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## **Inclusive Teaching Competency Model and its Applicability on Elementary School Teachers of Pune District in India**

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The SDG 2030 Goal 4 emphasized Inclusive Education. This paper focuses on the Inclusive Teaching Competency (ITC) Model. ITC Model is a framework that represents the structure of inclusive teaching competency by defining its areas and individual competencies that are consist under each area. The ITC Model specifically deals with the competencies required for school teachers while teaching an inclusive classroom that includes children with or without disabilities. The purpose of this research paper is to elaborate on the applicability of this ITC model. The method of research is the survey method and the findings are in the form of quantitative data. The finding reflects the status of teachers with respect to inclusive teaching competencies. The model will be helpful for teachers for self-assessment of inclusive teaching competencies. Furthermore, it will assist school administration in designing need-based courses for school teachers towards in-service teacher training and orientation in inclusive teaching competencies.

**Keywords:** Inclusive Teaching Competency Model, Inclusive Education

## **Introduction**

Quality education is an undeniable right of all children regardless of their abilities or disabilities. Studies have shown that quality of education can have a significant impact on student's academic achievement, however, marginalization and poor education conditions stand as the biggest barriers to realizing equity and quality in education, especially in developing nations (Sharma, U., Armstrong, A. C., Merumeru, L., Simi, J., & Yared, H., 2018). Government policies across the globe can ensure access to education, but in the absence of teachers having inclusive teaching competency, quality education remains in question. Teachers practice exclusion not deliberately but in ignorance, while engaging in intuitive teaching rather than following inclusive education strategies that result in a negative impact on the achievement and behavior of children, nullifying the ultimate motive of inclusion and inclusive education (Ruijs, & Peetsma, 2009). The concept of competency, as a psychological variable was introduced in the 1950s by Robert W. White, who defined it as 'an organism's ability to have effective interaction with the environment.' A Model is a framework or pattern, either conceptual or mathematical, which illustrates relationships in one's observations of the world, 'each model observes reality from a particular perspective. A Competency model thus can be explained as a valid, observable, and measurable set of knowledge, skills, and attributes demonstrated through behavior that results in an outstanding performance in a particular work context (Ahuja, 2009). In this research Inclusive Teaching Competency (ITC) model is represented as a framework that depicts various areas of competencies, essential for inclusive teaching with respect to the teaching of children with special needs in inclusive classrooms and competencies represented under the areas. Inclusive teaching competency can be elaborated conceptually as, the teachers' knowledge, skills, and attributes to design and implement inclusive teaching and learning practices that promote the inclusion of all learners in a classroom. This competence includes understanding the needs of learners with diverse abilities, developing appropriate teaching strategies to address these needs, and assessing learning outcomes for all learners. The whole idea of teacher training is built on competency development. Teacher training is considered a key factor to bring about inclusion along with Teachers' attitudes and commitment (Forlin, Loreman, and Sharma 2014). Training can be made comprehensive that includes all the dimensions of inclusive teaching competency; however, such exhaustive training can be introduced at the pre-service level. The in-service teacher training must be brief, effective, and enriching. A competency model-based

training programme thus fills the gap by employing assessment tools for the identification of teachers' deficit areas of competence and providing a need-based training programme.

### **Background of the Study**

UNICEF report in South Asia estimated, 29 million children (12.5 million at the primary level and 16.5 million at the lower secondary level ) were out of school in 2018. Of these, a considerable proportion was estimated to be children with disabilities.' In India, the disability population is the highest which is more than the world average. In 2019, a State of education report, UNESCO on the other hand revealed 'India is home to 8 million children with disabilities, and 45% of them fail to attain literacy. Considering the fact that the majority o

f the disabled population resided in rural areas it is important the policy impact is greater enough that educational opportunity is available and accessible to every individual. Studies time and again highlighted the inaccessibility issues, and negative attitudes and practices towards disability, among other factors, create more barriers for vulnerable groups including children with disabilities. Furthermore, in the context of inclusive teaching competency, lack of knowledge, negative attitude, and commitment is cited as a lacuna in ensuring quality and equitable education (Sharma,2018; Johansson S.T., et. al., 2021; Bhatnagar & Das, 2014). Studies conducted in an Indian scenario found that, though the teachers are becoming more accepting of the presence of children with disabilities and are able to articulate stronger reasons for their participation in schooling, they continue to see children with disabilities through a deficit lens and teachers admitting to the fact that they feel less competent in teaching children in the inclusive environment (Shruti Taneja-Johansson, Nidhi Singal & Meera Samson, 2021; Das, 2013). Given the fact that there are several in-service teachers training and professional development courses under Sarva Shiha Abhiyaan (SSA) that are conducted from time to time for up-skilling the teachers in India but the benefit of the courses are restricted to a selected number of candidates and the private school and teachers are left out of the necessary upskill programmes. This condition elevates the need for introducing a competency model-based training programme. That is focused on the competency need, thus is effective in terms of content comprehension and economic in terms of time.

### Objective of Research

This research focuses on the following objectives:

1. To develop Inclusive teaching competency model for school teachers.
2. To check the applicability of inclusive teaching competency model for school teachers.
3. To check the status of inclusive teaching competency of school teachers as per the model.

