



Developing effective and efficient learning environment by enhancing teacher's competencies through a newly developed 360 degree Global Educator's Competencies Framework

Megha Ahuja

MASTER THESIS

DECEMBER, 2021

Master's Degree Programme in Educational Leadership

ABSTRACT

Tampereen ammattikorkeakoulu
Tampere University of Applied Sciences
Master's Degree Programme in Educational Leadership

AHUJA, MEGHA:

Developing effective and efficient learning environment by enhancing teacher's competencies through a newly developed 360 degree Educator's competencies framework

Master's thesis 70 pages
December, 2021

Providing a good learning environment to students is a key component of an education process. But, to develop an efficient learning environment for students it is necessary to have competent educators who possess all 21 st century educator's skills and competencies. For this, it is pivotal to identify the required competencies that an educator should have and also how to improve them. This study analyses the key competencies that an educator should possess to develop an effective and efficient learning environment for students. In this research, a new educator's competencies framework has been developed in which various competencies that an educator should possess have been analysed. Also, suggestions have been recommended as how to enhance them.

Key words: learning environment, competency, leadership, emotional intelligence, creativity, research, global educator

Content		
S.No.	Topic	Pg. No.
1.	Introduction	
	1.1 Research Topic.....	6
	1.2 Research Question.....	7
	1.3 Research approach.....	8
	1.4 Structure of Thesis.....	8
2.	Literature Review	11
	2.1 Learning Environment	11
	2.1.1 Meaning & Definition of Learning Environment.....	11
	2.1.2 Factors affecting Learning Environment.....	13
	2.1.3 Types of Learning Environment.....	16
	2.1.4 Relationship between Learning Environment and	
	2.1.4.1 Teachers.....	19
	2.1.4.2 Students.....	20
	2.1.4.3 Competency.....	20
	2.1.4.4 Educational Leader.....	21
	2.2 Competency	22
	2.2.1 Meaning & Definition of Competency.....	22
	2.2.2 Requirement of Competency.....	23
	2.2.3 Importance of Competency.....	24
	2.2.4 Competency Assessment.....	25
	2.2.5 Method of Competency Assessment	25
	2.2.6 Teacher's Competencies.....	27
	2.2.7 Traditional Frameworks of teacher's competencies.....	28
3	Analysis & Research Result	29
	3.1 New Framework- 21st century Global Educator's Competencies Framework.....	29
	3.1.1 Basic Competencies of an educator.....	30
	3.1.2 Affective Competencies of an educator.....	30
	3.1.3 Expertise Competencies of an educator	30
	3.1.4 Global Competencies of an educator	31
	3.2 Basic Competencies of an educator.....	31
	3.3 Affective Competencies of an educator.....	32
	3.3.1 Emotional Intelligence skills.....	32
	3.3.1.1 Frameworks.....	34
	3.3.1.2 Suggestions.....	37
	3.3.2 Creativity & Innovation skills.....	38
	3.3.2.1 Frameworks	40
	3.3.2.2 Suggestions.....	43
	3.4 Expertise Competencies of an educator.....	44
	3.4.1 Leadership & Management skills.....	44
	3.4.1.1 Frameworks.....	44
	3.4.1.2 Suggestions.....	48
	3.4.2 Research oriented skills.....	49
	3.4.2.1 Frameworks.....	52
	3.4.2.2 Suggestions.....	54
	3.5 Global competencies of an educator.....	55

	3.5.1 Suggestions.....	58
4.	Suggestion to teachers as to how they can enhance their competencies while teaching in an online and blended learning environment.....	60
5.	Conclusion.....	62
	References	63

TABLES & FIGURES

S.No.	Topic	Pg.
Fig. 1.1	Research questions	8
Fig. 1.2	Structure of Thesis	10
Fig. 2.1	Factors affecting Learning Environments	13
Fig. 2.2	Method of Competency Assessment	26
Fig. 3.1	21 st century Global Educator's Competencies Framework	29
Fig. 3.2	Mayer-Salovey Ability Model of Emotional Intelligence/	34
Fig. 3.3	Goleman's 5 components of Emotional Intelligence	35
Fig. 3.4	Lin model	40
Fig. 3.5	4 p's of creativity	41
Fig. 3.6	Innovative Teacher Leader competencies model	47
Fig. 3.7	Research Framework	52

1 INTRODUCTION

1.1 Research Topic

Generally, a learning environment is considered as the sum total of physical, infrastructural, technological factors etc. under which the teaching-learning process takes place. But, in real practice, it is the human factor which plays a key role in developing an effective and efficient learning environment. The interaction and the exchange of ideas, knowledge and information between teacher and students are the essential core elements within a learning environment, and how effectively and efficiently these interactions are done reflects the effectiveness of the learning environment. But the quality of these interactions and exchange of knowledge depends a lot on teacher's and student's competencies.

Students are the center of the education system but without proper professionally trained teachers, students cannot achieve the best in their career. Teachers are the real asset of any educational organization and nation's education system. They play a pivotal role in developing knowledge and enhancing the skills of students. They are the key human resource of educational organizations, but without their efficient performance no student can get quality education and no educational organization can survive. So, it is necessary that teacher's competencies and skills should be regularly updated keeping in view the current requirements of the education system. There has been a lot of research which focused on how to enhance student's skills but very limited on developing 21 st century teacher's competencies.

The purpose of this study is to find out the ways as how to enhance teacher's competencies in order to develop an effective and efficient learning environment for the students. There are various factors which affect the learning environment, and out of which a key factor which highly impacts the learning environment is pedagogical factors or more precisely the quality of teacher's competencies. In education settings, a teacher is not a mere transferor of knowledge rather a facilitator, guide and mentor for students. Hence, the

competencies of a teacher plays a key role in developing an effective and efficient learning environment.

The aim of this study is to develop a teacher's competencies framework which highlights the key competencies of 21 st century's teachers and suggest ways how teachers can improve his/her competencies in order to develop an effective learning environment for the students. Special attention has been given to three categories as they are the core of the teaching profession. Also, teacher's competencies have been analyzed from an online and blended learning environment perspective as they have become the key requirements of current as well as future times.

For this, various frameworks of teacher's competencies have been analysed but none of them gives a complete detail of all kinds of competencies that a teacher should possess. For this, a new comprehensive teacher's framework has been developed by the author which gives a complete study of teacher's competencies.

1.2 Research Questions

One of the key roles of a teacher is to develop a positive learning environment that fosters the learning of students and helps in developing 21 st century skills. But to develop a positive learning environment, teacher's competencies play a major role. They should have a proper understanding of educational, psychological, socio-cultural needs of the students. To possess these kinds of understandings, they should possess 21 st century teacher's competencies then only they can develop a positive learning environment for the students. Hence, the main idea behind this research is to develop a relationship between teacher competencies and the learning environment. How can improvement in one factor affect the other? An important point to analyze is how teacher competencies can be helpful in improving the learning environment and how they can be improved. Based on this idea, the research questions are as follows: -

Q1. How can the learning environment of students be improved by enhancing teacher's competencies?

- What are 21st century competencies of a teacher?
- How can teacher's competencies be helpful in improving the learning environment of students?
- How can these competencies be improved?
- What are the key competencies that a teacher should possess while teaching in online and blended learning environment?

Fig 1.1- Research questions of this research

1.3 Research Approach

A descriptive research in which the relationship between teacher competencies and learning environment has been established. Detailed literature review has been done in said topics and a new framework has been developed. Each component has analysed deeply and suggestions have been given.

1.4 Thesis Structure

Chapter 1- **Introduction**- In this chapter, firstly the introduction of research topic is discussed as it explains why is this topic chosen, purpose and aim of this research. This chapter also includes the research questions as the whole research is based on these questions.

Chapter 2- **Literature Review**- In this chapter, the literature review has been done in which detailed study on two main topics such as learning environments and competencies have been conducted.

Under the learning environment topic, firstly to understand its meaning, its definition has been analysed from different perspectives given by different educationists. Further under the topic of learning environments, its factors and types have been discussed in detail. Finally, under this topic, the author has deeply examined the relationship between the learning environment and the

other variables such as teachers, students, educational leader, and competency.

In the second topic i.e. competencies, its meaning has been understood by analysing various definitions given by different educationists. After this, why are competencies required, has been analysed. Then, what is competency assessment and how it is done is discussed. Finally, what are teacher competencies and various traditional frameworks of teacher competencies have been studied in detail.

Chapter 3- **Analysis and Result-** Based on above analysis and findings, that no traditional framework is found effective which gives the clear picture of complete teacher's competencies. For this, a new framework is formed in which four different types of teacher 's competencies have been categorised. Under each competency, related skills have been analysed and discussed in detail. Suggestions related to each skill as how it can be improved have also been given.

Chapter 4- **Suggestions-** In this chapter, suggestions are given as how teachers can develop effective and efficient online and blended learning environment.

