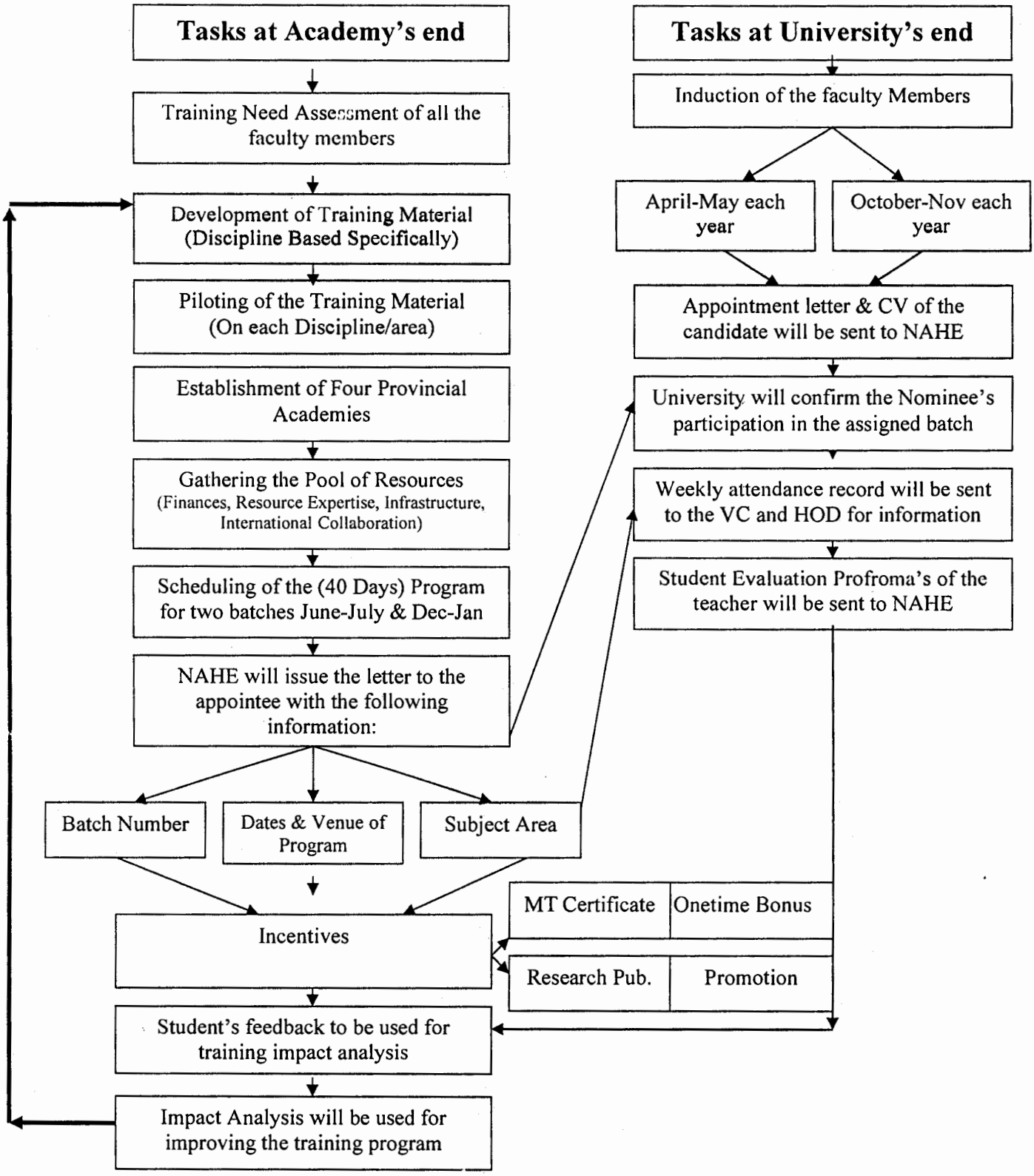
14 respondents were of the view that the challenge NAHE is currently facing is the mis-alignment between professional development needs as perceived by the institution and the needs felt by individual faculty members themselves and this becomes the cause of ineffectiveness of professional development programs, so in order to reduce this gap, a proper need analysis like this follow-up study should be conducted.