### Research Methodology

The research area of the present study focuses on Inclusive Education and specifically deals with the Inclusive teaching competency of school teachers at the elementary level. Though the population for the study is all school teachers, teaching at Elementary level schools in urban areas in the Pune district. The study is limited to a sample school selected from the urban area of the Pune district of Maharashtra, India only. The present study applies different methods for different objectives, thus the overall research is based on Multi-Method research as explained in the following Table 1.

**Table 1: Objective wise research methodology**

Objectives	Research method	Participants	Data collection method	Instruments used	Analysis approach
<b>Objective 1</b>	Triangulation Method	- (Journals for content analysis) - 5 participants for detailed interview - 30 Inclusive classroom observation and interview with subject teachers	Observation and interview	- Interview schedule - Behavior indicator check list	Qualitative
<b>Objective 2</b>	Survey with expert	- 6 Field experts in area of inclusive education - 5 practicing teachers in the area of inclusive education	Interview and Feedback	- Feedback on model - Unstructured interview on model applicability	Qualitative
<b>Objective 3</b>	Descriptive research	- 124 elementary school teachers from 34 schools randomly selected	Survey with elementary school teachers	'Inclusive Teaching Competency Assessment Tool' developed by researchers as part of Inclusive teaching competency model	Quantitative

The objective 1 is based on qualitative research that employees triangulation method in order to outline the model structure. At first content analysis from books (n=4) and journals (n=20) method was used to identify the variables while defining inclusive teaching competency. Later, 5 inclusive schools were observed for the same, interview with school representatives were also taken into consideration for organizing the variables. The data sets obtained for content analysis were in form competency statements, thematic analysis of process (Braun & Clarke, 2006). The research process for objective 2 is explained in following flow chart 3.

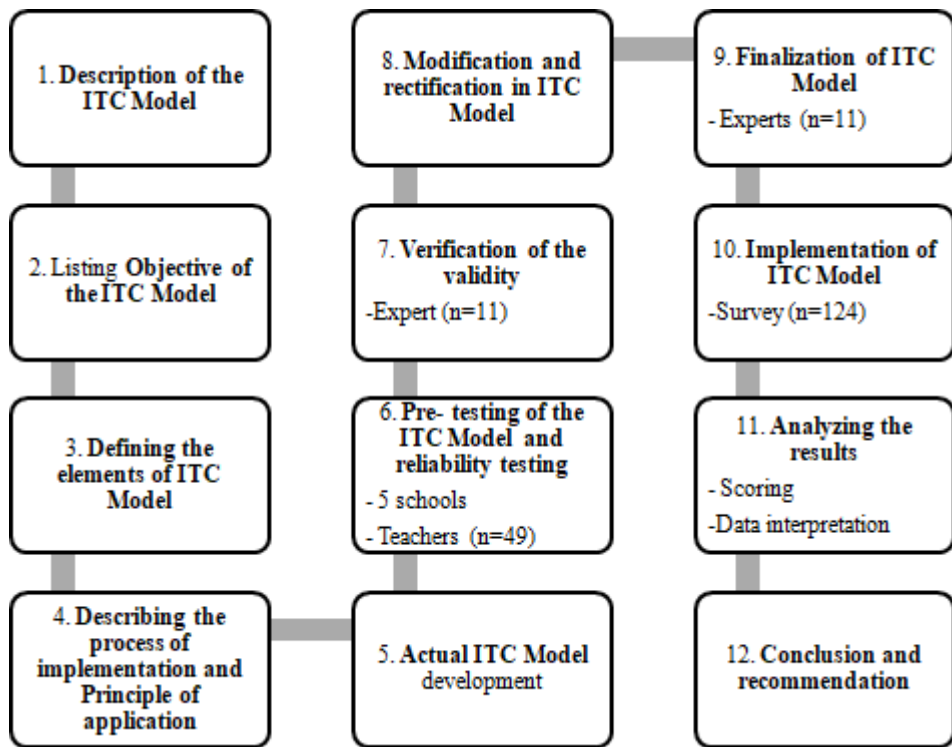
The 2<sup>nd</sup> objective was to check the applicability of the model to meet the purpose experts of the field have given their consent which included researchers in the field of inclusive education and practitioners of inclusive education at school. The research process for objective 2 is explained in following flow chart 4.

Following to this, for objective 3 status of inclusive teaching competency of school teachers was found using the model. For the purpose data was collected from 124 school teachers from 34 schools across urban areas of Pune district of Maharashtra, India. Scoring and percentage is used for assessment and data is represented in 3D Cylinder Graph.