Chapter 5- **Conclusion-** Final Conclusion of this research

Structure of thesis

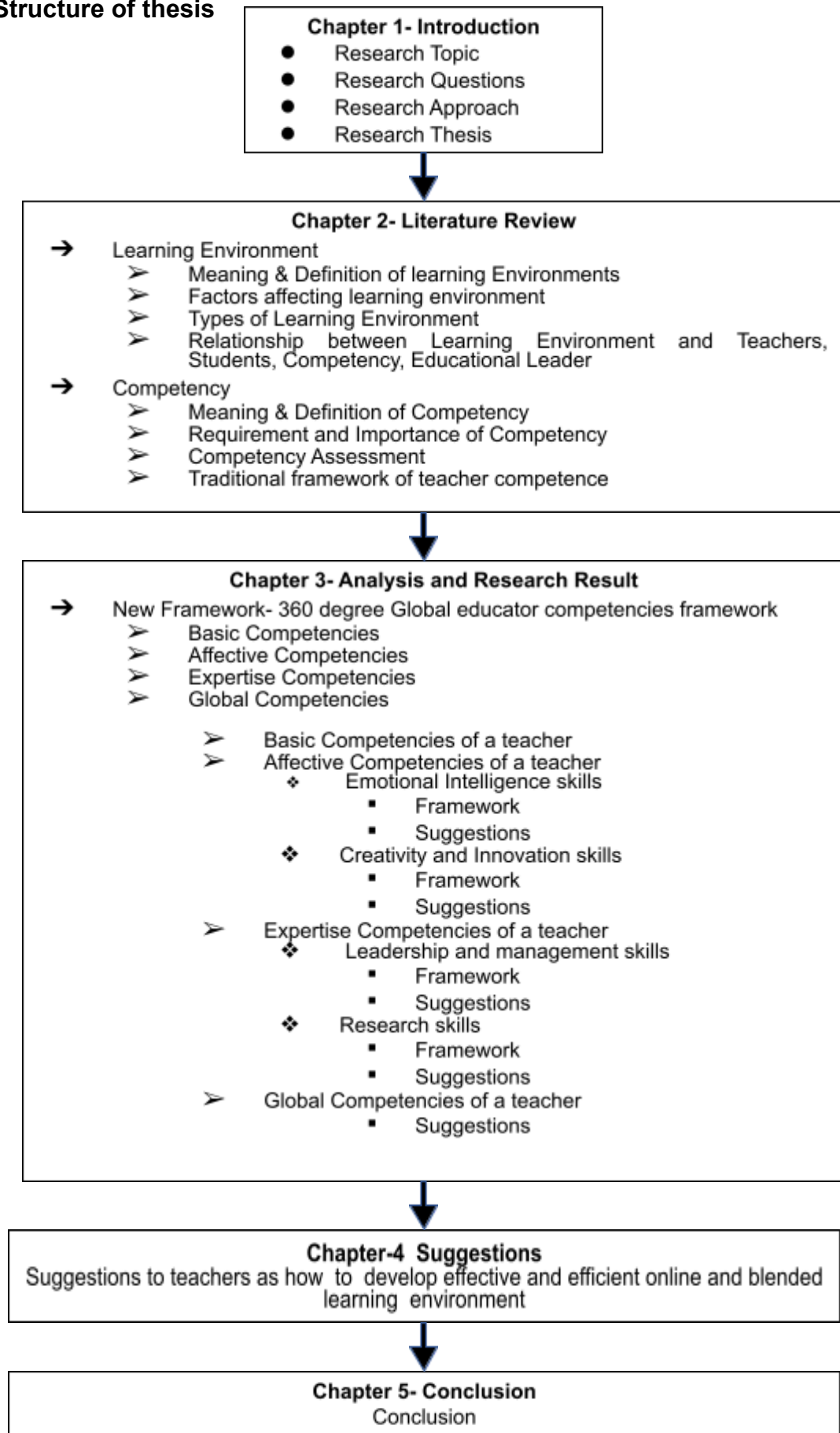


Fig. 1.2- Structure of thesis

LITERATURE REVIEW

2.1 Learning Environment:

2.1.1 Meaning & Definitions

The term 'Learning Environment' has been defined in different ways and from different perspectives.

Based on learning settings

"a place where people can draw upon resources to make sense out of things and construct meaningful solutions to problems" (Wilson, 1996, p.3)

Based on physical settings

"physical setting (light, temperature, furnishings [hardness, softness] colors, spaces etc.) of learning areas used by children (Burton, 1991, Pg. 37).

As learning centres

Each Centre is a kind of learning environment with material, equipments, furnishings, and visual aids that correspond to the centre's purpose. These are usually organised either for one child or pairs or small groups of children (Burton, 1991, Pg. 37).

From Child's perspective

"Children's expanded environment as they progress from home care to participation as a student in school" (Burton, 1991, Pg.37), .

From Teacher's perspective

Place where a teacher facilitates engagement and learning for their class group of students (Nobile, Lyons & Kelly, 2017, Pg.4).

Based on dimensions/factors

" social, physical, psychological and pedagogical context in which learning occurs and which affects student achievement and attitudes (Fraser, 1998 a).

Based on digital environment

“where students can use technology in meaningful ways to explore digital contents (eg. e-textbooks, online resources), communicate with their peers and teachers, collaborate with their peers and others throughout the world, and learn anywhere at any time(Donovan & Green, 2014, Pg. 10).

As mentioned above, some educationist have considered learning environment as a place or a learning centre, some referred it as physical settings, some defined it from child's perspective and others have from teacher's perspective, some have defined from factors point of view and finally some have considered it from collection of resources point of view.

After analysing all the above definitions, and bringing together various perspective in one definition, **Learning Environment** can be defined as a place or an environment where students involve in learning process under the guidance of their efficient teachers by utilizing various resources such as learning material, technology etc. Hence, it is clear from the definition that resources are important but without efficient teachers they are meaningless.

2.1.2 Factors affecting Learning Environment

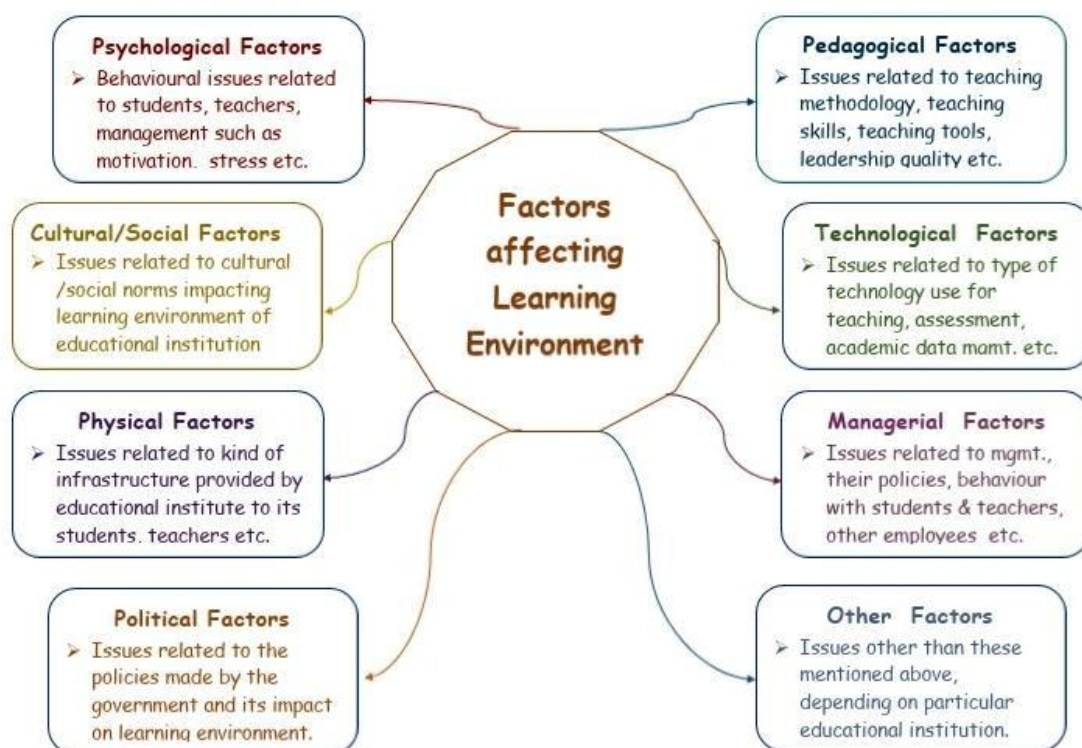


Fig. 1.2-
Factors affecting Learning Environment

The dynamics of a learning environment involve a wide range of teaching and learning styles, instructional methods and techniques for different kinds of learner; motivation of both learners and teachers; and understanding of their personal, intellectual and psychological needs (Sharpe, 1985, Pg. 2). Developing a conducive environment is one of the key necessities so that students gain new knowledge or skills. In order to provide an effective learning environment to students it is necessary to analyse various factors affecting the learning environment and how they can be improved. These factors have a huge impact on the students and teachers, and on their performance operating in that environment. Thus, their analysis is of key importance.

Developing an effective learning environment is in itself a creative task of a teacher. Usually physical & technical aspects of the learning environment are given due importance, but there are many other factors which equally play an important role. The factors affecting learning environment which are as following:-

- 1) **Pedagogical Factors:** - Pedagogy is derived from the Greek word paidagōgikos which means 'teacher'. Pedagogy refers to the teaching strategies, techniques or

approaches that teachers use to deliver instruction or facilitate learning (Wang, 2008). All factors which are related to teaching and its related concepts come under pedagogical factors. These factors include teacher goals, teaching methodology, teaching skills, teaching tools, assessment strategies, material resources, leadership quality etc. Teaching is the process of fulfilling needs of the learner with the incorporation of innovative pedagogical tools (Vijaylakshmi et al., 2020, Pg. 3049) . Without proper implementation of it, no teaching learning process can ever execute successfully. As it is rightly said “Pedagogy is at the heart of teaching and learning” (Paniagua & Istance, 2018, Pg. 14). In connection to the learning environment, pedagogical factors are one of the crucial factors, as all other activities within the environment are directly related to these factors (Closs et al., 2021, Pg.3). Effective students-teacher relationship, classroom culture, good learning outcomes, high motivation level of students etc. are only possible when pedagogical factors are correctly analysed and properly implemented.

- 2) **Psychological Factors**:-Human factor i.e. students and teachers are the key factors in the teaching-learning process and within an effective learning environment (Padhi, 2021, Pg. 2420-21). Students' learning environment and motivation are important to the students in learning(Susanti, T & et al., 2020, Pg. 2047). The interpersonal relationship among pupils, relationship among pupils, relationship between pupils and their teachers, relationship between pupils and both the subject matter studied and the method of teaching and finally, pupil's perception of the structure characteristic of the class and its learning environment(Anderson, 1973, Pg. 4). To understand students and teachers and their needs, it is necessary to understand their psychology. In relation to students, various psychological factors are learner traits & characteristics, their learning goals and motives, support from teachers etc. In relation to teachers, different psychological factors are personality, attitude and belief, Individual difference, motivation level etc. These psychological factors influence the learning environment, students' learning and teacher's competencies(Reddy, 2021, Pg.131). Therefore, teachers should have deep theoretical and practical understanding about different psychological concepts such as personality, intelligence, attitude etc. Within a learning environment, it is necessary on the part of a teacher to have a good understanding about the student's psychology, their drives, behaviour etc. as it will help teachers to give the correct response to students as per the situation they are going through.

- 3) **Technological Factors-** Technology, if properly applied in a learning environment can give fantastic learning experience to the students (Casanova et al., 2020). Tools and technologies like interactive whiteboards, artificial intelligence, mooc, mobile learning, social media, collaborative tools etc. are some of the examples which can make student's learning interesting and interactive. Lots of research has been done to analyze the impact of technology in different types of learning environments. But technology can only provide a good learning experience but the real competence to use it depends on the skills of a teacher. How a teacher creatively uses technology in the learning environment and how effectively students involve in their studies and improve their learning outcomes (Nessipbayeva, 2012, Pg. 148-154). Use of technological methods have increased during this Covid time but it is also necessary to analyse teacher's attitude towards online teaching and how they efficiently perform it.
- 4) **Physical Factors-** The learning environment dramatically affects the learning outcomes of students. Schools' open space and noise, inappropriate temperature, insufficient light, overcrowded classes, misplaced boards and inappropriate classroom layout all make up factors that could be confounding variables distracting students in class (Gilavand, 2016, Pg. 1) . This is one of the most common factors in analysing the good learning environment for students. It has its own importance because without proper physical settings, it can directly impact the studies of students. Such as good quality lighting, ventilation, acoustics, furniture, air quality etc. But only good physical facilities is not in itself enough for improved academic performance of students as other factors also play a crucial role.
- 5) **Managerial Factors:-** In regard to creating an effective learning environment, it is not only a teacher's responsibility but also the crucial role of management. The creation of a good learning environment in an educational organisation is a responsibility shared by the management, high authorities and teachers who must all together play a significant part through effectively managing the given resources in the educational organisation (Bell & Rhodes, 2002, Pg. 152). As it depends on management's intelligence and interest, how much money they invest and further maintain them on various physical, infrastructural and technological factors related to the learning environment. Not only this, but also their role as management, it is imperative that they should understand teachers and students psychology and

their well being.

