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AN EDUCATIONAL MODEL FOR PRE SERVICE TEACHERS TO TRAIN IN INCLUSION

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Abstract

The contemporary movement of inclusion in education has brought about a change in classroom interactions. Providing quality education for all in an inclusive setting is a challenge, however it is also the need of the hour. In order to face this challenge it is essential that teachers are educated for inclusion at the pre service levels. We need to educate the pre service teachers from the theoretical, practical and attitudinal perspective. The present paper reviews models of teacher education in general along with those for educating pre service teachers for Inclusion. A mixed methods study was conducted by the authors, which supported the suggestion given in the reviews that state the need for an educational programme for pre service teachers for inclusion. The authors have endeavored to suggest a framework for a model for pre service teacher education for inclusion based on the feedback given by the pre service teachers. This model has been named as the CAP-ACR Model for Inclusion. The model includes activities, which helps develop the three domains given by Dr. Benjamin Bloom i.e. the Cognitive (C), the Affective (A) and the Psychomotor Domain (P). Further the model is designed based on the principles of teacher education models namely the Applied Science (A) Model, the Reflective (R) Model and the Craft (C) Model, hence the name CAP-ARC Model for Inclusion.

Key words: *Pre service teachers, inclusion, needs analysis, model for education of pre service teachers.*

- **Introduction**

Inclusive education involves firstly, an attitude – a value and belief system – not a set of actions. An inclusive school values diversity. It assumes that with good teaching each child can learn - given appropriate environment, encouragement and meaningful activities. The concept of inclusion means:

- Every child has an inherent right to education on the basis of equality of opportunity.
- No child is excluded from, or discriminated with in education on grounds of race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, disability, birth, poverty or other status.
- All children can learn and benefit from education
- Schools adapt to the needs of children, rather than children adapting to the needs of the school.
- Children's views are listened to and taken seriously.
- Individual differences between children are a source of richness and diversity, and not a problem.
- The diversity of needs and pace of development of children are addressed through a wide and flexible range of responses.

The principles of inclusion show the following characteristics

- The system accepts and promotes the fact that the majority of children with special educational needs can be accommodated within the regular school system.
- There is explicit recognition that the education of all children with special educational needs is a responsibility of the national school system.
- Leadership and resources are provided to make primary teaching and curricula more flexible, allowing both for common experiences and specialized goals, in order to respond to variety of individual needs and environmental circumstances – as local cultures and community's dictate.
- Closer links between regular and special education, formal and non formal systems and school and community sectors are encouraged so as to benefit all children.
- There is recognition that teacher training is a highly interactive, continuous and supportive process of enhancing the competence of the teacher to respond to a greater diversity of children's learning styles and needs.
- Community and parental involvement, including distribution of control and responsibility is encouraged. (Roy, 2006)

- **Research Reviews**

While positive attitudes may be able to transcend philosophical barriers to inclusion, they may not always translate into feeling prepared for the reality of inclusive teaching. For example, a review conducted by Avramidis and Norwich (2002) concluded that although

most teachers held positive attitudes toward inclusion, teachers did not feel prepared for teaching students with exceptional needs, especially in the case of students with severe learning difficulties and behavioral/emotional disorders.

A qualitative study conducted by Fayez, Dababneh, and Jumiaan (2011) reported that preservice teachers held strong and positive attitudes about the philosophy of inclusion as an entitlement of children with special needs. However, when asked about their preparedness to implement inclusion, the participants felt their mandatory inclusion course, while adding to their knowledge base, only provided a very narrow understanding of practical skills. Another qualitative study found that a single-unit course on inclusion positively changed preservice teachers' perceptions about inclusion; however, participants overwhelmingly indicated that they still required additional knowledge and skills in order to "operationalize their changed perceptions and beliefs" (McCray & McHatton, 2011, p. 149).

Hodkinson's (2006) study found similar findings and concluded that first-year teachers felt their preservice training provided them with a good understanding of the theory of inclusive education, however their understanding of the practical delivery was limited. Moore-Hayes' (2008) study reported that preservice teachers cited the need for more preparation and experience in order to feel prepared for working with students with exceptional needs. Additionally, in a study conducted by Forlin and Chambers (2011), the researchers discovered that a unit of study in inclusive education increased preservice teachers' knowledge and their confidence as teachers. In contrast, it also increased their levels of stress in teaching students with disabilities.

Thus there are obvious gaps in teacher preparation programs. Teacher educators should view these gaps as a major roadblock to advancing the actualization of inclusion at the very basic level: the general education classroom. To ensure a better match between teacher preparation and the realities of inclusive classrooms, changes to the current approaches are necessary and critical. Hence adding authentic practical experiences to the existing courses in inclusion will benefit preservice teachers. Practical supervised experiences will add a sense of preparedness to their positive attitudes toward teaching in inclusive classrooms.(Peebles & Mendaglio, 20014)

A number of models have been advocated to implement inclusive education or inclusion in general classrooms. Of them three models are given below:

- **Models of Inclusion in Classrooms**

1. Consultant Model
2. Teaming Model
3. Collaborative/Co-Teaching model

Consultant Model

- Two educators help with curriculum problems
- Special educator helps the student to practice a newly acquired skill and re-teach difficult skills
- Regular scheduled meetings between educators is held
- Suitable for a low incidence of students with special needs and when overall number of students is less

Teaming Model

- A Team for each grade level
- A period per week assigned to the team for planning
- The team members along with the special educators meet on a regular basis
- The special educator provides information, possible instructional strategies modifications, ideas for assignments of students with special needs
- Suitable when student to teacher ratio is high
- Limited opportunities for specialized educators to work in general education classrooms
- Possibility of resistance to implementation of modification from other team members.