### **Description of Research Instrument**

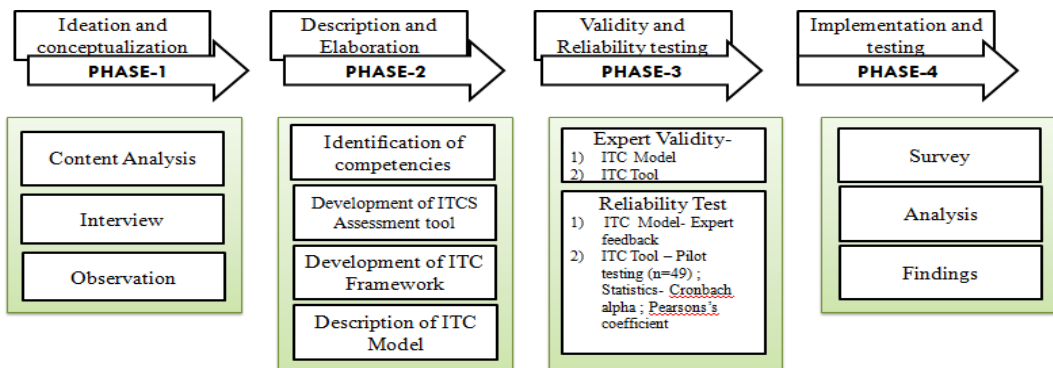
The objective 3 of the study is based on descriptive survey. 'Inclusive Teaching competency Scale' developed by researchers was employed. Face validity, Content validity and item validity of tool was received from 6 field experts practicing in field of inclusive education and psychology. Reliability of the tool was calculated with 48 participants, using Pearson's correlation formula. Item correlation was calculated for all items in questionnaire and correlation coefficient of each item found significant at 0.05 level of significance. Inter rater reliability coefficient was 0.92 on Pearson's correlation. For internal consistency, Cornbach's alpha calculated to be 0.824. Both found significant at 0.05 level of significance. The tool consisted of 6 dimensions based on the inclusive teaching competency model. 24 questions were included and 5 range of responses based stage on inclusive teaching competence were included. Thus, the minimum to maximum score ranges from 24-120. Where, the maximum score indicates maximum level of perceived level of inclusive teaching competence.

## Steps for ITC Model Development



Flow chart 1: Steps in ITC model development

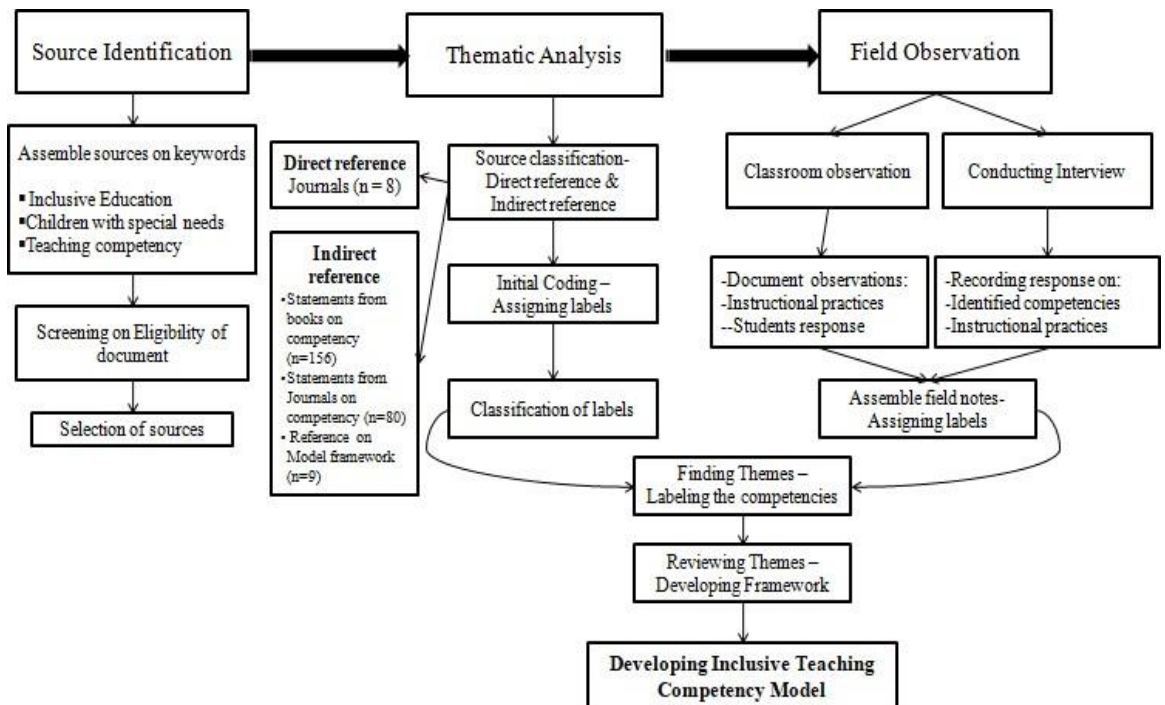
## Phases of Research in Present Study



Flow chart 2: Phases of research

### Data Analysis Process

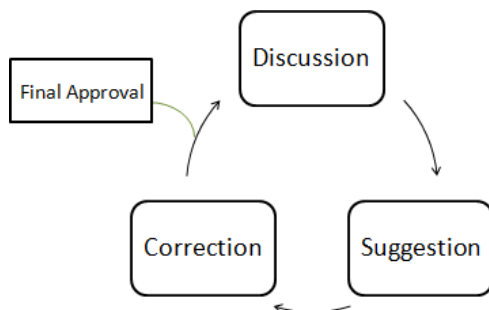
Objective 1- Data gathered for objective 1 were in form of paragraph, statements, list of competency for inclusive education. Thematic analysis method was used for analysis of data and theory development (Braun & Clarke, 2006). Frequency matrix is prepared to assessing importance given by various researchers to identified variables from direct references and thematic analysis was done for listing of variables from indirect references and field notes from observation and interview. Following flow chart represents the process flow of data analysis for objective 1.