- 6) **Social/cultural Factors** :- Society and learning environment are two sides of a same coin. What happens in one impacts the other. They are highly interdependent on each other as positivity or negativity of one affects the other. Variety of social as well as culture norms such as national days, festivals, religious rituals etc. brings positivity whereas different kinds of wrong things happening in the society impact student's mind.
- 7) **Political Factors:-** The learning environment and the types of information provided to the students affect political ideology and socialization(Lovell, 2018,Pg. 2). In the same way, policies have a major role in creating a productive learning environment. Policies help in defining the rules, regulations, procedures and protocols for educational institutes. These policies affect the learning environment like the government ruling the country and their vision, their policies towards education, national policy of education of the country etc. These factors have a direct or indirect impact on students' learning and teaching activities.
- 8) **Other Factors:** All other factors which are not discussed above come under this heading.

2.1.3 Types of Learning Environment

There are three types of Learning Environment which are as following-

- 1) Classroom/ Face to Face Learning Environment
- 2) Online Learning Environment
- 3) Blended Learning Environment

1) **Classroom/ Face to Face Learning Environment-**

A traditional classroom setting whereby learners are physically present in the classroom together(Thompson, 2009).

It is defined as “ student's perception of or reaction to their learning tasks and classroom instructions”(Waxman & Walberg 1991).

Thus, classroom learning environment can be defined as a learning environment in which there is face to face interaction of students with a teacher

and also students have maximum opportunities to interact, to develop knowledge and skills during the learning process.

2) Online Learning Environment:-

The environment where teaching and learning take place through the use of computers and the Internet (Li & Lui, 2013).

A learning environment with no physical location and in which the instructors and students are separated by space(Moore, 2016).

Learning platform that allows sharing of educational materials with the learners via the web (Muniasamy, 2019). Ex. include Moodle, WebCT, & Blackboard.

Online learning environment refers to the e-learning environment used for knowledge acquisition within computer mediated digital system (Holland, 2009)

An electronic communications-based learning system that enables and supports the interactions between participants necessary to complete an instructional transaction(Ragan, 2009) .

A structured space created online to facilitate learning & communication, within the parameters of an online distance learning structure (Enger, 2009).

The virtual learning space where students exchange knowledge and expertise using the virtual classroom. Effectiveness in this learning environment should include measures of quality and depth of interactional relationships based on attention, mutual interest, support, reduced stress, shared identity and interpersonal comfort. Here individual performance and team success gives rise to collective synergies that further enable learners to exceed their personal potential(Cato & Seepersad, 2016).

Thus, online learning environment can be defined as a learning environment in which studies as well as interaction between teacher and students are done

completely through digital technology medium. Its effectiveness depends on which technology has been chosen by the teacher and how the teacher applies it.

3) **Blended Learning Environment:-**

Blended learning is a phrase introduced by the distance learning community in recognizing the value of synchronous learning activities, like face-to-face interactions with instructors and collaborative work with peers, as complements to activities performed asynchronously by individual learners(Howard, Remenyi & Pap, 2006) .

Blended Learning is defined as a combination of face-to-face (fff) and computer assisted learning (C A L) in a single teaching and learning environment(NEUMEIER, 2005). The most important aim of blending learning design is to find the most effective and efficient combination of two modes of learning for the individual learning subjects contexts and objectives.

Modern learning technologies are making it possible to provide immediate feedback to learners during learning activities performed online or otherwise within technology-supported learning environments(Howard, Remenyi & Pap, 2006). These technologies enable the students to get immediate feedback and help in progressing in the learning process.

For this research, all three types of learning environment have been taken into consideration as each has its own advantages and relevance in the field of education. This research work applies on all types of learning environments mentioned here, specially at this Covid time when teachers and students are involved in the teaching learning process through online mode. But, still the classroom learning environment is always being liked and considered important, as it facilitates students to come in contact with teachers and friends personally. This intensely affects learning and the learning environment.

2.1.4 Relationship between Learning Environment and

Three key dimensions of the education process are students, teachers and learning environment (Shaughnessy, Shaughnessy & Haladyna, 1983, Pg. 24). In the education process, students are the main component around which the whole system revolves. But to provide the best possible educational outcomes to students, other essential components such as competent teachers, good learning environment are very much required. To understand the relationship among these variables, an analysis is being done to see how the learning environment is related to other key variables and its impact on them. These variables are:-

- 2.1.4.1 Teacher
- 2.1.4.2 Students
- 2.1.4.3 Competency
- 2.1.4.4 Educational Leader

2.1.4.1 Teacher

It is rightly said that "Teachers and Faculty are the heart of the learning process" (NPE-20, 2020, Pg.5). They shape the future of children and therefore the future of the nation (NPE-20, 2020, Pg. 20). They are the most essential and respected members of a society. Considering all these facts given above, a key question arises that how a teacher and learning environment is related to each other? What is the role of the teacher in making an effective learning environment? The way students and teachers interact, the feelings exchanged between them, the teaching employed, and the management techniques used are all part of what some researchers have called the learning environment(Hofstein, A., Yager, R. E., & Walberg, H. J. , 1982). Teachers are the main factors who can make an effective learning environment for the students. Their competencies can play a major role in providing an effective learning environment to the students. But after detailed analysis it has been found by the author that very less research has been done to explain the relationship between teacher and learning environment. This

made the author inquisitive to find out how teacher and student's learning environment are interrelated and how it can be improved by enhancing the competencies of a teacher.

In this research thesis, the author has analysed in a detailed way how teacher's competencies and learning environment are related to each other? What skills and competencies a teacher should possess in order to develop an effective learning environment for students? In this research, the author has analysed these concepts through different frameworks, discussed their drawbacks and developed a new framework for the indepth analysis of relationship between teacher, their competencies and student's learning environment .

2.1.4.2 Students

One factor around which the entire education system revolves, all policies and decisions are taken for their benefit, variety of resources gathered for them and whose success is the success of nation, failure is the failure of nation, such important factor are the students of a education system. Students are the *backbone of a nation*, and on *their delicate shoulders* rests the responsibility to lead the nation towards prosperity and progress (India NCC, 2021). Hence, students are the key components of the educational process (Sari & Yolcu, 2020). The more skilled the number of students, the nation will be comparatively more developed. This is only possible when students get all the required educational material resources, but along with that the key resources are the skilled teachers and effective learning environment. Whether students or teachers or learning environment, they are so dependent and inter- related to each other, lack of performance of one can be the failure of another.

2.1.4.3 Competency

In general, competency means a person's skill and ability to do something. In education settings, teacher's competencies are very much necessary for effective results. Without proper competencies or lack of

them, a teacher fails to do his/her pedagogical practices in an efficient way. Similarly, if students are not able to properly develop their skills and competencies in an education system, then the students in their future career will not be able to perform in the best way.

Great teachers create an effective learning environment (Said & Rogayah, 2009). An important point to be understood here is that the role of competency in a learning environment is very crucial. An effective learning environment can only be developed when teachers have all the required competencies and they use their competencies in an efficient way. In the same way, students can acquire skills and competencies properly only when they will get an efficient and effective learning environment. Thus, the role of competency in a learning environment is very crucial and needs to be researched effectively.

2.1.4.4 Educational Leader

In order to develop an effective education system, it is very much necessary that all the activities whether related to teaching, non-teaching etc. need to be regularly analysed and if some flaws are found, that should be checked and corrected immediately. But for this, highly qualified, properly trained and having long educational experience people are needed. Such people are educational leaders who are efficient enough to tackle such situations. It is the educational leader, as a strong instructional leader, that is responsible for the creation of an effective environment (IUN, n.d.). An effective educational leader demonstrates understanding of and knows how to be a change agent (IUN, n.d.). Whether the case is of education system on a whole, or learning environment of a classroom, or of online learning session, skilled and efficient educational leaders are required who has the ability to improve and develop learning environment into effective one. Hence, the relationship between educational leaders and the learning environment is highly crucial and such relationships should be maintained whenever necessary.

2.2 Competency

2.2.1 What is competency?

According to the **Concise Oxford Dictionary**, competence (or competency) denotes the “ability to do” something or the “ability for a task”.

The **Macquarie Concise Dictionary** defines competence as “the quality of being competent”, where competent means “properly qualified” or “capable”.

A common characteristic which comes out from the above definitions is that the person should be competent, i.e. one should be qualified, have ability and skills to perform tasks efficiently.

To understand it in a more clear manner lets us see what different educators have given different definitions of competence.

"Underlying characteristics of the person that leads to or causes effective or superior performance" (Boyatzis, 1982)

"Effective application of knowledge and skill in work setting"(del Bueno, 1990).

"Whatever is required to do something adequately" (Pollock, 1981).

In above definitions competence has been defined in more generalised form where it has been considered **how effectively employees apply knowledge and skills that leads to superior performance.**

Now, in further definitions educational researchers have compared competence in relation to the **ability of employees and achieving desired outcomes.**

"ability to perform the activities within an occupation or function to the standards expected in employment" (Burke, 2005)

"The ability to perform a task with desirable outcomes under the varied circumstances of the real world"(Benner, 1982).

In a more systematic way, here below the competencies have been defined as a set of specific attributes.

Competencies are defined as "the set of knowledge, skills, and experience necessary for the future, which manifests in activities" (Katane et. al. 44).

Gupta (1999) defined competencies as "knowledge, skills, attitudes, values, motivations and beliefs people need in order to be successful in a job."

Thus, competencies can be defined as **specific attributes or characteristics of a teacher which leads to demonstration of skills and abilities resulting in effective performance of duties assigned to them.** It is an effective application of knowledge, skills and behaviour used in performing specific job tasks. Competency is the ability to apply knowledge and skills to produce a required outcome. It is the ability to perform activities within an occupation; to function as expected for employment; and the ability to do a job under a variety of conditions, including the ability to cope with contingencies. Competency cannot be directly observed and hence it has to be inferred from indirect evidence and hence is performance based.