Collaborative/Co-teaching Model

- General educators and special educators work together
- Both educators are responsible for instructional planning and delivery, student achievements, assessment and discipline
- Students receive age appropriate academic support services and possible modified instructions
- Has minimum scheduling problems
- Fosters continuous and ongoing communication between educators
- Suitable with lower student to teacher ratio.(Fernandes, 2006)

- **Models of Teacher Education**

There are different teacher education models which could be taken advantage of in the course of preparing teachers for climate change education delivery. Prominent among them include:

The Applied Science Model

The Applied Science Model is the traditional and perhaps is still the mostprevalent model underlying most teacher education models. This model was proposedby Michael J. Wallace in 1991 based on the Technical Rationality of Donald A. Schön.The model gained prominence as a result of the achievements recorded in empiricalscience, most especially in the 19th and the 20th centuries. The Applied Science Modelemerged on the following assumptions:

i. Teaching is a science and as such can be examined rationally and objectively.

ii. Teachers learn to be teachers by being taught research-based theories.

iii. These theories are being conveyed to the students only by those who areconsidered to be the experts in the particular field.

iv. Teachers are said to be educated when they become proficient enough to applythese theories in practice.

The Craft Model

The Craft Model is the oldest form of professional education and is still usedtoday in teacher education, albeit rather limitedly. Its conceptual basis, however, iswidely utilized in practicum courses in which students work with classroom teachers,often called cooperating teachers. Its use in one course in a programme of teachereducation cannot be regarded as a model for an entire programme. The basicassumptions underlying this model are as follows:

i. In its most basic form, Craft Model consists of the trainee or beginner workingclosely with the expert teacher.

ii. The practitioner is supposed to learn by imitating all the teaching techniques usedby the experienced teacher.

iii. Knowledge is acquired as a result of observation, instruction, and practice.

The Reflective Model

The ultimate goal of teacher education as far as this model is concerned is to empower prospective teachers to develop a spirit of inquiry leading to informed decision making while

applying values to action. The Reflective Model is based on the assumption that teachers develop professional competence through reflecting on their own practice. In other words, a teaching experience is recalled and considered to reach an evaluation and to provide input into future planning and action.(Doggoh & Aliyu, 2010)

- **Models for education of pre service teachers for inclusion:**

The Individual Direct Experience Approach (IDEA) was developed by Dr. Jodi Pebbles, through her work with preservice teachers, as a systematic, meaningful approach to teacher preparation for inclusion (see Figure 1). IDEA is designed to be implemented during a preservice teacher's field experience, ideally an extended field experience of six to 12 weeks. It consists of having preservice teachers work individually and directly with one student with exceptional needs, as a living case study, throughout the duration of their field experience. Essentially, IDEA allows preservice teachers to experience direct interactions with a student with exceptional needs and to apply the knowledge and skills learned from these interactions to make appropriate adaptations or modifications to whole class lessons. This scaffolded process allows preservice teachers to understand the "how" and "why" of differentiating instruction and make accommodations for exceptional learners. The primary objectives of IDEA are to develop practical inclusive teaching skills and to allay preservice teachers' anxieties regarding working with students with exceptional needs. The specific expectations of IDEA are presented below, and an illustrative example will demonstrate the application of IDEA to a field experience.

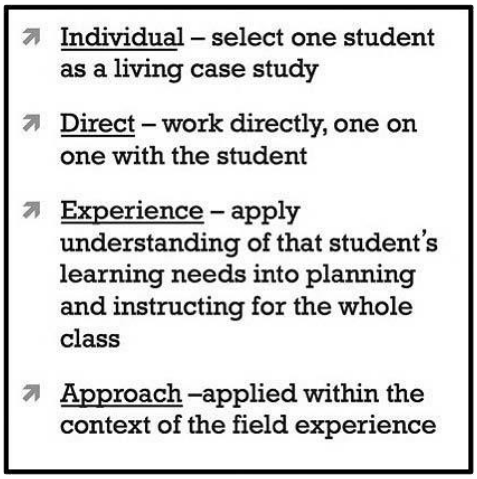

FIGURE 1 Individual direct experience approach for teacher preparation for inclusion.

IDEA is an approach to systematically introduce preservice teachers to teaching in the inclusive classroom. Not only does IDEA provide preservice teachers with the opportunity for interacting with students with exceptional needs, but it also requires that knowledge gleaned from these interactions will be implemented in whole-class instruction.(Peebles & Mendaglio, 2014).

The concept of inclusion places the emphasis on changing the system rather than the child. Proponentsof inclusion insist that it isn't necessary for a student with disabilities to be "at grade level" in order toreceive instruction in the general education setting. The argument is that our educational system,structure and practices need to shift and become more flexible, more inclusive, and more collaborativein order to better accommodate students with learning differences.

One of the greatest barriers to achieving this goal is the preparation teachers receive at the preservicelevel. Several researchers (Pugach and Allen-Meares, 1985; Baker and Zigmond, 1990; Schumm andVaughn, 1995; Giancreco, Dennis, Cloninger, Edelman, and Schattman, 1993) have noted the lack ofprofessional training in inclusive techniques and practices for general and special education teachers.Welch (1996) also discussed the differences in philosophies and theories between general andspecial education at the preservice level. If teacher education programs are to prepare educators to besuccessful in the classrooms of the future they must reconceptualize and redesign their approach topreservice preparation of teachers.Figure 2 illustrates a proposed model for developing and implementing an inclusive teacherpreparation program.