In response to the question asked from the faculty members regarding the problems they faced other than the above mentioned, some of the participants pointed out that they faced the problems due to the childish behavior of administration, in certain decision making incidents.

4.9 Mechanism for Mandatory Professional Development Program

In the light of the detailed analysis of the data and keeping in view the objectives of the study, a detailed mechanism was devised for conducting the mandatory professional development program for the higher education faculty. The program of professional development would be conducted discipline specifically and a National Faculty Academy will be constituted having the provincial head quarters. The proposed mechanism is presented below.

A National Faculty Academy will be constituted and it will replace National Academy of Higher Education (NAHE).



1. According to the above mentioned framework the proposed academy will conduct discipline wise training needs assessment of the faculty members of higher education institutions.
2. On the basis of the TNA the training material will be developed for the pedagogical skills enhancement of the faculty members. It is important to mention here that the resource material will be compiled for different disciplines. For example if the content is about teaching skills then specifically teaching skills required for mathematics, engineering, sciences, humanities, arts, literature, languages will be separately developed in the form of booklets for each discipline. Moreover the training material will consist of Guide for the Master trainers as well as the Manual for the trainee's. The Reader's Pack will be a self explanatory comprehensive book consisting of examples from classroom context having the content of original lessons.
3. After the development of the material the same will be pilot tested on the relevant group of the faculty members from each discipline. On the basis of the results of the pilot test the material will be finalized in consultation with the experts of the field. The program content will also include English Language Skills and Basic Computing Skills as well.
4. In order to conduct the program simultaneously throughout the country, the proposed Academy will extend itself and will be made functional at the four provincial headquarters along with the one centrally working at the federal capital for the faculty members of the local universities as well as catering the needs of

- same discipline area would be enrolled in the program. In case if in one centre, the number would be less than 25, then participants' of that particular discipline from two or more centers will be combined in one batch. (Expenditure plan would be made accordingly).

9. During the actual conduct of the program, in order to ensure maximum participation, the attendance record of each participant will be sent to the respective Vice-Chancellor and Head of Department on weekly basis. After the completion of the course the certificate will be awarded and an incentive would be given to each participant as recognition of successful completion of the course. The process will further go on with the evaluation of the faculty member trained through NFA. This evaluation will be conducted after six months on the basis of the faculty evaluation forms filled in by the students at the end of the semester. Moreover the trainee would also be required to reflect about what worked and what went wrong. This reflection will help to improve the faculty members own skills on the one hand and the betterment of the program on the other.
10. The results of the impact analysis will lead back towards the first step i.e. training needs assessment, the deficiencies and gaps will be worked out for future improvement of the program.

4.10 Discussion

The present study was conducted to analyze the implementation status of Staff Development Courses conducted by the project NAHE. From the respondents opinions some of the points have emerged which needs to be discussed further. Some participants were of the view that student psychology was one of the most beneficial parts of the program because it helped the participants in knowing about the psychological needs of the students which play the most crucial role in the success of teaching learning process. With regard to the content of the teachers' professional development on students' learning, a number of studies report that the more students' knowledge teachers have, the higher the levels of student achievement (Falk, 2001; Grosso de Leon, 2001;; Tatto, 1999). Many participants were of the opinion that Testing and Assessment was very much useful component and it helped them in evaluating their student's learning achievement (93). These findings are also supported in the research conducted by Hawley, 1999 in which it was concluded that the component of student assessment is one of the major ingredients for the success of any professional development program developed for teachers.

The research findings revealed that this course was interesting because it gave participants' the chance to learn and apply skills used in the classroom teaching and it was highly relevant to their professional needs. This evidence is supported by Guskey's (2002) work, in which he argues that teachers tend to be quite pragmatic, and thus strive to acquire c knowledge that is "specific, concrete, and practical... directly relates to the day-to-day operation of their classrooms" (p. 382). Therefore the element of practicality and demonstration of skills made it more interesting for the participants.

•One of the major findings of the study was that majority of the problems faced by the course coordinators were rooted in the financial aspects of the programs. These findings are in accordance with the research study conducted by Brennen, (2001) in which it was suggested that the success of the professional development program in a developing country depends upon the allocation and utilization of financial resources, further more he suggested that for proper utilization a well developed monitoring system must be in place to ensure greater quality.