2.2.2 Requirement of Competencies

Competencies determine the knowledge, skills, attitude etc. of a person. These are essential as they describe the overall personality of a person. Everyone wants to improve their competencies for their further growth in their career. Here explaining the requirement of competencies from different viewpoints which are as following:-

From an **individual point of view**, competencies are those qualities which help a person to grow in one's career. From an **employee's point of view**, it is a description of standards that one should possess. From an **employers' /**

organisation point of view, it is a scale to judge employees' performance, how efficient employees work and how it provides benefits to the organisation.

2.2.3 Importance of Competencies

Competencies are crucial for varied reasons. No matter whether they are employees or employers, competencies play a key role in their 's career and in overall functioning of the organisation. Here discussed the importance of competencies from different viewpoints which are as following:-

Employee's point of view

- It gives information that what competencies are required to do a specific job
- It encourages employees to improve their performance
- It supports in professional development of employees
- In order to improve the performance of employees and develop new skills it is necessary that employees should upgrade their skills and competencies.

Employer's point of view

- It is helpful in setting standards and performance expectations from employees
- It helps in developing the talent of employees
- It facilitate in recruitment and selection of employees
- It helps in focusing on employees behaviour
- It helps the employers to judge the qualities of employees that they should have before joining and during the job tenure. It becomes a key resource to select and develop employees and to provide feedback on their performance.
- It helps in improving the productivity of employees by analysing in which competencies they are lacking and developing their competencies through proper training.
- It helps in retaining employees for a long time as experienced qualified competent employees are the strengths of an organisation.

- There will be less scope of errors from employees, if they possess the required competencies.

For all these benefits, a **proper competency framework is required which helps in identifying, assessing, measuring and managing the competencies of employees.** But before that lets analyse what is the competency assessment.

2.2.4 Competency Assessment

Proper assessment of competencies required for doing a particular job role, not only help employees to perform their best but useful for employers and also in overall growth of the organisation. Thus, competency assessment is necessary.

Competency Assessment is a system of identifying and measuring competencies/capabilities of an employee against the requirements of the job. It is a method in which employees themselves or their senior analyses, as how employees have performed in their job as compared to specified performance standards. The goal of competency assessment is to find out what kind of issues lie in the performance of employees and how can it be corrected before it impacts the organisation's performance. Thus, It is an ongoing process of continually building knowledge and skills (Shermon, 2017, Pg. 232)

Through this kind of assessment, employees know that what kind of competencies are expected from them and what needs to be done to give their best performance. Correct assessments of employees' competencies help the organisation to function properly and get best output from their performance.

2.2.5 Methods of competency assessment

In assessing competencies, there are two terms which is of great importance i.e. assessor and assessee. Assessor means a person who assesses competencies. Whereas assessee means a person whose competencies is assessed.

These methods are important as they help the employees to analyze the gap that exists between their competence in comparison to standards.

There are various methods through which employees' competence can be assessed. Based on 'who should assess competencies' the assessment methods can be categorised as following:-

Methods of Competency assessment

- ↳ Self Assessment
- ↳ Peer Assessment
- ↳ Employer/Supervisor Assessment
- ↳ 360 degree Assessment
- ↳ Assessment by experts

Fig. 2.2- Methods of Competency Assessment

Self assessment - Viewing oneself accurately is termed as Self Assessment (Mersino, 2007, Pg. 96). Self assessment is one of the important methods of competence assessment in which a person(assesse) oneself assess, does some kind of reflection through which he or she recognises their skills, talents and opportunities, and also how much they can take benefits from it. It is one of the effective methods which gives an opportunity to an individual to reflect on their own strengths and weaknesses. This kind of reflection helps employees to understand in which competence area they require further development. Self assessment is usually combined with one or more assessors such as coordinator, supervisor etc.

Peer assessment:- It is one of the key methods of competency assessment practised under a positive and collaborative environment. Assessing other's work , evaluating its quality and providing feedback is termed as peer assessment (Babik, Iyrt & Ford, 2012, Pg.3) The concept behind this method is that peer members conduct competency assessment for each other. Through this method, the employee is able to understand what others think and expects from him. The employee also gets to know what competencies he/she possesses.

Employer's/supervisor assessment:-

In many organisations, managers/supervisors/coordinators assess the competencies of their team members. They take this initiative of assessing employees' competencies by following all the rules and regulations. Supervisor reviews employees' skill assessment details and compares it with the given standards. Supervisor once reviewed, discusses the gaps with the employee.

This method is successful when they are competent in their work and have a good understanding about their team members.

360 degree assessment

A full circle, multi source, and multi rater system used to obtain information regarding employee's competencies, behaviour, management style etc. from the boss, peers, subordinates, internal and external customers, meaning thereby to get information about employee's performance from all stakeholders vertically and horizontally involved with the employee (Goel, 2012, Pg111). It is a method which provides an all round perspective on employees' competence. This kind of assessment not only includes the perspective of individuals or of supervisor but also of peer members(colleagues) and subordinates. This method yields the most accurate results as an employee is assessed from every possible angle i.e, it includes self assessment, peer assessment and also employer's assessment.

Assessment by experts

An assessment procedure based on expert review(Jain, Howlett & Uskov, 2016, Pg. 355). This kind of assessment is done by people who are experts in their field, having high experience in their work area as well as good knowledge and practical experience of assessing competencies. Expert is a competent specialist who examines, gives a review on an employee's performance using his own knowledge(Jain, Howlett & Uskov, 2016, Pg. 355).

2.2.6 Teacher's Competencies

Competency is the heart of the education process. Lack of competencies among teachers compromises students' access to quality education (Lim, Juliana & Liang, 2020, Pg. 525). Whether it is teacher's competency or student's competency both are crucial in their own way and for the proper management of the education process. A high level of competence helps the person to perform in a competent, proficient, productive, creative and innovative way, which directly improves the performance of the person. It encourages the person to do tasks in a systematic and quick way, in minimum time, efforts and with no stress at all. To maximize student learning, teachers must have expertise in a wide-ranging array of competencies in an especially complex

environment where hundreds of critical decisions are required each day (Jackson, 1990).

2.2.7 Traditional framework of Teacher's Competencies

Various frameworks have been analyzed to find out different competencies of a teacher such as Competency Framework for Teachers (Department of Education & Training, 2014, Pg. 4), 21st Century Skills For Teachers And Students (Olajire, nd), 15 Professional Development Skills for Modern Teachers (Cox, 2019) etc.

Competency Framework for Teachers (Department of Education & Training, 2014, Pg. 4) failed to give a clear understanding about the total competencies of a teacher as it highlights only professional knowledge and professional attributes of a teacher. In this framework affective competencies have been completely ignored.

In the 21st Century Skills For Teachers And Students (Olajire, nd) framework, no doubt the researcher tried to inculcate competencies from multiple perspectives but failed to include professional competencies that are necessary for every teacher.

In 15 Professional Development Skills for Modern Teachers (Cox, 2019) framework the researcher tried to include competencies from professional and affective perspective but failed to analyze it from global perspective as today it is essential for an educator to equip himself/herself through global competencies.

Hence after analysing all the abovementioned frameworks it clearly shows that none of them is in complete in itself, as it does not provide a complete picture of total competencies that a teacher should possess because of this, the author has developed a new teacher's competencies framework. This new framework namely **360 degree Global Educator's Competencies Framework** gives a complete detailed analysis what 21 st century teacher should possesses different competencies.

Chapter 3. Analysis and Research Result

3.1 New Framework: 360 degree Global educator competencies framework

After analyzing the frameworks given by different authorities and gaining novel knowledge about advanced competencies, they give good information about teacher's competencies but in fragments. None of the frameworks discussed above, fail to provide complete information of teacher's competencies, within a single framework. That is why a need for such a framework arise where all the required teacher's competencies can be studied and analyzed within a single framework. Such framework is discussed below

This new framework is known as the **360 degree Global Educator's Competencies Framework** shown below:-

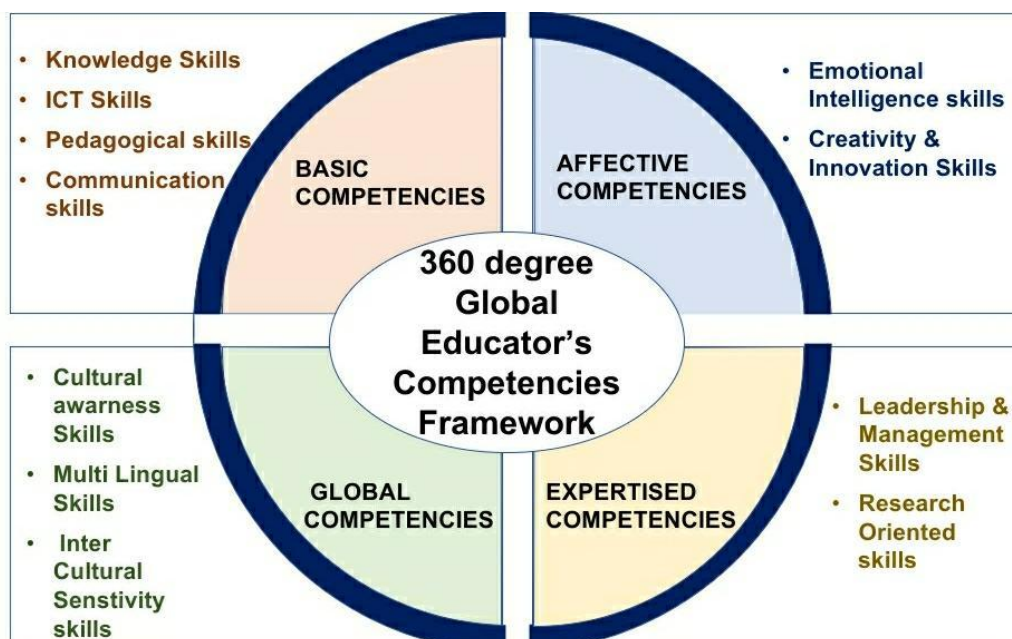


Fig. 3.1-
21 st century Global Educator's Competencies Framework

The key characteristics of this framework is that it can be used by all educators whatever subject they teach, applicable at all levels (primary, secondary, college etc.) and can be used in different kinds of learning environments such as classroom, blended and online learning environments etc . In this new

framework, teacher's competencies are categorized into **four different categories** and each category has a special meaning and relevance. Thus, the four categories of competencies of this framework which are following:-

3.1.1 Basic Competencies

3.1.2 Affective Competencies

3.1.3 Expertise Competencies

3.1.4 Global competencies

3.1.1 Basic competencies- It is set of skills which every teacher should possess in order to survive in the teaching profession. As the name suggests, these are the basic requirements that a teacher should have. It includes:-

- Knowledge skills
- Pedagogical skills
- ICT skills
- Communication skills
- Cognitive skills

3.1.2 Affective teaching competencies:- It is a set/group of skills that if a teacher possesses these skills can add a great positive impact in the teaching-learning process within a learning environment. These group of skills are as following-

- Emotional Intelligence skills
- Creativity and Innovation skills

3.1.3 Expertise teaching competencies- It is a set/group of skills that a teacher should equip with them, either through proper training or through long teaching experience that a teacher gets. These competencies not only help in improving the learning environment but also helps in maintaining the cordial environment of educational institutions. These expertise teaching competencies are-

- Leadership and management skills
- Research oriented skills

3.1.4 Global competencies - It is a set/group of skills that a teacher should have in order to develop oneself into a global educator.