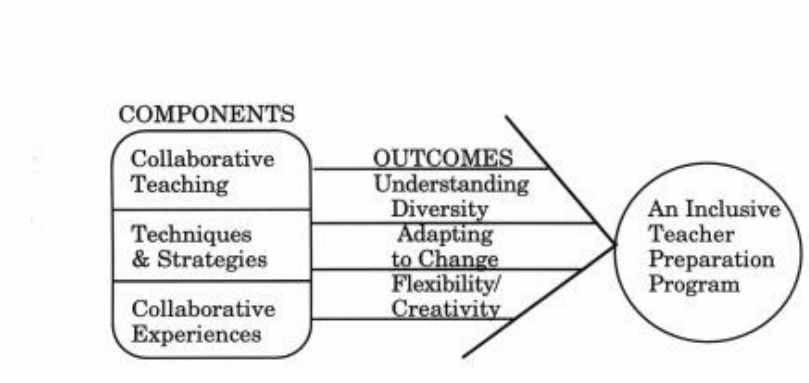

FIGURE 2 An Inclusive Teacher Preparation Model

This model provides a framework for developing and implementing a teacher education program that will prepare teachers to teach in inclusive educational settings. To be effective an inclusive teacher preparation program must instill in the preservice teacher an

understanding and appreciation of diversity. To do this successfully they must alsohave the ability to be flexible and creative in meeting these challenges and solving problems.

After studying both the IDEA approach and the above model of the teacher education program, the authors found that both dealt with the three domains given by Dr. Benjamin Bloom i.e. the cognitive domain, the affective domain and the psychomotor domain.

In IDEA the direct experience with student with special needs helps the pre service teachers learn about their learning needs (cognitive), interact with them to feel comfortable in their company (affective domain) and adapt and modify teaching for the whole class by catering to diverse learning needs (psychomotor domain). The part of the teacher preparation program which deals with the 'understanding of diversity' reflects educating the cognitive domain. Similarly the 'appreciation of diversity' deals with the education of the affective domain. The third domain i.e. the psychomotor domain is also trained when preparing the pre service teachers to become flexible and creative in meeting the challenges of inclusion in the classroom setting. (Whitworth, 1999).

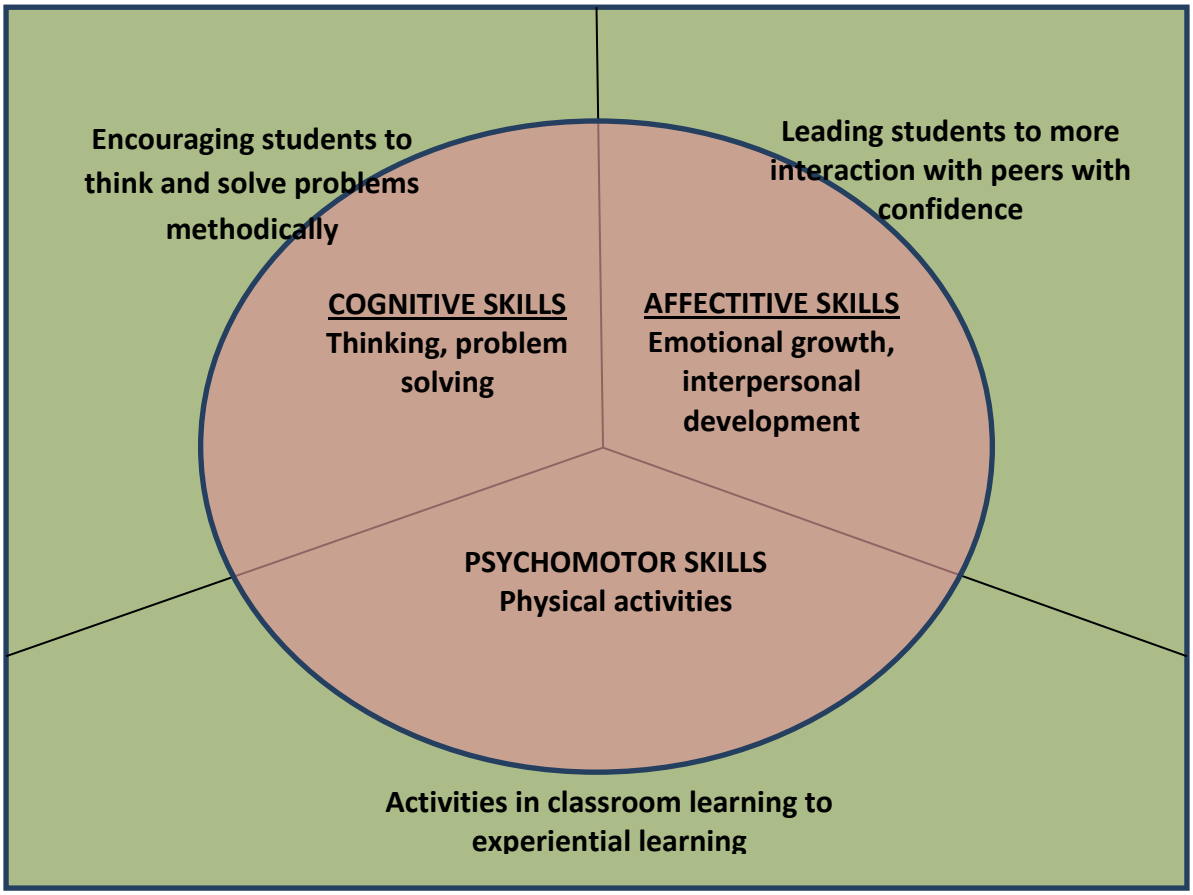

FIGURE 3 Description of the skills and classroom activities related to the three domains

The figure above describes the skills related to the three domains and the classroom activities that help develop the respective domains. (http://casebaselearningasatool.com). However these domains have not been highlighted in the above mentioned models. Thus the authors decided to undertake the study of developing a framework for educating the pre service teachers for successful implementation of inclusion in classrooms in the Indian context.