Majority of the respondents pointed out that it is non-workable to monitor the performance of the faculty members trained through the staff development programs. These findings are in contrast with the research study conducted by Baker and Smith, 2006 in which they argued that the last step without which the professional development cycle is incomplete is monitoring and evaluating the performance of the trainees' and this is the step which is the most crucial in determining in the success of whole process. This may be done in another way that is assessing the students' achievement before and after the training programs, but again many complications are involved.

Another reported problem by the faculty members according to the data is implementation of the learned ideas in to their university setup. The same problem was pointed out by the Nir, (2001) in which the respondents were studied after the lapse of six months post training period. They pointed out that their heads want to maintain the status-quo in the department and they don't like the ideas flow from bottom up, rather they only follow the top down approach for getting tasks done. In that study Nil

suggested that a separate training program for heads/senior faculty members working at administrative posts should also be conducted in order to make them flexible and responsive to the innovation at their sites.

CHAPTER 05

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The present study aimed at assessing the implementation status of the staff development courses conducted by NAHE. The major objectives of the study were to assess the academic quality of the Staff development courses conducted by NAHE; to determine the percentage of the faculty members trained in different academic disciplines'; to assess the problems faced by faculty members due to their participation in the Staff Development Courses; to assess the problems faced by the Course Coordinators; and to develop a framework for future training programs. The opinions of faculty members, resource persons and course coordinators were included in the study regarding different dimensions of the program.

Three separate questionnaires were developed for the purpose of data collection. The questionnaires were made in which participants were asked for rating the academic content of the program and the problems they faced due to their participation in SDCs; the coordinators were asked to give their opinions regarding the problems they faced during the coordination and the resource person were asked to rate the overall quality of the modules and the facilities provided to them. One component was common in all the three questionnaires and that was to assess the workability of making the staff development programs mandatory for all the faculty members. Overall 17 Human Resource Development Centers were selected keeping in the provincial representation. In

total 384 participants, 16 course coordinators and 20 Resource Persons responded to the questions. The data findings show that the module on Assessment and Evaluation was rated at the top w.r.t to the content quality, while the lowest rate module was Administrative planning and Communication Skills. Moreover, the findings revealed that the resource persons of the module Assessment and Evaluation were of the best quality, while the resource persons of the module Research Methods and Skills were least rated by the participants'.

From the detailed analysis of the problems faced by the faculty members it was revealed that some of the problems were rated more intensive like Lack of reward / acknowledgement or visible recognition; consideration of SDC' as part of faculty workload by the universities; assignment of additional responsibilities to the participants' by their universities; managing the alternatives in the university set-up in place of those who are involved in the training programs; etc. Some of the intensive problems faced by the course coordinators were like procedural delays in collecting advance amount from their university; accounts clearance from the internal auditors and then from HEC; getting nominations of the faculty members for the course; and above all difficulties in engaging expert resource persons for different modules. Resource persons of the program were comparatively satisfied with the logistics arrangement of the course as they were of the opinion that the training hall was well equipped, the coordinator provided in time facilitation in all aspects, but they pointed out that the time duration was in-sufficient according to the breadth and depth of the content.

The study revealed the fact that more than 80% faculty members and coordinators considered the mandatory staff development programs workable in the university context

and it was suggested that these programs may be conducted in the summer vacations or semester breaks. It was proposed in the mechanism that the newly inducted faculty members should be enrolled in the training programs conduced by NAHE, prior to getting any coursework from their university. From the discipline based analysis of the trainee's data it was revealed that the highest number of the faculty was trained in the discipline of Social Sciences, and lowest representation was from Agriculture Sciences.

From the findings of the study it was recommended that an institute of career planning may be constituted as permanent body for the training of the faculty members; the need analysis of the higher education faculty may be conducted more specifically adopting the discipline based approach; these program may be conducted on-campus and the faculty members may be completely detached from the department work and for ensuring this session wise attendance record may be sent to NAHE and the Vice-Chancellor of that particular university.

5.2 Major Findings

The major findings from the data collected regarding the implementation status of the staff development courses are presented below and the percentage of the respondents in agreement of that particular statement is also given.