Global educator does not mean who has taught in an international environment rather teaching in local settings and using global competencies in the teaching-learning process. The global competencies are as following:-

- Intercultural Awareness
- Understanding of complex global issues
- Multi lingual
- Ability to consider and Value other's perspective
- Comfortable with ambiguity and change
- Promoting global values such as equity, peace, justice & sustainability

3.2 Basic teaching competencies- Group of those skills which are basic qualifications and necessary to survive in the teaching profession. As the name suggests, these are the basic requirements that a teacher should have.

- Knowledge skills
- Pedagogical skills
- ICT skills
- Communication skills
- Cognitive skills

For this research thesis, the author has kept discussion of basic competencies to minimum as no doubt they are necessary but are basic qualifications. For this research work other three competencies have been analyzed in detail

3.3 Affective Competencies of an educator

Affective competencies means an ability to understand self and other's emotions, ability to be empathetic towards others and give motivation to them (Sinha, 2021, Pg. 125). The affective competencies of teachers focus primarily on feelings, emotions of their own and their students, self-awareness and awareness of others-self as well as inter-personal relationships which in turn helps teachers and student-teachers to organize their teacher's strategies considering the learner's learning needs and emotional needs (N.D. & G, 2021). Thus, affective competencies of an educator can be defined as an ability of a teacher to understand one's own emotions and emotions of others so that teaching strategies can be planned accordingly to the needs and requirements of students. Group of such skills if an educator possesses can add a great positive impact in the teaching-learning process within a learning environment. International encyclopedia of teaching and teacher education have given a great emphasis on affective competency of the entire spectrum of a teacher competency (N.D. & G, 2021). Hence, this competency plays a key role in developing an effective learning environment for students. To have a better understanding of it, let me discuss the groups of skills which come under affective competencies. These group of skills are as following-

3.3.1 Emotional Intelligence

The core of a student's learning lies in the ability of interaction and a fundamental teachers' understanding to students in order to facilitate the learners' potential and self-actualization (Susanto, Rozali & Agustina, 2019).

To effectively execute the teaching-learning process, usually, there are certain things which teachers bring with them to the classroom, which are valuable for the learners. Firstly, their expertise in the subject, and secondly, knowledge of teaching and learning methods i.e. teacher pedagogy. But, there is one more thing which can not be directly seen, despite of that, it is very much necessary for effective teaching i.e. emotional intelligence. Emotions influence teacher-student interactions and shape the atmosphere of the classroom (Meyer & Turner, 2017). For teachers it is not enough to have only academic

knowledge, it is necessary to have emotional knowledge (Susanto, Rozali & Agustina, 2019). Hence, all three things mentioned above i.e. subject expertise, teacher's pedagogy and emotional intelligence are key components of effective teaching.

One of the major reasons for improper teaching done by teachers is that they fail to recognise the importance of emotional intelligence in their work. They do not pay attention to the emotional dimension of the learning-teaching exchange. For eg. Sometimes teachers are unable to acknowledge the confusion or boredom that students are going through during the lesson, due to that teachers fail to understand and respond accordingly to the feelings that students go through and also fail to create a positive learning environment. Emotional Intelligence is the foundation of positive relationships and developing a positive environment within and outside the classroom (Hargraves, (2017), Maamari & Majdalani (2019)). Hence, emotional intelligence is one of the key competencies that a teacher should possess to execute a successful teaching-learning process. For better understanding of the concept, the author has discussed some important definitions of emotional intelligence given by eminent researchers and thereafter analyzed the key frameworks of emotional intelligence and finally gave suggestions that how a teacher can enhance his/her emotional intelligence.

Meaning and Definition

Salovey and Mayer-

Concept introduced by Salovey and Mayer

“capability of an individual to manage his own emotions and the emotions of other individuals, to differentiate among them and to utilize information to facilitate one’s activities, reasoning, and thinking”.

Alan Mortiboys in his books "" has lucidly explained how an emotional intelligent teacher can prove to be effective in developing an effective and efficient learning environment. According to him, if an emotional intelligent teacher properly utilises his/her emotional intelligence skills, then he/she can create a positive emotional learning environment for students. To be an emotionally intelligent teacher, the teacher should have a deep understanding of

and ability to recognize one's own feelings and feelings of learners, and also the teacher should properly use his/her listening skills with individual students and students working in groups. The teacher should deal with learner's expectations with complete dedication and develop a self-awareness within oneself and encourage students to do that (Mortiboys, Pg.8). To analyze deeply about emotional intelligence, various frameworks of it have been developed by researchers. Let's analyze some important ones:-

3.3.1.1 Emotional Intelligence Frameworks

The Mayer-Salovey Ability Model of Emotional Intelligence/Four-branch model of emotional intelligence

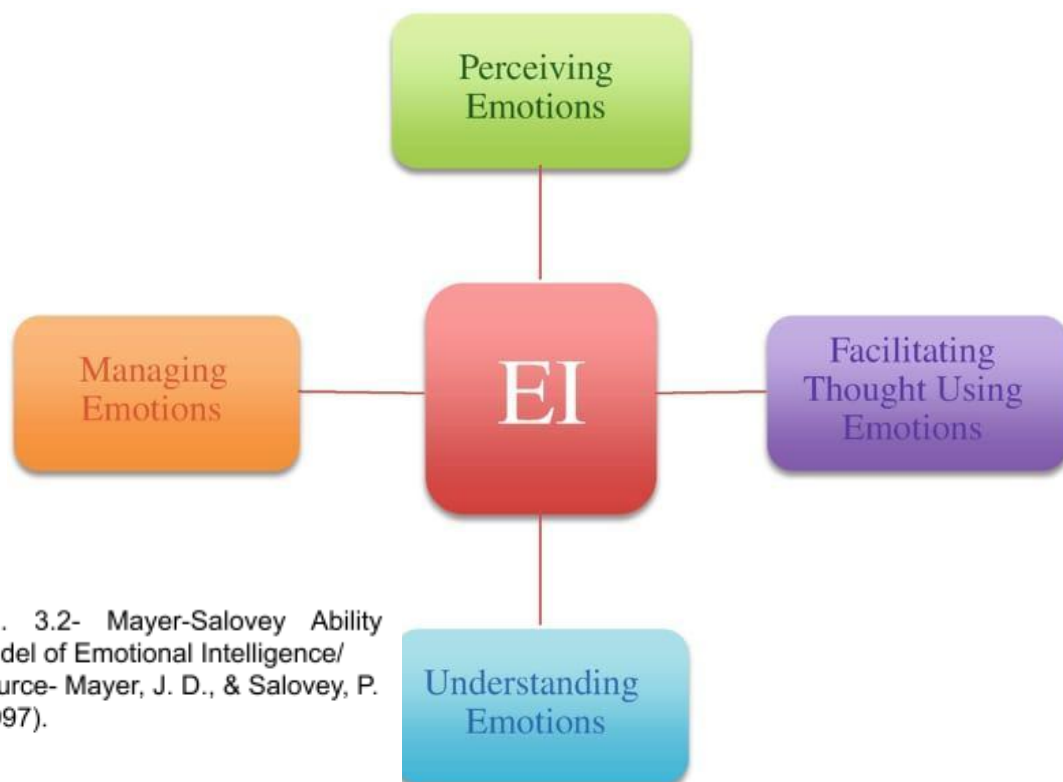


Fig. 3.2- Mayer-Salovey Ability Model of Emotional Intelligence/
Source- Mayer, J. D., & Salovey, P. (1997).

Mayer and Salovey defined emotional intelligence as specific abilities, the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth (Mayer & Salovey, 1997). Thus, emotional intelligence can be defined as an ability to monitor one's and others' emotions, the ability to distinguish emotions, and the ability to use them to guide their thinking and actions (Rong, 2020). To

understand emotional intelligence, Mayer and Salovey developed a model of emotional intelligence called a four branch model. In this four branch model, the first branch is perceiving and identifying emotions which defines an ability of a person that how he recognizes what they themselves feel and also what other people feel. The second branch is using emotions to facilitate thoughts. Under this a person's ability is measured how he/she generates emotions and reasons with this emotion. The third branch is understanding emotions which means an ability to understand complex emotions and emotion chains and how these emotions transition from one stage to another. The final branch is managing emotions which means a person's ability to manage his/her own and other's emotions.

Thus, this model very well illustrates the science of emotions, initiating from perceiving to managing them. This model explains how to understand emotions of our own self and others. But Goleman analyzed Emotional Intelligence through a very different perspective. He examined the key components of a highly emotional intelligent person.

Goleman's 5 components of Emotional Intelligence

According to Goleman, D. (1999), emotional intelligence comprises five components or five different types of people. These components are



Fig. 3.3- Goleman's 5 components of Emotionally Intelligence
Source- <http://theimportanceofemotionalintelligence.weebly.com/the-5-components.html>

a) **Self aware:-** These kinds of people have an understanding about their feelings, emotions, strengths, weaknesses etc. Due to this self

understanding about themselves, they know about their potentials resulting in more self-confidence and possess high EQ. This quality is important for everyone but for a teacher it is extremely important as their self awareness will give them knowledge about their potential. This will also help them in knowing how to use their potential in the most effective way. This will enhance their self confidence which will give a positive impact on the teaching- learning process.

b) **Self regulation**:- These kinds of people have control on their impulses whether they are in a positive or negative situation. Due to this good control on their drives, they are considered as mature people. For a teacher, this quality is really crucial as during their teaching task they may face a variety of situations which are positive as well as negative. This quality will help to maintain their balance while dealing with any kind of situation.

c) **Motivation**:- Motivated people do not just run behind high salary packages or some prestigious titles. They love challenges and achieving these challenges make them happy and highly motivated. For a teacher to keep themselves and their students motivated is in itself an essential task as the whole teaching learning process revolves around various psychological concepts such as learning, motivation etc. Hence, motivation is a key skill that every teacher requires to be successful in their teaching task.

d) **Empathy**:- Empathetic people understand other people's feelings and when they make some important decision, they consider other's feelings also. Being empathetic is a necessary personal quality but for a teacher being empathetic means understanding the needs of students required to execute the educational process efficiently. By doing so, this makes a teacher, a supportive teacher who is always appreciated by students.

e) **Social skills**:- Social skill people are good at managing relationships with other people. This skill is the culmination of emotional intelligence 's other four components. Teacher's role is not limited to students only but with their parents, their own colleagues and society as a whole. Hence social skills are required at every level.