The following questions were the focus of the present study:

- Are the pre service teachers aware regarding inclusion in terms of its characteristics and benefits to both teachers and students?
- What are the training requirements/needs of the pre service teachers if they have to implement the inclusion in their classrooms?
- What are the beliefs of the pre service teachers regarding the need for inclusion?
- Which are the barriers perceived by the pre service teachers while implementing inclusion?
- How will inclusion affect the classroom environment according to the pre service teachers?

- **Objective**

To design a teacher education model for educating the pre service teachers regarding inclusive education.

- **Method**

Quantitative and qualitative data was collected using a questionnaire. Analysis of the data was done using both quantitative and qualitative methods. 'Percentage' was used to calculate the quantitative data and 'grounded theory' was used to analyze the qualitative data. There are many research designs in Mixed Methods. One of the designs is the 'Convergent Parallel Mixed Methods Design'. In this approach a researcher collects both qualitative and quantitative data, analyzes them separately, and then compares the results to see if the findings confirm or disconfirm each other (Creswell, 2014). As the both quantitative and qualitative data collection was done simultaneously and the data was analyzed separately using quantitative and qualitative methods for analysis for triangulation, the authors followed the **Convergent Parallel Mixed Methods Design.**

- **Informants**

Ninety three pre service teachers from Adarsha Comprehensive College of Education and Research were the informants of the present study.

The views of the pre service teacher's regarding inclusion were collected using a questionnaire consisting of 8 close ended items and 5 open ended questions. The quantitative analysis of the data was done using percentage and has been presented in Table 1 given below.

Table 1 Responses of the pre service teachers regarding inclusion in percentage

Sr. No.	Item	Yes	No
1.	It is possible to include Children with Special Needs in regular classrooms	66	34
2.	Children with Special Needs benefit by inclusion	65	35
3.	Children without Special Needs benefit in an inclusive classroom	34	66
4.	Inclusion of Children with Special Needs will have a negative impact on classroom environment	60	40
5.	Regular Indian school teachers are sufficiently trained for inclusion	13	87
6.	Currently Indian schools have adequate resources for inclusion	03	97
7.	It is essential to give education to pre service teachers to deal with inclusion.	93	07

Observation

A large number of the pre service teachers appear to support the concept of inclusion. However many of them feel that inclusion will adversely affect children without special needs, although it may positively affect the Children with Special Needs. Almost all the pre service teachers believe in the necessity of teacher education for inclusion of Children with Special Needs.

Interpretation

From the responses shown in table 1 it is important to note that the pre service teachers are aware of the insufficiency of education of teachers and inadequacy of available resources for effective inclusion in Indian schools. The responses further highlight the need for education of pre service teachers for inclusion.

The five open ended questions were analysed using the 'grounded theory'.The researcher follows the three stages of grounded theory data analysis: open coding, axial coding and selective coding (Strauss & Corbin, 1990). The qualitative analysis is presented below in figures 5 to 10:

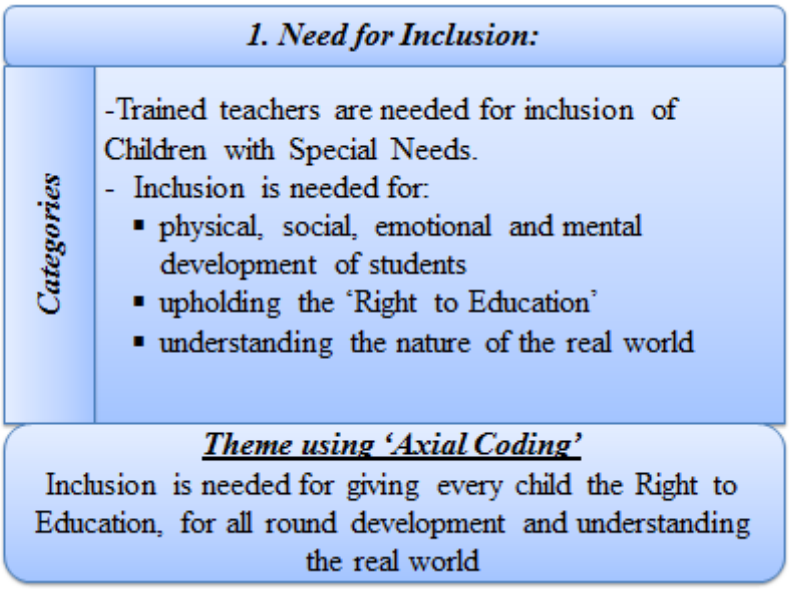

FIGURE 5 Qualitative data analysis regarding Need for Inclusion

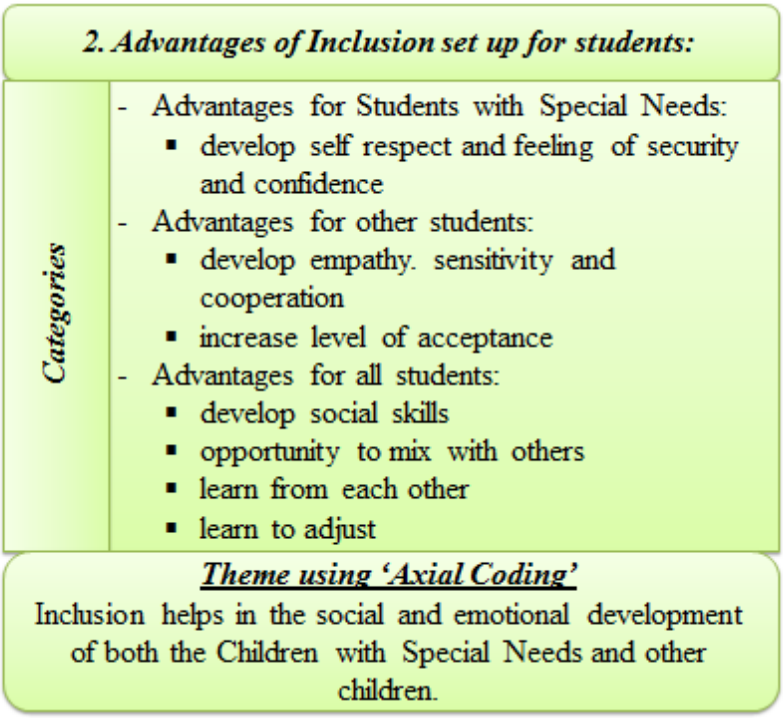

FIGURE 6 Qualitative data analysis concerning Advantages of Inclusion for students

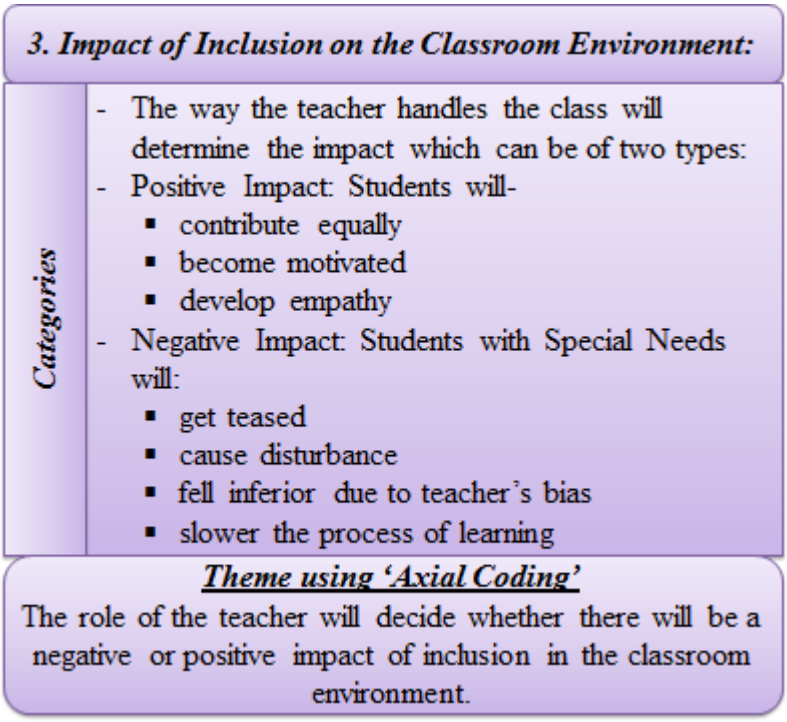

FIGURE 7 Qualitative data analysis about the Impact of Inclusion on the Classroom Environment

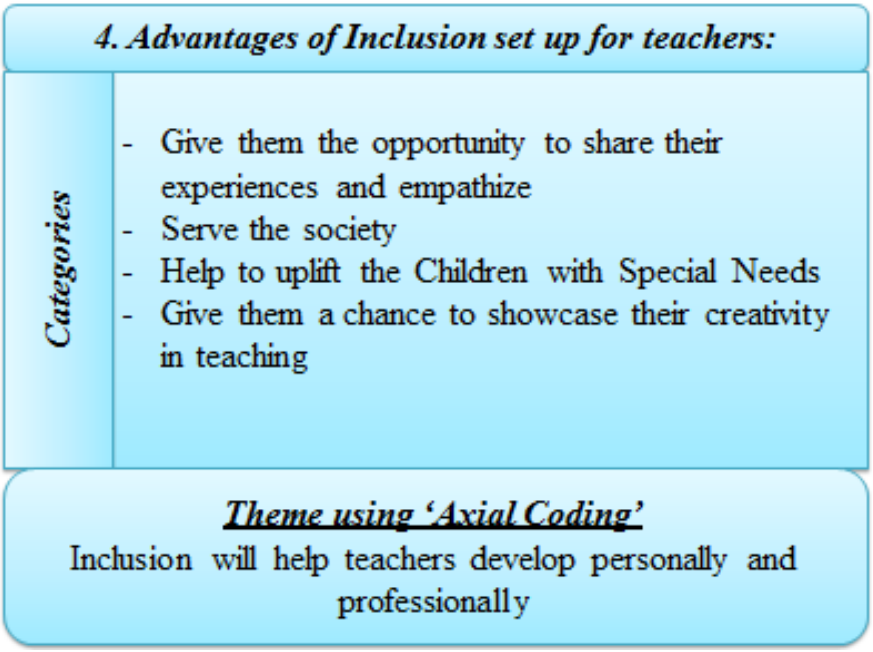

FIGURE 8 Qualitative data analysis related to the Advantages of Inclusion for Teachers