1. Educational Psychology was the best among other modules with mean percentage 61%,
2. Assessment and Evaluation was rated second with the average percentage of 60%,
3. Curriculum Development was rated third with the average percentage of 59%,

4. •Research Method and Skills was rated fourth with average percentage of 46%,
5. Advanced Teaching Skills was rated fifth with the average percentage of 41%,
6. Administrative Planning & Communication Skills had the lowest percentage of (35%).
7. The best resource persons were available for the module Testing and Assessment with 64% opinions lying between the rating lines of 70-90.
8. The second best resource persons were available for the module Curriculum Development with 65% opinions lying between the ratings of 50-70.
9. The third best resource persons were available for the module Advanced Teaching Skills with 60% opinions lying between the rating of 50-70.
10. The field resource persons for the module Research Methods and Skills were the least rated in quality as 45% respondents rated 30-50 or below average.
11. Lack of reward / acknowledgement or visible recognition i.e. promotion or any sort of bonus was a biggest problem. (100%).
12. Universities don't consider Staff Development Course as part of the faculty workload. (83%)
13. Faculty members are overloaded with too many responsibilities even during the course. (77%)
14. A procedural delay in collecting advance amount from the university is a biggest problem faced the course coordinators. (87%)
15. Getting the accounts clearance by the internal auditors is the second rated biggest problems for coordinators. (81%)
16. Call for Nominations of 35 faculty members is difficult for the coordinators of SDC programs. (69%)

17. It is workable to make these Staff Development Courses mandatory for all the faculty members at university level. (83%)
18. It is not workable to monitor the teaching performance of the faculty trained through the Staff Development. (73%)
19. One time bonus after the completion of course is a workable option for making the course rewarding. (39%).
20. Counting the course in place of one research publication is another workable option for making the staff development courses rewarding for the nominees. (29%).
21. It is workable to conduct one month staff development program in future as well. (66%).
22. The facilities provided to the resource persons in the training hall were satisfactory. (84%)
23. The course coordinators of the staff development programs made efficient coordination during the whole one month. (90%).
24. It is workable to conduct the staff development courses in summer vacations or during semester break. (60%)

5.3 Conclusions

The present study was conducted to analyze the implementation status of the staff development programs conducted by the project NAHE. The results of the study show that:

1. •The content of the staff development programs is not of good quality, and it needs revision.
2. More specifically the module on Administrative, Planning and Communication Skills needs altogether revision and it was suggested by the participants' that the communication skills component must be separated from the administrative and planning components of the module.
3. Regarding the quality of the resource persons it can be concluded that it was not up to the mark and it is required that the pool of expert resource persons may be developed at the provincial level and exchange of expertise may be done in the field where there is scarcity of resource persons.
4. From the detailed discipline wise analysis of the trainees it was concluded that the faculty from the discipline of pure sciences was trained in less proportionate in comparison with other disciplines. So there is a need to maintain a ratio of number of trainees in all the disciplines keeping in view the total number of faculty in that particular discipline.
5. Moreover from the analysis of the problems faced by the faculty members during staff development courses, it can be concluded that increasing financial allocation for the course and making it more rewarding are the steps that can help to minimize the problems of participants and coordinators of the program. Moreover fixing tangible rewards for the participants' is also a step towards improving the quality of programs. These rewards can be in form of considering the course in place of one research publication or awarding a certificate of future Master Trainers or giving one time bonus after the successful completion of the course.

6. From the analysis of the results obtained from the course coordinators it can be concluded that the coordinators face much difficulties in accounts related matters; one of the initiative that can help minimize their problems is to transfer the money directly to the Coordinator is also a useful step.
7. Moreover making the staff development mandatory and offering the course in semester breaks can help to get maximum benefit out of the program.

5.4 Recommendations

Keeping in view the results of the study, it is recommended that:

1. Content of all the six modules should be revised and a need analysis may be conducted before developing the material. Moreover the content should be developed keeping in view the needs of different disciplines.
2. An institute of career planning should be setup with the one major goal of conducting these types of programs periodically for all the faculty members, and these programs should be conducted at the provincial head-quarters.
3. The institute of career planning should asses every lecturer of the country, measure his deficiencies and plan number and types of courses for every lecturer, considering every lecturer as a case study. It will finally culminate into development of 12 to 15 different courses according to the specifications
4. Universities should nominate only those faculty members who are willing to attend the programs and whose department Head is also willing to spare him. This will help in overcoming drop-out from SDC.