Thus, analysing all the key components of Goleman's model it clearly explains that a person should possess all these qualities i.e. Self Awareness, Empathetic, motivated, self regulated and have good social skills in order to become a highly emotional intelligent person. Since a teacher and teaching profession requires highly emotional intelligent people, teachers should also possess these qualities.

Suggestions as how can teachers improve their emotional intelligence skills

3.3.1.2 Suggestions for teachers- how to deal with students

- Teachers should be emotionally intelligent to understand what students want to say or of what situation students are going through. For this, teachers should possess good listening skills and show empathy towards students and their situation.
- Teachers should develop a positive learning experience for the student by providing them a friendly and relaxed learning environment where they can feel enthusiasm and can ask their queries without any fear.
- Teachers should give complete support to students, forgiving them for their mistakes and giving them opportunity to improve and enhance in their task.
- They should apply proper strategies in tackling with difficult students

For Teachers how to manage self emotions

- They should be open minded to discuss their work related tough situations with their colleagues and management.
- Teachers should not feel disheartened, if they face any challenge rather with their strong will they should come up with new ideas so that they handle situations in a better way.
- They should develop positivity within themselves
- Proper sleep and practice of Yoga, meditation etc. are very helpful techniques in developing self awareness, empathy and emotional intelligence within a person.
- They should be mentally and emotionally ready to accept change that could take place in work environment or due to the behavior of students.

3.3.2 Creativity & Innovation

Some psychologists have an opinion that creativity is a thinking process (Dalton, Watts & Hoyle, 2010, Pg. 169), some believe that it arises from unconscious drive (Slaatte, 1983, Pg. 148) and others say it is a complex process (Goldberg, 2018, Pg. 92).

But to think in a creative way, one needs more skills such as **analytical skills** through which a teacher has a capability to understand the situation, **open mindedness** through which a teacher can listen, understand and analyze situations in an open way, free from assumption and biases. Let's analyse its definition in a more detailed way-

What is creativity?

Creativity is the ability to produce work that is both novel (i.e. original, unexpected) and appropriate (i.e. useful, adaptive concerning task constraints) (Sternberg, 1999)

"creativity sometimes refer to creative potential, sometimes to creative production, and sometimes to creative productivity" (Guilford, 1961)

Creativity "as bringing something into existence, generating, inventing, dealing imaginatively with seemingly intractable problems" (Landry & Bianchini, 1995, Pg.18)

Creativity is a function of an interpersonal attitude towards the beneficial and positive use of creativity in combination with three factors: knowledge, imagination and evaluation. (Noller, nd)

Creativity involves thinking a problem afresh and from first principles; experimentation; originality; the capacity to rewrite rules; to be unconventional; to discover common threads amid the seemingly disparate; to look at situations laterally and with flexibility. These ways of thinking encourage innovation and generate new possibilities (Landry & Bianchini, Pg. 18)

Thus creativity & innovation can be defined as a key skill through which a person analyzes a situation/task in a creative way which involves generation of

new original ideas by gaining knowledge and applying that knowledge in a practical way.

What is innovation?

The terms creativity and innovative are often used interchangeably but they are different.

“Innovation is about action. Creating results by doing new things” (Miller & Wedellsborg, 2013)

“Innovation consists of the generation of a new idea and its implementation into a new product, process, or service” (Urabe, 1988).

Thus, innovation means when people put creativity and ideas into action.

Difference between creativity and innovation

According to Andy Burnet of the Center for Creativity at the Cranfield School of Management " Creativity is a divergent thought process that generates ideas, and is non-evaluative whereas innovation is a convergent process with the selection and implementation of ideas"

Creativity, in other words, is the process through which new ideas are produced, while innovation is the process through which they are implemented(Landry & Bianchini, 1995, Pg. 18).

The key difference between creativity and innovation is that creativity means generation of new ideas whereas innovation means selection and implementation of ideas(Cameron & Gretchen, 2013, Pg. 98). Progressing from creativity to innovation involves evaluation, which is not in itself part of the creative process. Evaluation involves assessing how appropriate an idea is to a given situation, its feasibility, cost-effectiveness and popularity (Bianchini & Landry, 1995, Pg. 20). Some people are creative but some may be innovative. A person may be very creative, but if that person does not have analytical, evaluative skills to judge and analyze which idea to be selected and implemented then such person is generally not called as innovative(A’sad & Thomas, 2013, Pg.220). Thus, creativity is a necessary precondition for

innovation, but innovation is what counts in maximizing the potential of an idea (Bianchini & Landry, 1995, Pg. 20).

Importance of creativity & innovation in education

Teachers need to be creative so that through their good imagination skills, they can create innovative solutions which provide students an interactive and enjoyable learning environment and help them in getting involved in their studies in the best possible way. Creativity is a natural talent (Stronge, 2018, Pg. 120) but that can also be learned (Melser, 2018, Pg. 35). It is not necessary that teachers need to be creative by nature. If a teacher does not have natural creative skills, it has been proved by researchers that creativity can also be learned (Stronge, 2018, Pg. 120). But for this, teachers need to practice different techniques to enhance creativity. But before analysing those techniques, the author has analyzed two different kinds of frameworks here below, which are developed by psychologists to explain creativity in a much better way. These frameworks are as following:-

3.3.2.1 Contemporary framework of creativity

1. Lin Model

Creative Pedagogy

Lin (2011) created a framework known as creative pedagogy which explains the relationship between creativity and pedagogical practices.

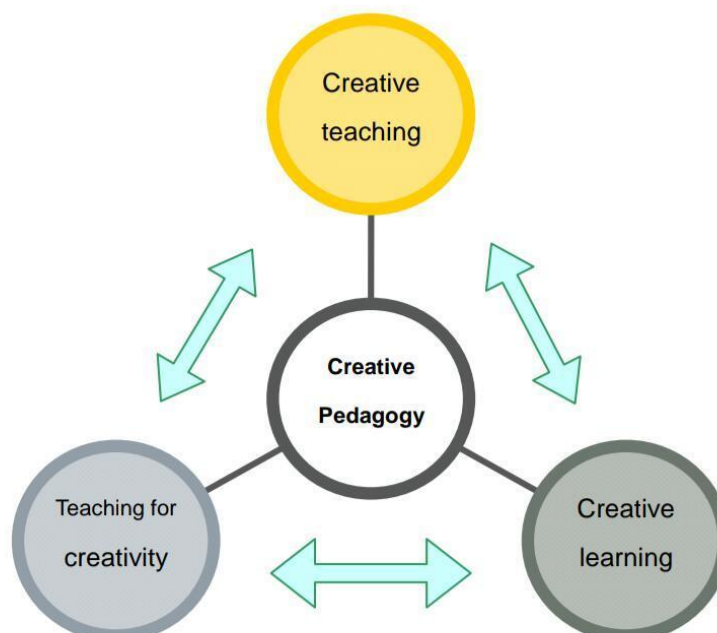


Fig. 3.4- Lin Model
Source- Lestari, I., Zakiah, L. (2020)

According to Lin (2011), the development of creativity in education can be fostered by three aspects: by

Creative teaching:- where the teacher uses creative and innovative pedagogical approaches with the motive to involve students more and more in their studies.

Creative learning: where students on their own uses techniques that lead to creative output

Teaching for creativity:- means where a teacher develops an environment and shows an open attitude towards the student's creative ideas and behaviour. Teachers provide such tools and techniques to students, through which they can enhance their personal creativity.

These three aspects are interrelated with each other which forms the framework known as creative pedagogy, which offers a holistic view for fostering creativity in education by the interplay of three practices: creative teaching, creative learning and teaching for creativity. If a teacher practices all the three aspects in their teaching tasks, it will not only enhance their performance but also provide an effective learning environment to the students.

2. 4 ps of creativity

4p model of creativity is one of the most acknowledged models developed by Mel Rhodes. According to Rhodes(1961) creativity is a phenomenon where an individual develops new products, with implicit

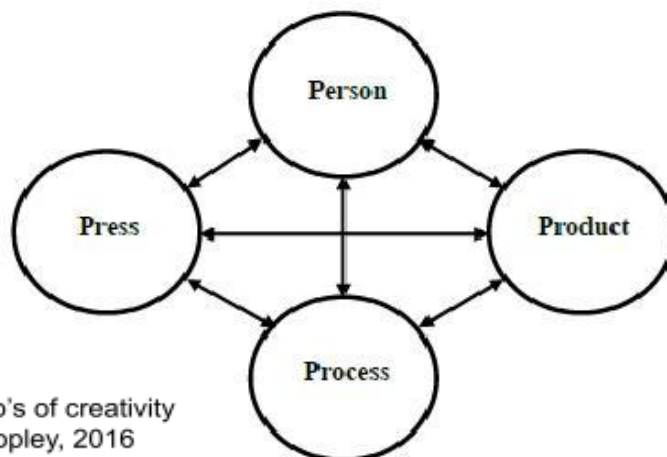


Fig. 3.5- 4 p's of creativity
Source- Cropley, 2016

cognitive thinking, and where there is an environment that potentiates that creation.

He categorized these factors into four different perspectives which are as following:- (a) the creative person; (b) the creative process; (c) the creative product; and (d) the press.

a) **Creative person:** In education settings, this person can be a student, teacher or educational leader who through their skills, abilities and motivation develops an idea or product.

b) **Creative process:** Creative process means the process through which the creative person will develop the product. Such a process can be adopted by teacher, student or educational leader in an education setting.

c) **Creative product:** It is that product which has been produced by a creative person and hence it is also known as innovation. This is the final product that can be used to provide creative solutions to students so that they can enhance their learning.

d) **Press:-** Press means the environment in which the creative person has worked in order to develop a creative product. This is a key factor which needs to develop and further improve so that the person can create a creative product by using the creative process so that in whole that person can become a creative person.

After analysing the above two models of creativity, they give a detailed and clear picture of what creativity is and its different aspects. For enhancing the teacher's creativity skills, these two models can be used in the education field in a very effective way. Lin Model gives a clear understanding about the relationship between creativity and the teaching-learning process. How creativity is related to teachers, students and the teaching process. Rhodes's 4P model can help teachers to understand the creative process in a much better way by recognizing and establishing the difference between a creative person, process, product and environment under which that product is developed or learning environment is improved. By understanding this difference, teachers will be able to

judge which factors need to be analysed and how to implement them properly.