**Flow chart 3: Process flow of thematic analysis of objective 1**

Objective 2- Data gathered for objective 2 were in form of feedback and suggestion. 3 cycles of feedback and suggestions were received from the

experts on the model. The suggestions received from experts were accepted and ITC model was rectified; Post rectification it is again sent for review and receiving validation. The suggestions received were updated and was again sent to expert for feedback until 100% validation for applicability was received. Following graph represents the research cycle until receipt of final approval.



**Flow chart 4: Flow chart for cycles of feedback for objective 2**

Objective 3- Data gathered for this objective were quantitative and the responses were received on research instrument ‘Inclusive teaching competency assessment tool’. For the purpose voluntary participation from 124 elementary school teacher from 34 schools across Pune district of Maharashtra was obtained. The data collection process started from obtaining necessary permission from relevant authorities, followed by rapport building with participants and providing participants with Inclusive Teaching competency assessment tool and explain the instructions, then participant’s responses were received and subsequently the scores on responses were analyzed. The statistics used frequency and percentage. The data is represented in 3D cylinder graph.

### **Objective wise Findings**

**Objective 1- Develop of Inclusive teaching competency model, starting with** Content analysis, including reviewing of journals. Following review table was prepared for identifying major variables related to inclusive teaching competency.

**Table 2: Frequency Matrix for identified components from direct references**

Domain of competence	Selected Competencies	Areas of competence	Citation frequency	Selected sources
Cognitive	1) Awareness on policies on Inclusive Education	1) Awareness on Inclusive Education	7	Das et. al.(2012) ; Kusuma,A. &Ramadevi,K.(2013) ; Zulfija,M., Indira,O. &Elmira,U (2013) ; Rabi, N. M., &Zulkefli, M. Y. (2018) ; Bukvić,Z.(2014) ; Majoko,T.(2019) ; Das,A., et. al.(2013)
	2) Awareness on differential educational needs of Children with special needs(CwSN)			
	3) Knowledge on Inclusive Education strategies,	2) Knowledge of Inclusive Pedagogy	6	Das et. al.(2012) ; Kusuma,A. &Ramadevi,K.(2013) ; Zulfija,M., Indira,O. &Elmira,U (2013) ; Rabi, N. M., &Zulkefli, M. Y. (2018) ; Bukvić,Z.(2014) ; Das,A., et. al.(2013)
	4) Knowledge on selection of teaching methods as per learning needs,			
Affective	5) Perspective towards Children with special needs in inclusive school,	3) Attitude towards inclusion	3	Mehta & Panju (2018) ; Bukvić,Z.(2014) ; Majoko,T.(2019)
	6) Adaptation of Teaching as per learner,			
	7) Integration of CwSN,	4) Acceptance towards inclusion	5	Das et. al.(2012) ; Kusuma,A. &Ramadevi,K.(2013) ; Rabi, N. M., &Zulkefli, M. Y. (2018) ; Bukvić,Z.(2014) ; Das,A., et. al.(2013)
	8) Accommodation of CwSN			
Conative	9) Resource Management,	5) Management of inclusive classroom	7	Das et. al.(2012) ; Kusuma,A. &Ramadevi,K.(2013) ; Zulfija,M., Indira,O. &Elmira,U (2013) ; Rabi, N. M., &Zulkefli, M. Y. (2018) ; Bukvić,Z.(2014) ; Majoko,T.(2019) ; Das,A., et. al.(2013)
	10) Engagement and Motivation,			
	11) Professional Communication skills	6) Professional Communication and Coordination	7	Das et. al.(2012) ; Kusuma,A. &Ramadevi,K.(2013) ; Zulfija,M., Indira,O. &Elmira,U (2013) ; Rabi, N. M., &Zulkefli, M. Y. (2018) ; Bukvić,Z.(2014) ; Majoko,T.(2019) ; Das,A., et. al.(2013)
	12) Building Student support			

**Table 3: Example of initial coding generated for thematic analysis from Books and Journals from indirect reference**

Paragraph Extracted	Author	Source	Initial code
Normal' pupils in mainstreamed environments were actually K. Topping and advantaged in terms of attainment by the presence of pupils S. Maloney with special educational needs - perhaps because their teachers were sensitized to the different learning needs of others in the class with challenges.		The RoutledgeFalmer Reader in Inclusive Education (2006)	Knowledge of different learning need
Set of conditions which form the basis of inclusive L. Florian education...an opportunity for pupil participation in the decision-making process; a positive attitude about the learning abilities of all pupils;teacher knowledge about learning difficulties; skilled application of specific instructional methods;parent and teacher support.		The RoutledgeFalmer Reader in Inclusive Education (2006)	-Obtain students participaton -Positive attitude -Knowledge about learning difficulties -Skills in application on instruction methods -Obtain parents and teachers support

**Table 4: Example of initial coding generated from field observation**

Observation	Categories	Initial code
Observation	Inclusive Teaching Method in use	Acceptance towards inclusion of children with special needs (CWSN)
	Interaction with all children	Knowledge of inclusive teaching strategies
	Attention to special education need	Knowledge of differential learning need
	Activities included	Activities for Engaging CWSN
	Preparedness with teaching learning resources	Resourcefulness for active classroom engagement
	...	