5. The record of attendance should be sent to the Vice-Chancellor because this will keep the influence of departmental pressures to a minimum and faculty members will consider themselves on duty.
6. Courses should be held in the summer vacations so that faculty can attend the program without having any additional responsibilities imposed on them by the department/university.
7. Each departmental head should be informed at least three months prior to the start of the program so that he/she could make alternative arrangements well in advance. Moreover the nominated faculty members should also complete the assigned responsibilities or handover the tasks to other faculty members of the department.
8. The fresh inductees should be called within the first or second months of their induction for the course because they can participate very enthusiastically at the time when they don't have any course load or university responsibility.
9. Courses should be arranged not in the universities but in the organizations functioning outside the university setup so that the nominated faculty members may remain at the disposal of the course organizers for the whole time duration and in this way more qualitative implementation as per actual planning would be possible.
10. Every trainee should be required to explain at least one innovation within his/her department under the guidance of departmental head and university management. The initiative may be reported to Higher Education Commission and in return some form of rewards may be given to the innovator on the basis of importance

and scope of the initiative. A competition among the participants of each of the course, regarding bringing the innovation within the department is another useful step that can be taken by NAHE/HEC.

11. The faculty members participating in the program should be assessed at the end of the program and on the basis of their performance they can be assigned the task of organizing one workshop for their own department fully funded by HEC. This type of reward can promote a very healthy competition among the participants on the one hand and can sensitize the heads of departments about the importance of benefits attached with attending the program, on the other.
12. The funds allocated for the different components of the staff development program should be increased. In this way the course coordinators will be able to provide more facilitation to all the stake-holders.
13. Students should be invited in the sessions to have an analysis of problems that they face in the classroom. In this way the resource persons would be able to provide some useful tips and techniques to the faculty members keeping in view the students problems.
14. A strong feedback system should be implemented, so that the input can be timely incorporated in the future training programs to make them more effective.
15. The techniques of organizing the lab sessions should be included in the relevant modules or may be included as a separate booklet for the sciences disciplines.
16. There should be better monitoring of the quality of what is offered but not only in terms of the presentations and activities of the program, but in terms of the extent to which they had an impact on institutional and individual performance.

17. It is recommended that future research studies may be conducted in this dimension on the following areas:

a. A feasibility analysis of the National Faculty Academy may also be conducted in order to have a permanent body for the training of higher education faculty.

b. The training need analysis of the higher education faculty may be conducted with the proper classification of the training needs of different disciplines.

c. The same data may be gathered from the larger sample of the trainees, Course Coordinators and Resource Persons.

d. The aspect of making the programs mandatory may further be studied at a larger scale covering not only the trainees but other faculty members and administrative bodies representing all the public sector universities of Pakistan.

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Annex-A (Total Population)