3.3.2.2 Suggestions as how can teachers improve their creativity & innovation skills

After analysing and understanding definitions of creativity and innovation, its difference and various models of creativity, hereunder discussed are the suggestions that teachers can follow to enhance their own creativity and innovation skills. The suggestions are as following:-

- a) Teachers should use innovative teaching methods and tools to make studies interesting for students.
- b) They can experiment with different activities to see how students get involved in these activities and how learning outcomes of students can be improved.
- c) Teachers should be open minded when students give their ideas and provide them compassionate learning environments where they can apply their ideas in the learning process.
- d) Teachers should develop different creative assessment methods so that students can get opportunities to showcase their skills and talents in different ways.
- e) Teachers should use collaborative projects where different students participate in these projects and support each other in enhancing their creativity.
- f) Teachers should attend various creativity enhancement related workshops wherein they can know about the latest creativity techniques trending in the education world. It can be in the form of any software, teaching or assessment method.

3.4 Expertise competencies

3.4.1 Leadership and management skills

Leadership and management skills are those skills that equip a teacher to inspire, guide and support students in an effective manner so that they bring out the best in them. These competencies are not only relevant in relation to students, but also with their colleagues and school administration. They lead a change in their educational organisation and face challenges in an efficient and effective way.

Teachers with leadership qualities (or Teacher-Leader) not only share the expertise knowledge they have in their subjects but also provide psychological and emotional support to students. Such teachers facilitate, support, guide, mentor the students and provide every kind of support to the students. These teachers can play a key role in the professional development of their team members by sharing their knowledge and giving support to each other.

To develop teachers into effective leaders, good communication skill is one of the basic requirements but along with that a teacher needs to develop oneself into a change agent who has the skills to become an inspirational leader on whom not only students but also other members such as colleagues, seniors etc have full trust on him/her. But what kind of qualities a teacher with leadership & management competence should possess can be understood with the help of following frameworks such as

3.4.1.1 Frameworks

Teacher Leader Model Standards

Teacher Leader Model Standards are the standards that delineate the knowledge, skills, and competencies that teachers need in order to assume leadership roles in their schools, districts, and the profession(). In this model, various domain standards have been given which explains the role and functions which are as following:-

Domain I -Fostering a Collaborative Culture to Support Educator Development and Student Learning

Domain II- Accessing and Using Research to Improve Practice and Student Learning

Domain III - Promoting Professional Learning for Continuous Improvement

Domain IV- Facilitating Improvements in Instruction and Student Learning

Domain V- Promoting the Use of Assessments and Data for School and District Improvement

Domain VI-Improving Outreach and Collaboration with Families and Community

Domain I -Fostering a Collaborative Culture to Support Educator Development and Student Learning

One of the key roles of a teacher-leader is to develop a collaborative culture within the classroom among students and among educators working in the educational organisation. He/she should develop such an environment where there is trust, cooperation and understanding among teachers and the focus is on improvement in pedagogical methods and student's learning.

Domain II- Accessing and Using Research to Improve Practice and Student Learning

Teacher leaders should encourage the research activities among the students and educators. They should guide students how research helps in developing new knowledge and how this knowledge is helpful in further development. They should also encourage other teachers to participate in research activities and implement new findings in their pedagogical activities.

Domain III - Promoting Professional Learning for Continuous Improvement

Teacher-leader should inform about latest pedagogical tools, techniques and technologies to other teachers. They should motivate other teachers to participate in different workshops which helps in developing their professional skills and promote excellence in their performance.

Domain IV- Facilitating Improvements in Instruction and Student Learning

A teacher leader should utilise his/her knowledge and experience in advancing the professional skills of other educators working along with them in educational organisation. They should provide an environment to other educators where

they can collaborate and support each other in enhancing their skills and competencies.

Domain V- Promoting the Use of Assessments and Data for School and District Improvement

Teacher Leaders should keep themselves updated about the latest research that is taking place in the education field. They should share this knowledge with them, encourage educators to develop relevant data for further research and use it for the improvement of educational organisation's activities.

Domain VI-Improving Outreach and Collaboration with Families and Community

Every society has its own culture and beliefs. Teacher leaders should understand their culture, families and beliefs from which students come from. They should work with their colleagues to efficiently collaborate with student's families and other members of the community with the aim to improve the learning of students and provide maximum opportunity to them.

From the above discussion it is clear that the role of a teacher is not limited to his/her classroom. They should develop a leadership quality within themselves so that they can support the students and work colleagues in various educational purposes and further help in developing an effective learning environment.

Innovative Teacher Leader competencies model

School management should provide opportunities to its teachers to obtain leadership qualities while teaching in the classroom. This will help teachers in advancing in their career path while performing their teaching duties.

In order to become effective teacher-leaders or to enhance leadership qualities within a teacher, it is necessary to develop certain competencies which will help them in improving their performance within their work profile. To understand these competencies, the author has analyze one important model i.e Innovative Teacher Leader competencies model which is discussed here below-



Fig. 3.6- Innovative Teacher Leader Competencies

This model suggest five competencies that a teacher- leader should possess which are as following:

- 1) Know Yourself
- 2) Nurture Trust
- 3) Cultivate Curiosity
- 4) Catalyse actions
- 5) Navigate Perspective

1) Know yourself

The first key competencies that this model suggests to teacher-leaders is that they should practise self awareness i.e. to know oneself. It says that a teacher-leader should understand his/her own strengths and weaknesses and analyze how they impact their work profile. Teachers should analyse why they have chosen to be a teacher and what they like about their job. How can they use their strengths to enhance their performance that they gained from their education, work life and personal life experiences.

2) Nurture Trust

One of the key competencies of a teacher-leader is to build positive relationships with the students and their parents, colleagues, management and other members of society. This will help teacher-leaders to develop a cordial relationship with everyone and further motivates them to do their best in terms of performance. This also helps in developing trust and mutual understanding among each other.

3) Cultivate Curiosity

The next key competency suggested to teacher-leaders is to cultivate curiosity. It means that they should seek out ways to question, learn and share, also encourage others to do it. By doing so, it will help teacher-leaders and people related to them to develop new knowledge by asking questions and trying to seek out answers for them. This will help them to enhance their performance and also encourage others to do that.

4) Catalyse actions

The teacher leaders should do inspiring actions which encourage others to give their best performance. They are change agents who have the capacity to motivate people and bring change.

5) Navigate Perspective

Teacher leaders should work towards building relationships and trust, but this is possible only when ideas and views are clearly discussed with students and other educators. By doing so, this will help them to understand the situation easily and will work towards it with clarity.

3.4.1.2 Suggestions as how can teachers improve leadership & management competencies

The two models discussed above give a clear explanation what competencies a teacher-leader should possess. Here, the author has given some suggestions

as to how these competencies can be enhanced. The suggestions are as following:-

- 1) A teacher-leader should try to develop a collaborative environment within the classroom and at the workplace. There should be an environment of mutual understanding, trust and cooperation among students and educators working at the workplace.
- 2) To develop innovation in the teaching- learning environment, the teacher-leader should encourage research activities among students and educators.
- 3) Teacher-leader should lead the team of educators and encourage them to participate in various workshops and professional skills enhancement activities.
- 4) Teacher-Leader should motivate students to practice self awareness activities in order to find out their skills and competencies, strengths and weaknesses. Through this way, students will try to strengthen their skills and be able to remove their weaknesses.
- 5) Teacher-leader should try to develop a collaborative relationship with the student's parents, community and society as a whole. This will help the teacher-leader to understand them better and be able to communicate ideas, views etc. efficiently.

3.4.2 Research Skills

Research is the cornerstone of national growth (Oman, Gamaniel & Addy, 2006, Pg. 5273). Good quality of research determines the nation's economic progress and social development. In the same way, proper and systematic research in education plays a key role in providing high quality education to students.

Hence, it is necessary that teachers should get adequate opportunities to equip and strengthen their research skills so that they can properly apply their research skills in their professional career/practices.

Research activities are useful as they support in the improvement of teaching activities and foster further development. When teachers can investigate their own practices and beliefs, they can develop an insightful stance towards

teaching and learning(Dikilitaş & Bostancıoğlu, 2019, Pg.3). Gaining knowledge through research inquiry and applying the same during teaching, aids the educator in providing a good learning environment to students by applying new innovative teaching and assessment methods through proper use of psychological and technological tools. This further strengthens the professional skills of educators.

Research is not just the domain of an expert outside the classroom; it is also the domain of the teaching professional (McRae & Parsons, 2007). Sometimes it is considered that research is an activity of experts but it is not always true. Any teacher who asked a question deemed essential to practice and used a systematic method to find an answer has engaged in a form of research (McRae & Parsons, 2007)

Good teachers can become good researchers. Good teachers are good researchers; if they were not, they would not be good teachers(McRae & Parsons, 2007). But if we want teachers to be research-oriented, their willingness and interest plays a key role in developing their research competencies.

Teachers sometimes fear anxiety and reluctance towards research(Dikilitaş & Bostancıoğlu, 2019, Page 3). It may be due to the extreme pressure of their duties related to their job or due to lack of opportunities given to them. It is important to address/understand why teachers feel this kind of stress and have reluctance towards doing research. If teachers try to manage their work in an efficient way and management supports them fully, then they can actively participate in research activities, it will not only be beneficial for students or for themselves but society as a whole. Hence, it is necessary for the betterment of an education system that teachers should develop their research skills.

Teachers as researcher and its importance

Research competency is one of the key competencies that every professional should develop. Teachers having knowledge, skills and along with that possess a positive attitude towards research helps in developing their systematic

thinking, analysis, and synthesis towards their teaching role. This further supports the academic development of teachers and enables the discovery of new knowledge and innovations, to assist in problem resolution systematically, and the knowledge can be further developed continuously (Arayapipat, 2010).

One of the key roles of a teacher is to understand the needs of students and the kind of learning experience the students should get. A teacher should work as a co-researcher and guide whose prime responsibilities is to carefully observe students, listen to their questions, scaffold their learning , find what interests them and then provide them with meaningful opportunities to explore these interests further (Lees, 2018). Educators are no doubt the researchers, forever engaged in a process of inquiry that calls upon us to best understand the students, their learning strength and needs, their passions, interests, and ideas (Lees, 2018). Thus, to develop effective and efficient teachers, management should motivate teachers and even teachers themselves should enhance their research competencies.

To develop research competencies, very few frameworks are found during the research by the author but the few frameworks which are found are as follows such as NPA Core Competencies (NPA, nd), Career Development Framework (UQ, nd) etc. But none of them gives a clear picture that which research competencies a person should possess and more specifically a teacher should have. In NPA Core competencies framework, analytical skills, affective skills and learning skills are missing as these are the base of research competencies. Whereas in the Career Development framework, most of the skills are considered but it does not include emotional skills such as interest, motivation etc as these skills play a major role in developing and enhancing the researcher's interest in research. For this, the author has developed a new Teacher's Research Competence framework (TRC framework) which includes all the required skills a person should have to develop his/her research competencies.