**Table 5: Example of initial coding generated from interview**

Observation	Categories	Initial code
Narrative	"We admit students regardless of their abilities and disabilities;	- Attitude towards inclusion
	"Our primary focus is never on bringing the children at par with other peers, rather we give attention if the child is progressing at his/her pace or not."	Acceptance towards CWSN and individual attention
	"We include different activities and try to include activities for engaging parents with children for facilitate their learning.	- Creating inclusive environment for children with special needs
	"And we have seen that children eventually do well."	
	"We make sure that CWSN is not left out so we include collaborative activities as well; through curriculum or extra curriculum."	- Communication with parents
	...	...

**Table 6: Final listing of components on inclusive teaching competency framework based on thematic analysis of indirect references and assembled field notes after**

Final Listing				
Extracted Codes from Content analysis, Observation and Interview	Labeling from Axial Coding	Labels from selective coding	Domains	
Government Policy on Inclusion of CWSN	Awareness on policies on Inclusive Education	Awareness on Inclusive Education	Cognitive Domain	
Government schemes & facilities for inclusion of CWSN	Education			
Educational Needs of CWSN	Awareness on differential educational needs of CWSN			
Identification of barrier faced by CWSN		Knowledge of Inclusive Pedagogy		
Teaching strategies for inclusion	Knowledge on Inclusive Education strategies			
Development of Non-Scholastic areas				
Teaching Aids for inclusive teaching-learning	Knowledge on selection of teaching methods as per learning needs			
Development of Inclusive Lesson Plan & IEP		Attitude Towards Inclusion	Affective Domain	
Philosophy of inclusion	Perspective towards CWSN in inclusive school			
Values of inclusive education				
Consideration for curriculum modification	Adaptation of Teaching as per learner	Acceptance towards Inclusion		
Consideration for extra time adjustments				
Adaptation of Evaluation system	Integration of CwSN			
Environment adaptation		Accommodation of CWSN	Conative Domain	
Accomodation of CWSN	Accomodation of CWSN			
Accomodation of CWSN Learning environment		Management of Inclusive Classroom		
Technical abilities in identification and development of learning resources	Resource Management			
Inclusive Teaching learning material				
Engagement of CWSN inclusive environment	Engagement and Motivation	Professional Communication and Coordination		
Motivation of CWSN				
Communication with parents	Professional Communication skills			
communication with peers				
Collaborating with other resource persons	Building Student Support System			
Building Social circle				

### **Inclusive Teaching Competency Model Theory And Framework**

The Inclusive Teaching Competency (ITC) Model retains B.S. Blooms Domains theory in the foundation of the model structure and further identifies competency areas that represent each domain. In the present study, each area is further disintegrated to define inclusive teaching competencies. The ITC Model emphasizes that the Competencies are contextual and dynamic. Inclusive teaching competency is not a single factor rather it is a comprehensive representation of various competencies that come together to form inclusive teaching competency. Inclusive teaching competency observes assumptions, that is, 1) Competence is subject to context, the environment of interaction, and learning needs. 2) Inclusive Teaching Competence is dynamic. 3) Inclusive Teaching Competence is in cluster form. 4) Competency can be

developed. 5) Competency motivation is intrinsic. 6) Inclusive Teaching Competence is represented under stages of competence.

Stages of inclusive teaching competency- The competency stages were based on field observation. The following table represents the behaviours exhibited by teachers in the context of inclusive education and inclusive teaching competency. 5 stages of competency were identified from the present study, where Stage A- represents the primary stage, while Stage E represents the highest stage of inclusive teaching competence.

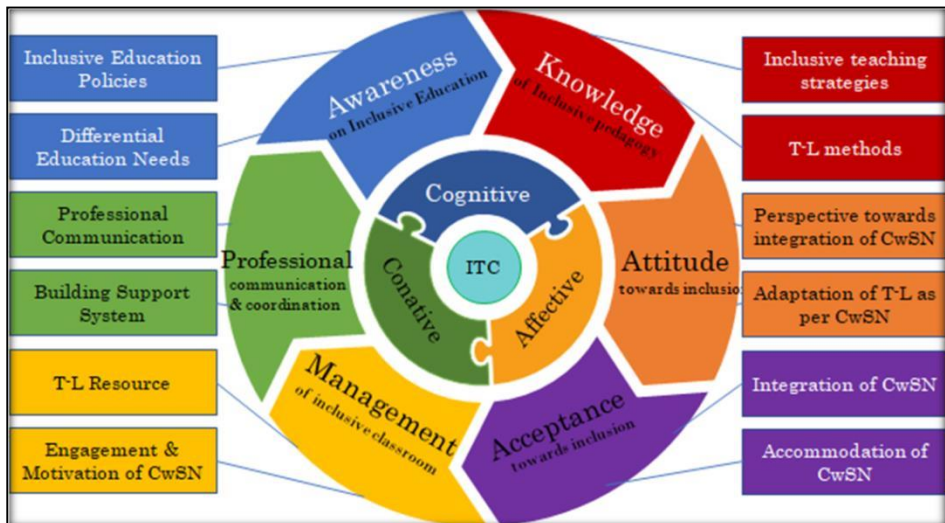
**Table 7: Stages of competence**

Competence Stage	Response behaviour	Behaviour Indicators
A	Resistant	Participants are unaware of the concept of inclusive education and disbelieve the concept at the same time.
B	Ignorant	Participants are somewhat aware of the concept of inclusive education and still find it irrelevant
C	Apprehensive	Participants remain unsure and doubtful about the concept.
D	Receptive	Participants are somewhat aware of the concept of inclusive education and find it relevant too.
E	Assertive	Participants are aware of the concept of inclusive education and believe in it at the same time.