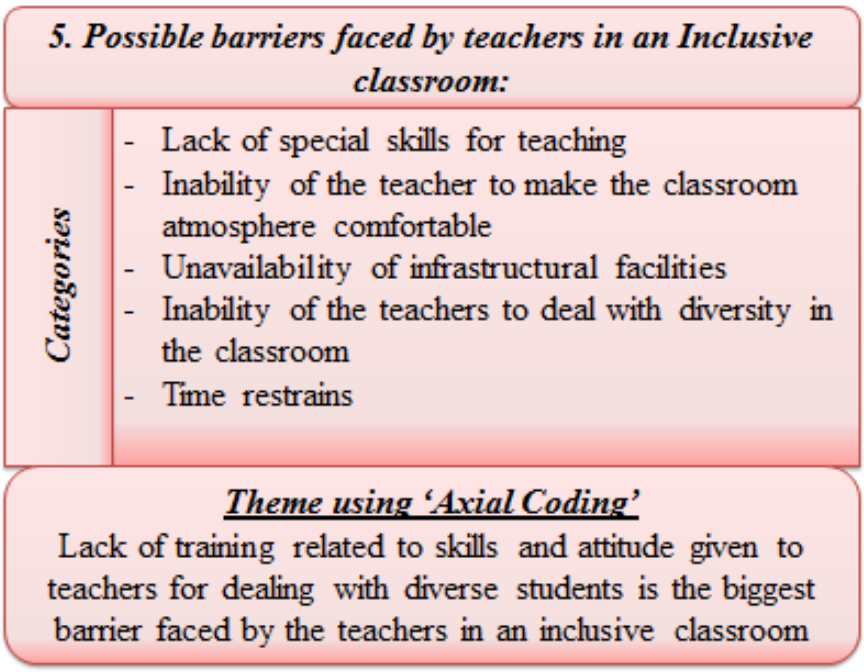

FIGURE 9 Qualitative data analysis regarding possible barriers to inclusion in classrooms

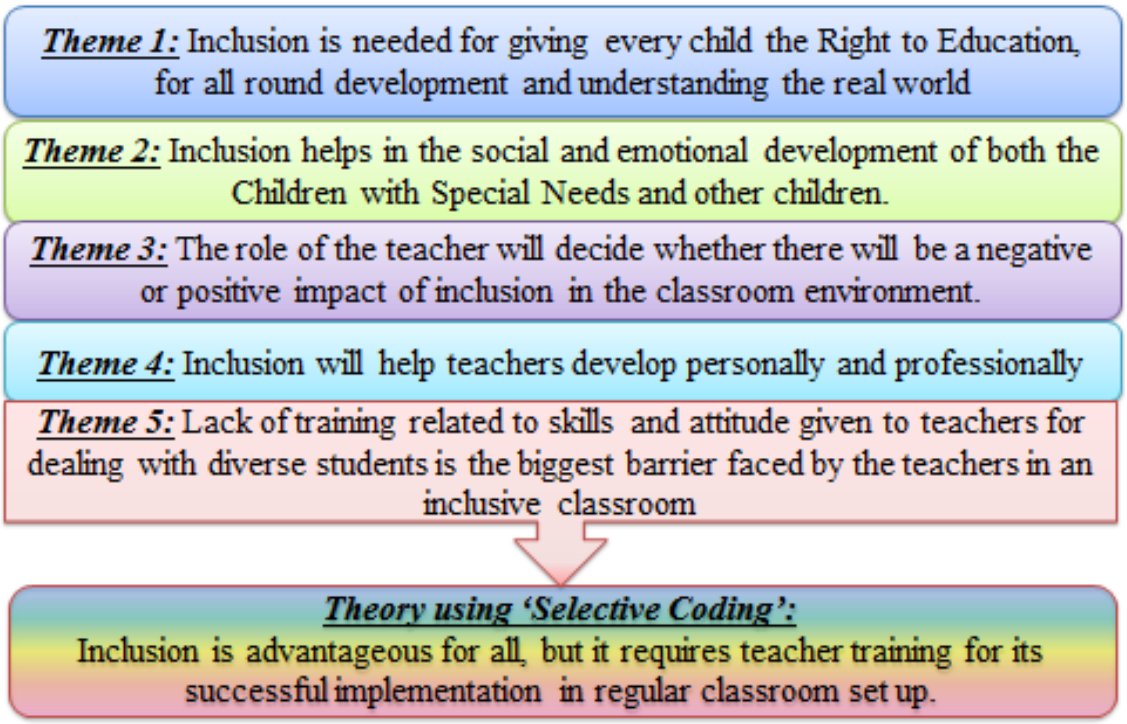

FIGURE 10 Theory derived from 'Selective Coding'

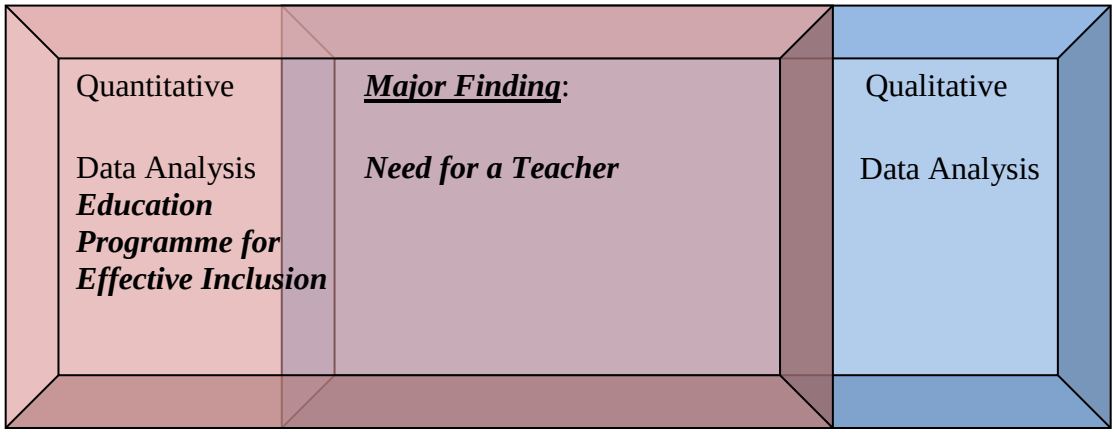

FIGURE 11 Major Finding obtained through Quantitative and Qualitative data analysis