Human Resource Development Center established by NAHE

S #	Name of the Centre	Courses Conducted	No of Teachers Trained
	Punjab		
1.	Bahauddin Zakariya University, Multan	6	128
2.	University of Punjab, Lahore	2	55
3.	University of Agriculture, Faisalabad.	3	88
4.	Government College Township, Lahore	3	105
5.	National University of Modern Languages, Islamabad	2	41
6.	Lahore College for Women University, Lahore	6	203
7.	Government College University, Faisalabad	3	103
8.	University of Education, Lahore	3	82
9.	University of the Punjab, Lahore	2	58
10.	University of Sargodha, Sargodha	5	154
11.	Federal Urdu University of Arts Science & Tech, Islamabad	2	75
12.	University of Education, Dera Ghazi Khan	1	33
13.	University of Education, Jauharabad	2	70
14.	Islamia University Bahawalpur	4	134
15.	University of Veterinary & Animal Sciences, Lahore	1	35
16.	COMSATS Institute of Information Technology, Islamabad.	1	35
17.	University of Education, Attock Campus	3	119
	Sindh		
18.	Sindh Agriculture University, Tandojam	4	140
19.	Dow University of Health Sciences, Karachi	10	307
20.	Quaid-e-Awam University of Engineering Science & Technology, Nawabshah	2	70
21.	University of Sindh, Hyderabad	2	70
22.	Mehran University of Engineering & Technology, Jamshoro	1	34
23.	Shah Abdul Latif University, Khairpur	1	36
24.	University of Karachi, Karachi	4	106
	NWFP		
25.	NWFP. University of Engineering & Technology, Peshawar	4	117
26.	IER Deptt University of Peshawar	4	134
27.	Kohat University of Science & Technology, Kohat	6	190
28.	Gomal University, Dera Ismail Khan	4	135
29.	Karakurum International University, Gilgit	2	70
30.	Frontier Women University, Peshawar	1	30
31.	Hazara University, Mansehra	1	35
32.	University of Science & Technology, Bannu	1	35
33.	NWFP Agriculture University, Peshawar	1	41
	Balochistan		
34.	Balochistan University of Information Technology & Management Sciences, Quetta	5	120
35.	University of Engineering & Technology, Khuzdar	2	70
36.	Sardar Bahadar Khan Women University, Quetta	1	18
37.	University of Balochistan, Quetta	5	145
	Azad Jammu and Kashmir		
38.	University of Azad Jammu & Kashmir, Muzaffarabad.	5	143
	Grand Total	**115**	**3564**

Annex-B

QUESTIONNAIRE FOR PARTICIPANTS

Study Title: **An Analysis of the Implementation Status of Staff Development Courses conducted by National Academy of Higher Education (NAHE) and Development of Mechanisms for their Expansion and Improvement**

Name (optional): ---------- **Institution:** ----------
Qualification: ---------- **Experience:** ----------
Faculty/Department: ----------

Section A: Academic Quality of the Staff Development Courses:

Type an asterisk in the space below the number as an indicator.	Indicate the number that best describes the extent to which the content of Staff Development Course assisted in learning/applying the following statements.					
1= very low extent; 2 = low extent; 3 = uncertain; 4 = high extent; 5 = very high extent.						
1.	Learned to integrate new learning/knowledge in the classroom	1	2	3	4	5
2.	Learned to apply motivational techniques on college/university level students	1	2	3	4	5
3.	Gained Academic/professional skills for counseling the students	1	2	3	4	5
4.	Learned about multidimensional learning difficulties of students	1	2	3	4	5
5.	Gained skills in dealing with the ---------- needs of students					
	i. Academic needs	1	2	3	4	5
	ii. Social needs	1	2	3	4	5
	iii. Emotional needs	1	2	3	4	5
6.	Learned about psychological principles of adult learning	1	2	3	4	5
7.	Learned to apply Instructional methodologies relevant to your own discipline(s).	1	2	3	4	5
8.	Learned about professional code of conduct for teachers	1	2	3	4	5
9.	Learned to adjust instructional strategies based on knowledge of students learning styles.	1	2	3	4	5
10.	Learned to evaluate your own teaching competencies.	1	2	3	4	5
11.	Learned to evaluate your own teaching weaknesses.	1	2	3	4	5
12.	Learned techniques for enhancing the instructional leadership skills	1	2	3	4	5
13.	Grasped the crucial role of communication for the success of teaching process.	1	2	3	4	5
14.	Enhanced skills in communication within the classroom regarding:					
	i. Verbal Communication Skills	1	2	3	4	5