### **Inclusive Teaching Competency (ITC) model framework**

The developed Inclusive Teaching Competency (ITC) model framework is represented in 3 layers. The center part represents the domains and the second layer represents 6 Areas of key competencies essential for inclusive teaching with respect to teaching children with special needs in an inclusive classroom and the third layer represents 12 competencies under the areas. Such key areas as identified are as follows: 1) Awareness of Inclusive Education, 2) Knowledge of Inclusive Pedagogy, 3) Attitude Towards Inclusion, 4) Acceptance towards inclusion, 5) Management of Inclusive Classroom and 6) Professional Communication and Coordination. And 12 competencies identified are 1) Awareness on policies on Inclusive Education, 2) Awareness on differential educational needs of Children with special needs(CwSN) , 3) Knowledge on Inclusive Education strategies, 4)Knowledge on selection of teaching methods as per learning needs, 5) Perspective towards Children with special needs in inclusive school, 6) Adaptation of Teaching as per learner, 7) Integration of CwSN, 8) Accommodation of CwSN, 9) Resource Management,

- 10) Engagement and Motivation, 11) Professional Communication skills, and 12) Building Student Support System.



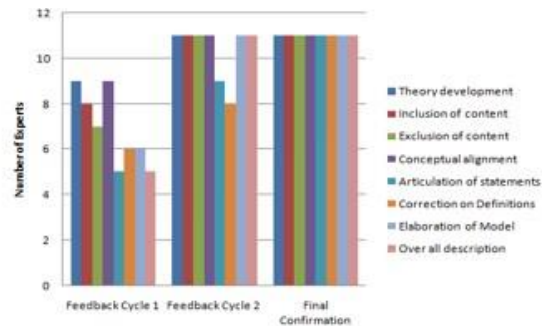
**Figure 1: Inclusive teaching competency model framework**

Inclusive teaching competency model framework was derived on the basis of field observation on effective variables relevant to the actual classroom scenario. The set criteria of observation included, list of identified inclusive teaching competencies and observation on presence and absence of identified competency and its impact on values of inclusive education. The model development process was cyclic process instead of being linear until the final model structure was defined. Since some pre-identified factors were rejected on field observation on the basis of relevance in classroom teaching and learning while some others were introduced. The final Inclusive teaching Competency model framework is represented in Figure 1.

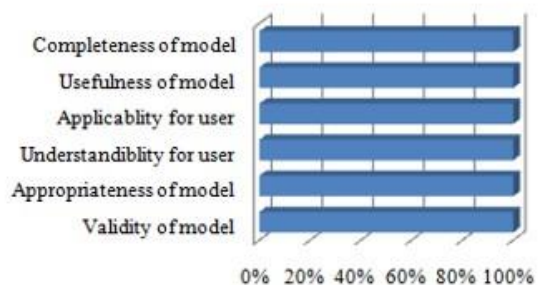
**Objective 2-** Checking the applicability of Inclusive teaching competency framework on the basis of Feedback from 6 field experts and 5 school representative was included, the category of the feedback are mentioned in the following table.

**Table 8– Approval of experts on feedback cycle**

Nature of Feedback	Feedback Cycle 1	Feedback Cycle 2	Final Confirmation
Theory development	9	11	11
Inclusion of content	8	11	11
Exclusion of content	7	11	11
Conceptual alignment	9	11	11
Articulation of statements	5	9	11
Correction on Definitions	6	8	11
Elaboration of Model	6	11	11
Overall description	5	11	11

**Graph 1– Approval of experts on feedback cycle****Table 9– Experts confirmation on Applicability**

Category	Confirmation received	Not received	Total Participants
Validity of model	11	0	11
Appropriateness of model content	11	0	11
Understandibility for user	11	0	11
Applicability for user	11	0	11
Usefulness of model	11	0	11
Completeness of model	11	0	11

**Graph 2– Confirmation of experts on applicability**

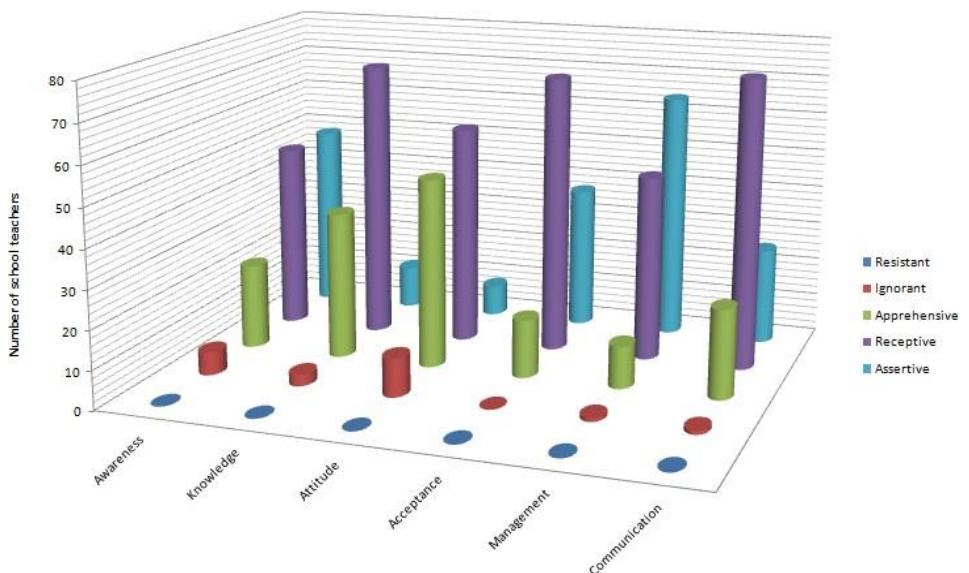
On the basis of experts feedback on Inclusive Teaching Competency Model applicability it was found that Inclusive Teaching Competency Model was found 100% Applicable.