- **Suggested Model for Education of Pre Service Teachers for Inclusion**

The quantitative and qualitative data analysis of the responses from the Pre Service Teachers emphasizes the need for a teacher education model for inclusion. The major finding of the current study and the review of literature too highlight the requirement of a teacher education model for inclusion which will develop knowledge, positive attitude and skills for inclusion. The findings also stresson using techniques that should be reflective and collaborative in nature focusing on field experiences.

The IDEA and the Inclusive Teacher Preparation model mentioned earlier have given emphasis on Bloom's 3 Domains. Hence the authors have proposed a model based on Benjamin Bloom's 3 Domains i.e. the 'Head' or Cognitive (C), the 'Heart' or Affective (A) and the 'Hand' Psychomotor (P) Domains.This model is different from the two above mentioned teacher training models for inclusive education as it has integrated the three domains along with three teacher education models i.e. Applied Science (A) Model, Craft (C) Model and the Reflective (R) Model. The model designed has been named as the CAP-ARC Model for inclusion. The aspects taken from the three teacher education models which have been taken into consideration while designing the CAP-ARC Model for Inclusion have been depicted in figure 12.The objectives of the CAP-ARC Model for Inclusion have been illustrated in figures 13 and figure14 gives the description of the model.

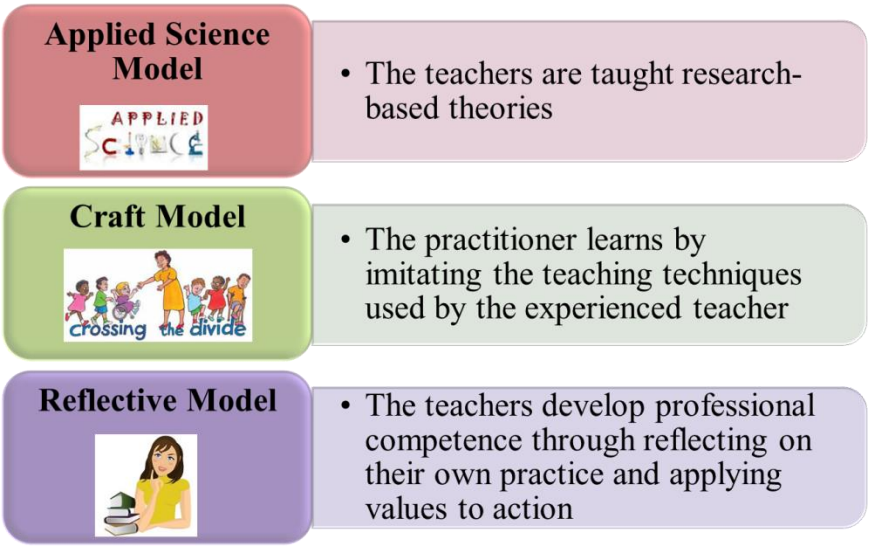

FIGURE 12 Aspects of the teacher training models considered for the CAP-ARC Model of Inclusion