	• ii. Nonverbal Communication Skills	1	2	3	4	5
	iii. Written communication skills	1	2	3	4	5
15.	Enhanced time management skills in the classroom	1	2	3	4	5
16.	Learned to maintain meaningful interaction strategies in the following:					
	i. Teacher – Student Relationship	1	2	3	4	5
	ii. Teacher – Teacher Relationship	1	2	3	4	5
	iii. Teacher – Head Relationship	1	2	3	4	5
17.	Learned strategies for integrating new learning into the curriculum	1	2	3	4	5
18.	Learned to design curriculum based assignments that promote critical thinking among students	1	2	3	4	5
19.	Learned to apply information communication technologies for curriculum implementation	1	2	3	4	5
20.	Learned to relate the content according to the needs and abilities of students.	1	2	3	4	5
21.	Got hands on training in designing the curriculum for teaching the concerned areas	1	2	3	4	5
22.	Explored different methods of conducting educational research	1	2	3	4	5
23.	Learned the criteria for selection of relevant sample.	1	2	3	4	5
24.	Learned the construction of the research tool	1	2	3	4	5
25.	Got hands on experience on statistics for quantitative data analysis	1	2	3	4	5
26.	Learned the techniques of writing of the research report on technical grounds	1	2	3	4	5
27.	Learned using assessment tools for effectively monitoring student's learning	1	2	3	4	5
28.	Enhanced skills for providing meaningful feedback to students on their academic progress	1	2	3	4	5
29.	Learned to apply method of modifying instruction in the light of assessment results	1	2	3	4	5
30.	Enhancement of skills for the construction of different types of tests					
	i. Multiple Choice Questions	1	2	3	4	5
	ii. True False items	1	2	3	4	5
	iii. Short Answers	1	2	3	4	5
	iv. Match the column	1	2	3	4	5
	v. Subjective Type or Essay Type tests	1	2	3	4	5
31.	Application of Islamic/Ethical practices of teaching	1	2	3	4	5

32. Rate the quality of content delivery by resource persons against each of the following modules:

Modules	Quality Criteria		
	30-50	50-70	70-90
Educational Psychology			
Advanced Teaching skills			
Administration, Planning and Communication Skills			
Curriculum Development			
Research Methods sand Skills			
Assessment and Evaluation			

33. What aspects of the program did you find most beneficial for professional development of participants? Please prioritize them.
34. What aspects of the program did you find least beneficial for enhancing professional capabilities of participants? Please prioritize them.
35. Any recommendations' for the betterment of future training programs?

Section B: To what extent do you agree with the below mentioned problems related to your participation in the Staff Development Courses:

Use the following scale to answer the questions. In the left-hand spaces, please write numbers (01 through 05) that correspond to your opinions for each of the following questions.

1 = Strongly Disagree 2 = Disagree 3 = Neutral or no opinion
4 = Agree 5 = Strongly Agree

1. ------- Faculty members are often overwhelmed with all that is being required of them (in terms of Resource Person's expectations).
2. -------- Faculty members are overloaded with too many responsibilities even during the course
3. -------- There are not enough faculty members at the university who can take our responsibilities as alternative arrangements
4. -------- Meeting both the expectations of the university and the program requirements is very difficult
5. -------- Rescheduling of university classes seems difficult to manage
6. -------- University doesn't consider Staff Development Course as part of the faculty workload.
7. -------- Conflicting Schedules cause missing of either university or the course
8. -------- Covering longer distances to reach the course venue is a problem (geographically distant places)
9. -------- Accommodation arrangements are not sufficient
10. -------- Absence of fulltime, longer and continuous commitment as per the course requirement, by the faculty members
11. -------- Lack of reward / acknowledgement or visible recognition i.e. promotion or any sort of bonus on good performance
12. -------- There is a status-quo attitude of Heads of Departments/ senior faculty members
13. -------- Renovation is difficult to bring into the system
14. -------- Implementing the new ideas in the university environment sometimes become problematic
15. Any other problems, not mentioned above:
16. Suggest at least five solutions workable in your own context to overcome these problems?

Section C: Framework of future staff development programs for university/HEI's faculty members:

1. Staff Development Courses should be made mandatory for all the faculty members at university level.

Workable **Don't know** **Non Workable**

2. Staff Development Programs should be conducted in any of the two off seasons i.e. July-August or December-January.

Workable **Don't know** **Non Workable**

3. Inducting new staff before the month of July and December so that they can get training offered in any of the two off seasons.

Workable **Don't know** **Non Workable**

4. The mandatory staff training program should be subject specific.

Workable **Don't know** **Non Workable**

5. The teaching performance of the faculty trained through the Staff Development programs should be monitored during the semester?