**Objective 3- Checking the status of Inclusive teaching competency of school teacher on the basis of model.** Responses of 124 school teachers representing 34 schools in urban areas of Pune district of Maharashtra were recorded under the model assessment tool. Following is the Analysis table and graph.

**Table 4**–Percentage of sample representing in each area and stage of Inclusive teaching competence

Area of ITC	A	B	C	D	E
	Resistant	Ignorant	Apprehensive	Receptive	Assertive
Awareness on Inclusive Education	0	5%	19%	38%	38%
Knowledge of Inclusive Pedagogy	0	2%	31%	58%	9%
Attitude Towards Inclusion	0	8%	40%	46%	6%
Acceptance towards inclusion	0	0	12%	55%	30%
Management of Inclusive Classroom	0	1%	9%	39%	51%
Professional Communication and Coordination.	0	1%	19%	60%	20%

**Graph 3-** Percentage of sample representing in each area and stage of Inclusive teaching competence



**The finding suggest on the stage of competency in respective area of inclusive teaching competency. In the 1<sup>st</sup> area of Awareness** on Inclusive Education, 38% school teachers are assertive stage where as 19% are apprehensive stage, while 5% are still ignorant. In the 2<sup>nd</sup> area of **Knowledge** of Inclusive Pedagogy, 58% school teachers are at receptive stage, while 31% are at apprehensive stage and 2% are at ignorant stage of inclusive teaching competency. In the 3<sup>rd</sup> area of **Attitude** Towards Inclusion, 46% school teachers are at receptive stage, while 40% are at apprehensive stage and 8% are at ignorant stage of inclusive teaching competency. In the 4<sup>th</sup> area of **Acceptance** towards inclusion, 55% school teachers are at receptive stage, while 30% are at assertive stage and 12% are at ignorant stage of inclusive teaching competency. In the 5<sup>th</sup> area of **Management** of Inclusive Classroom, 51% school teachers are at assertive stage, where as 39% are at receptive stage, while 9% are at apprehensive stage and 1% are still at ignorant stage of inclusive teaching competency. In the 6<sup>th</sup> area of Professional **Communication** and Coordination, 60% school teachers are at receptive stage, where as 20% are at Assertive stage, while 19% are at apprehensive stage and only 1% are at the ignorant stage. Overall interpretation can be made that while no teachers are at resistant stage of inclusive teaching competency, some teachers are still at the ignorant stage, a considerable number of teachers are at apprehensive stage, and where as maximum number of teachers are at receptive stage.

### **Limitations**

The present study employed a multi-method approach to attain the objective. However, the major objective of developing an inclusive teaching competency model and its applicability was based on an extensive qualitative process for a deeper understanding of the topic and theory generation. Therefore, the study entails the limitations of qualitative research. Other limitations of the study are highlighted as under:

- 1) The research is limited to books, journals, and resources available to the researcher.
- 2) The research is based on a limited period of classroom observation and a sample of the study.
- 3) The influence factors such as age, gender, experience, and level of qualification were not under the control of the researcher.
- 4) The research is limited to the broader area of competency included in the model. Though, the model developed defines areas of competencies and competencies; however, it can be further

disintegrated into sub-competencies which is not done in the present study.

5) Also, the selected inclusive teaching competencies are general in nature, and competencies related to the inclusion of children with specific disabilities (such as visual disabilities, hearing disabilities etcetera) are not focused.

6) The research does not include the student's perspective in assessing the level of competence and is based on teachers' behaviour and perceptions only.

## **Discussion**

Most previous researchers adopted qualitative for developing competency models. Previous studies indicated the use of methods like content analysis of literature for identifying dimensions followed by the use of the Delphi method, where a panel of experts (n=5) establishes a consensus over the model in 4 rounds of reconstruction of model theory; initially independently and later over discussion (Yu, J. H., Luo, Y., Sun, Y., & Strobel, J. , 2012; Majoko, T., 2019).). Also, researchers employ literature reviews, reviews of company documents, and primary interviews with the key company stakeholders (Brown, L., George, B., & Mehaffey-Kultgen, C.,2018). In order to develop the present model that is Inclusive Teaching Competency model, analysis, and review of literature are done, followed by classroom observation and interview with teachers conducted in phase 1 of the study, thus the triangulation of two data sources served as a measure for both theoretical and practical understanding of subject matter, it indirectly establishes internal reliability. Through Phase 3 of the research, the cycle of discussions with a panel of experts was undertaken; it served towards establishing applicability and also indirectly establishes external reliability of the model. Some studies also indicated the use of a quantitative approach for listing inclusive teaching competencies (Kuyini, A. B., Yeboah, K. A., Das, A. K., Alhassan, A. M., & Mangope, B., 2016). Quantitative techniques such as Structural Equation Modeling (SEM), and Exploratory Factor Analysis (EFA) are very efficient tools for model development. However, for developing of Inclusive teaching competency model, it would not have served the purpose. Since Inclusive Teaching Competency is not a natural behavioral instinct and cannot be found naturally without training in the subject or experience in teaching CWSN. Forlin (2006) argues Positive attitude alone does not ensure quality inclusive education and skill in the use of various teaching methods is insufficient without knowledge of pupils' learning difficulties and the belief that such

pupils can learn. As such, the relationship between attributes that are nonexistent until developed through training is difficult to establish through quantitative techniques.