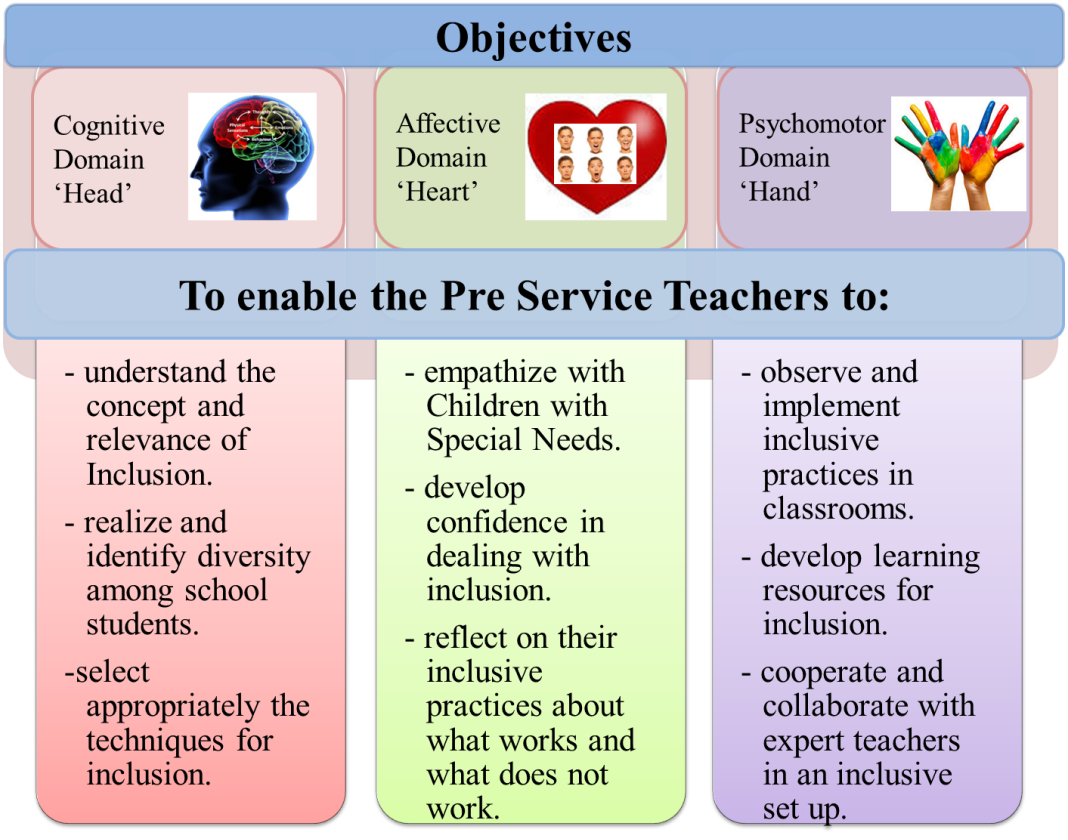

FIGURE 13 Objectives of the Proposed Model

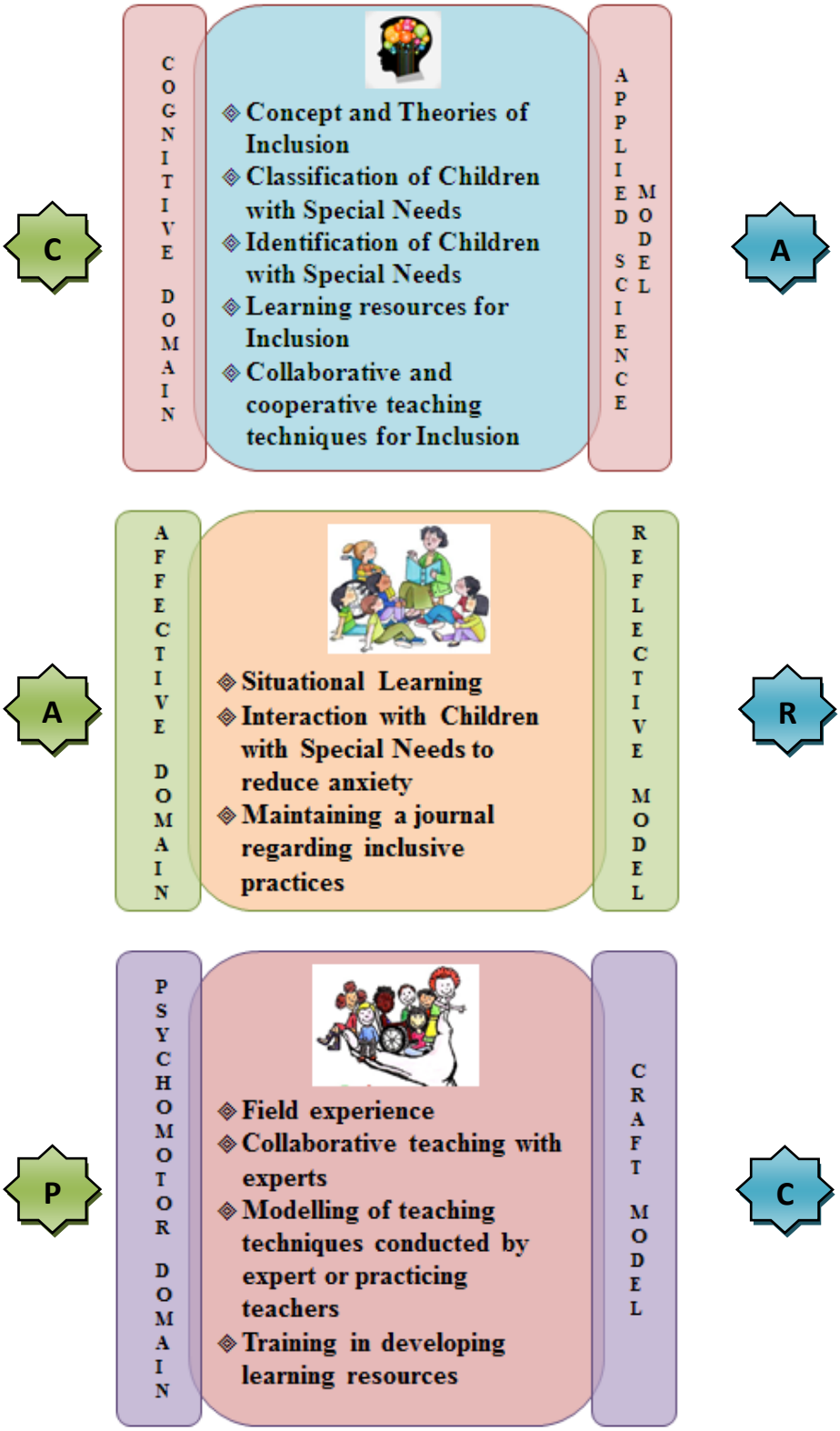

FIGURE 13 Framework of the CAP-ARC Model for Inclusion

For schools to teach students in inclusive set up it is essential for designing such models or programmes to educate pre service teachers in inclusion. This research paper has endeavored to present a model, CAP-ARC Model for Inclusion. Future research could add valuable feedback about the effectiveness of the model. A longitudinal study could also determine if the impact of the model is sustainable as pre service teachers enter the profession and progress through their careers. As the model is based on the three domains integrated with the three models of teacher education the authors are optimistic that it could help realize the famous quote 'children who learn together learn to live together'.

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