Workable **Don't know** **Non Workable**

6. What should be the duration of the program:

- **Less than one month**
- **One month**
- **Two months**
- **Three months**
- **Six months**

7. What reward / priority should be given to those who attend the NAHE's training program? (Select "Most Workable", "Workable" and "Non Workable" against all the choices)

a. One time bonus after the completion of the course *Most Workable*
b. A fixed ratio increase in Salary *Most Workable*
c. Promotion in the Job *Most Workable*
d. Counting the course in place of one research publication *Most Workable*
e. Award of the certificate as future Master Trainers *Most Workable*
f. 5% additional points in ACR *Most Workable*
g. Any other, other specify!

Annex-C

QUESTIONNAIRE FOR COURSE COORDINATORS

Name (optional): ---------- **Institution:** ----------
Qualification: ---------- **Experience:** ----------

Section A: To what extent do you agree with the below mentioned problems you faced related to Coordination in the Staff Development Courses:

Use the following scale to answer the questions. In the left-hand spaces, please write numbers (01 through 05) that correspond to your opinions for each of the following questions.

1 = Strongly Disagree 2 = Disagree 3 = Neutral or no opinion
4 = Agree 5 = Strongly Agree

1. -------- Drop-out of the participants during the course is a problem
2. -------- Call for Nominations or gathering a group of 35 faculty members is difficult
3. -------- Attendance of the participants is not regular till the end of program
4. -------- Difficulty in engaging expert resource persons having specialization in the course modules
5. -------- Maintaining the participants' interest in the program for the whole month is difficult
6. -------- In time start of sessions becomes problematic
7. -------- Accommodation for the resource persons is difficult to manage
8. -------- Transport facility for the resource persons is difficult to manage
9. -------- Procedural delays in collecting advance amount from their university
10. -------- There are coordination problems with NAHE
11. -------- Handling accounts of the entire program is difficult to manage
12. -------- Getting the accounts clearance by the internal auditors becomes problematic
13. -------- Problem in the clearance of the accounts from HEC
14. Managing expenses within the allocated budget in the following sub-heads was difficult:

a.	Stationary and Photocopy	Easily Manageable	Difficult to Manage
b.	Contingencies	Easily Manageable	Difficult to Manage
c.	Honorarium for Lectures	Easily Manageable	Difficult to Manage
d.	Honorarium for Support Staff	Easily Manageable	Difficult to Manage
e.	Remuneration to the Course Coordinator	Sufficient	Non-sufficient

15. **Any other problems, not mentioned above, you faced due to participation in Staff Development Course**
16. **Suggest at least five solutions to overcome these problems?**

Section B: Framework of future staff development programs for university/HEI's faculty members (Same as Section C of Questionnaire "A")

Annex-D

QUESTIONNAIRE FOR RESOURCE PERSONS

Name (optional): ---------- **Institution:** ----------
Qualification: ---------- **Experience:** ----------
Faculty/Department: ----------

Section A: Academic Quality of the Staff Development Courses:

Use the following scale to answer the questions **1= Strongly Disagree; 2 = Disagree; 3 = uncertain; 4 = Agree; 5 = Strongly Agree.**						
36.	The course was useful in enhancing the following skills:					
i.	Communication skills	1	2	3	4	5
ii.	Skills in psychologically understanding the student's learning variations	1	2	3	4	5
iii.	Skills in applying instructional methodologies	1	2	3	4	5
iv.	Instructional planning skills	1	2	3	4	5
v.	Time management skills	1	2	3	4	5
vi.	Skills in assessing the students learning	1	2	3	4	5
vii.	Research skills	1	2	3	4	5
37.	The number of sessions was enough according to the breadth and depth of the content.	1	2	3	4	5
38.	The facilities provided in the centre were satisfactory.	1	2	3	4	5
39.	The required AV aids were provided in the classroom.	1	2	3	4	5
40.	Throughout the course, in time management and coordination was made by the Course Coordinator.	1	2	3	4	5
41.	The participant's selection was rightly made for the program.	1	2	3	4	5

42. What aspects of the program did you find most beneficial for professional development of participants? Please prioritize them.
43. What aspects of the program did you find least beneficial for enhancing professional capabilities of participants? Please prioritize them.
44. Any recommendations' for the betterment of future training programs?

Section B: Framework of future staff development programs for university/HEI's faculty members (Same as Section C of Questionnaire "A")