The contemporary competence models can be classified under categories, 1) Corporate model 2) Psychological models and 3) Educational models. The competency model used in corporate industries is very different than that of the Educational model. The corporate model of competency is majorly used as a tool for defining roles in the hierarchy. Also, it is used as an assessment tool for setting criteria for the selection or rejection of candidates on the basis of competency and as a development tool for preparing subordinates for higher roles. Such as Prahalad & Hamel (1990) core competence model. Unlike corporate competency models, the teaching model does not set criteria for selection. Rather it is used as a tool for context-specific professional development. The context focus of the ITC Model is Inclusive teaching. The development of the Inclusive teaching competency model represents the domains, areas, and competencies with respect to inclusive education. The present competency model facilitates the identification of the stage of competency in a particular area. The Iceberg model of competence and Broadwell's 4 stages of competence can be categorized under the psychological model of competence. These models describe competence as an attribute with certain stages and levels, such levels also count as unconscious and subconscious levels. The educational models of competency are based on constructivist approaches, such as CBSE Competency Self-Evaluation Model, NCTE Model for teacher's development, and so on. The Inclusive teaching competency model can be explained under the professional development model in education. It studies inclusive teaching competency under a cluster framework of 3 domains, 6 areas, and 12 competencies. However, the competencies can be studied by further disintegration of 12 competencies into sub-competencies. This is also highlighted under the limitation of the present study.

Even though there is less representation of the variable 'Attitude towards Inclusion' in the competency list suggested by researchers; few researchers consider 'Attitude' under the primary definition of competency along with knowledge and skills (Gupta,2009). Also, the theory of reasoned action (TRA ) by Martin Fishbein and Icek Ajzen (1967) provides a strong theory bases for the inclusion of attitude. As the present study keeps Bloom's Domain theory as the foundation of competency modeling, the 'Attitude' variable is still considered under the affective domain with the consent of all

the field experts on theory. Attitude makes an integral part of the theory of inclusive teaching competency in several pieces of research. Furthermore, the inference of the narratives from inclusive school teachers also confirmed that 'Attitude towards Inclusion' is an integral part of the inclusive teaching competency model and crucial for the successful implementation of inclusive education.

The results highlighted knowledge and Attitude as problematic areas as finding in 3<sup>rd</sup> objective, similar findings were reflected in other studies (Sreeja, S.,2017; Valvi, N.,2016, Eduru,J.2015). Thus, the findings of the present study are in harmony with the previous studies. As found in objective 2, applicability was checked with experts and school teachers and the Inclusive teaching competency model was found 100% applicable to the selected criteria represented in Graph 2. However, the applicability process employs a qualitative approach and hence may bear subjective bias. In order to reduce the subjective bias, objective 3 is designed for practically implementing the model. The findings on objective 3, reflected the status of teachers' inclusive teaching competency and were considered positive, as no teachers were found resistant stage of inclusive teaching competence and only a few teachers at the ignorant stage of inclusive teaching competence. The findings also indicated that a considerable number of teachers believe that they represent the higher stage of inclusive teaching competence which is the assertive stage. However, the result must be read along with the fact that more than 70% of school teachers agreed that they have never received any training on inclusive education and neither have any experience in teaching children with special needs in an inclusive environment. Since the concept of inclusive education is gaining momentum with time teachers are becoming more aware of inclusive education theoretically. This is also reflected in the findings that maximum teachers assess themselves under the 4<sup>th</sup> stage which is the receptive stage where teachers acknowledge the importance of inclusive education. However, other studies found that 'teachers were unwilling to take responsibility for the learning of children with disabilities, expressing significant concerns about their own preparedness, while highlighting the lack of effective and appropriate support structures' (Johansson S.T., et. al., 2021). The present study is in agreement with the finding as a considerable percentage of teachers find themselves in the 3<sup>rd</sup> stage of inclusive teaching competency which is the Apprehensive stage where they remain doubtful. The finding can further be used for the development of need-based training programme. Teachers' competence is a critical quality indicator of the education system and is essential in ensuring the success of inclusive practices. Hence, the policies

must focus on the education and professional development of teachers working in both public and private sectors so that the goal of inclusion can be realized not only in terms of accessibility to education but also in terms of ensuring access to quality education where all children can realize best of their potential regardless of their abilities or disabilities.

### **Implications for Further Research**

The inclusive teaching competency model can be useful in competency mapping and assessment of teachers in the area of inclusive teaching. It will be useful for curating teacher development programmes based on the deficit areas of competence. Researchers can add to the theory by identifying sub-competence levels. This model may serve as the foundation for identifying competence with respect to teaching children with specific disabilities, for example, assessment of inclusive teaching competence for including children with visual difficulties and so on.

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