3.4.2.1 Framework

Teacher's Research Competence framework (TRC framework)

After analyzing various frameworks related to research competence but no framework gives a clear picture of teacher's research competencies. Therefore, a new teacher's research competence framework has been developed by the author. This framework is shown in the figure below and explained thereafter.

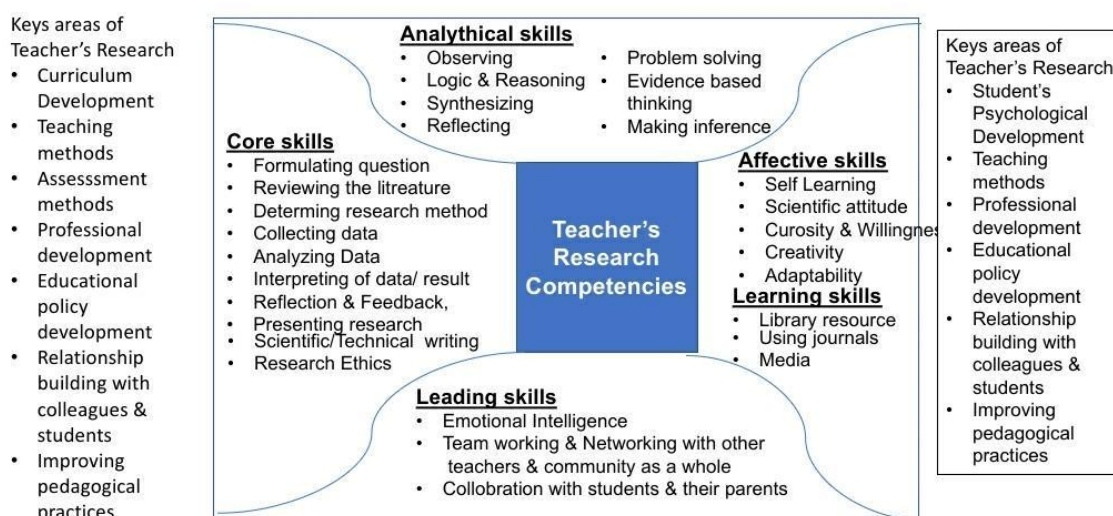


Fig. 3.7- Teacher's Research Competencies Framework

In this framework research competencies have been categorised under five different heads i.e.

1. Core skills
2. Analytical skills
3. Affective skills
4. Self Learning skills
5. Leading skills

1) **Core skills:** - As the name suggests, core skills include those skills which are required not only as a teacher but also as a good researcher that one should possess. These are the basic skills which are necessary for systematic research. Right from formulating research questions, reviewing literature, determining research methods and techniques, data collection and analysis, interpreting results, giving conclusion and feedback etc. each and every step is crucial in the research process. Teachers should have sound knowledge about

them and also know the correct method to execute them. If somewhere there exists any error in doing it, affects their research result and also their teaching activities.

2) **Analytical skills**:- Like any other researcher, teachers should also have good analytical skills to develop oneself into a good researcher, such as observing skills, reasoning skills, synthesizing, problem solving skills etc. These skills are very necessary in education research as teachers usually need to observe student's behaviour, analyze various issues that take place in the teaching-learning process. Attentive teachers observe their students and, through systematic and embedded study, come to understand the culture of their learning environment (McRae & Parsons). Thus, teachers should possess good analytical skills for doing research in an effective way.

3) **Affective skills**- These are very crucial skills of a researcher as it keeps the researcher self-motivated on the path of research. Research is not a mechanical activity rather it depends a lot on the psychological/affective skills of a researcher. Skills like self learning, developing scientific attitude, enhancing curiosity, putting creativity and adapting according to the situation are some of the necessary skills which every researcher should possess to enthusiastically work in the research field. Not only this, teachers should also need to be more patient in doing research in education as they need to conduct interviews from students, their parents etc. They need to analyze the individual needs of students or learning environments and, after reflection and consideration, adjust actions to best meet student and system needs(McRae & Parsons). Thus, to collect systematic data as a researcher, affective skills of a teacher are one of the necessary requirements.

4) **Self learning skills**- As a researcher, it is necessary to collect authentic data. For this, researcher has to find out required data from multiple sources such as from journals, books etc. Thus, a researcher should have self learning skills which means that he/she should have the drive to deeply analyse and find relevant data from various sources such journals, periodicals, internet, library etc.

Along with self learning skills, teachers should also have understanding, knowledge and experience in teaching in different kinds of learning environments such as classroom, online and blended learning environments etc. as every kind of learning environment provides relevant research data to the teacher. Hence, teachers should possess a strong drive to collect data from various sources such journals, periodicals, internet, library etc. and also from the learning environment where he/she teaches.

5) **Leading skills:-** Leading skills of a researcher plays a key role in pursuing the research work in a systematic way. Researchers should possess good leadership qualities as it helps in smooth running of a research project.

Teachers as researchers should also possess effective leadership qualities as teachers have to deal with different kinds of people like students, their parents, management, colleagues etc. Effective leading skills such as teamwork, cooperation, mutual understanding etc are necessary in order to pursue research work efficiently.

3.4.2.2 Suggestions how can teachers improve their research competencies

Teachers as researcher should follow the following suggestions:-

- To write a good research thesis, it is necessary to observe and analyze the issue in a correct way. They should use systematic research methods and techniques for result oriented research.
- To develop scientific thinking, teachers need to be curious, inquisitive and analytical by nature. This kind of nature will help in deep analysis of the issue and be able to find out the causes.
- Teachers need to be patient and interactive by nature in order to receive data from various sources such as by interview, group discussions etc.
- Teachers should develop a habit of reading different research papers, journals, research topic related books so that a strong theoretical base can be formed before doing the actual research.

- Teachers should develop a good understanding about various quantitative and qualitative methods as these methods are necessary to evaluate research data.

Thus, for a teacher to be a good researcher it is necessary that he/she should be well acquainted with research methodology on one side and should have good emotional intelligence and leadership skills on the other side.

3.5 Global Competencies

For developing 21 st century learner, it is necessary to nurture them into global citizens who have the capacity to understand the global and intercultural issues of the world, and possess skills to appreciate the perspective and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development (PISA, 2018). To develop global citizens, it is necessary that educators should be global educators who take the responsibility of developing global competencies in students. Developing globally competent educators or global educators through pedagogically sound technology- enabled education and training is critical for transforming education for student's success in the 21 st century(Guo-Brennan, 2020). But here the key question arises who are global educators, what are their global teaching competencies and how they can be developed?

A global competent educator or global educator is a professional who has the knowledge and a critical literacy in global, national and local issues; understands interconnectedness and the interdependency of issues, people and countries; is culturally competent to create an inclusive learning environment for a diverse student population(Guo- Brennan, 2020, Pg. 129) . Thus, global educator means a professional who has a global perspective and teaching competencies that develop students into global citizens. The tasks of such educators are to expand the world knowledge of students and create opportunities for them to develop their skills in understanding and solving complex global issues and encourage them to develop peace and justice

around them. They should try to inculcate 21 st century global skills such as critical thinking, creativity, innovation, empathy, intercultural awareness etc within students. These skills help them to develop their high order thinking skills and understanding of different cultures, which will further develop them into global citizens.

In developing global competencies of teachers, it does not mean teachers have to teach at international level rather teachers should develop their perspective in such a way that the students to whom they will teach, develop their understanding of global issues and motivate them to develop into a global citizen. Thus, the key global competencies of a teacher are as following:-

- Intercultural Awareness
- Understanding of complex global issues
- Multi lingual
- Ability to consider and value other's perspective
- Comfortable with ambiguity and change
- Promoting global values such as equity, peace, justice and sustainability

Intercultural awareness :- As a global educator, intercultural awareness is one of the necessary competences, as it helps educators to know about different cultures and also understand students from diverse backgrounds in a better way. As Paris (2012) defines the term intercultural competence in teachers as the ability to be aware of, accept, integrate and expand upon cultural differences in order to ensure that students experience meaningful learning. Thus, teachers should develop their intercultural competence with the aim that they can easily adapt in any situation when teaching students with diverse cultural backgrounds. For this teacher should broaden their understanding about different cultures. They should get familiar with different cultures, their diverse norms, values and ethics. They should have a good understanding about different global conditions and current events. Teachers should encourage intercultural communication among students who are from different cultural backgrounds which helps in building relationships and understanding of other cultures.

Understanding of complex global issues:- Teachers should have the understanding about the problems that the world is going through such as environmental concerns, global poverty, population growth, human rights etc., and the opportunities that humans have, which can bring further development. Teachers should encourage students to investigate the world and its issues, understand different perspectives of people, communicate ideas in a meaningful way and take actions that can help in improving the problems and bringing positive difference to people's lives . They should motivate students to strive for knowledge, by doing so, students will be able to understand their responsibility as global citizens rather than just running only towards career and money.

Multi Lingual :- The skills of multilingualism helps teachers to effectively communicate and understand other cultures in a better way, and further helps in improving the relationship with students. If teachers teach in a multilingual environment and take classes in more than one language, it not only helps in better understanding of students but teachers also gain intellectual benefits for themselves and their students (Worldairco_admin, nd). Through their multilingual skills, they can also encourage and facilitate in developing student's multilingual skills.

Ability to consider and Value other's perspective:- Global educators should not only have the ability to understand ideas and beliefs of students of their own culture but should also have the capability to explore, understand and value the perspectives of students of other cultures. They should not only understand culture differences but should also have the ability to appreciate culture differences and encourage students to develop a positive perspective towards culture difference. So, if a teacher wants to develop global competencies within students then they should encourage them to involve in intercultural communications and further motivate them to develop a kind of mutual understanding and cooperation among each other.

Comfortable with ambiguity and change:- To develop oneself into an efficient global educator, teachers should be capable of thriving themselves into new and rapidly changing situations. This will not only bring effective changes in their performance but also deal with the situation in a positive way.

Promoting global values: Global values can be defined as those beliefs that all human beings or communities of state share, with the conviction their conviction is in everyone's interest (Nolte, G., Zimmermann, A & Krieger, H., 2019). Some key global values are respect, justice, dignity, peace and harmony, cooperation, equality, freedom, responsibility, participation, tolerance, diversity, protect, solidarity, dialogue, integrity(OAM, 2012, Pg. 36). Global values are relevant as these values create a peaceful, just and sustainable world(OAM, 2012) so that all beings in this world can live happily and peacefully. As students, at national level, are considered as "the building blocks of a nation, in the same way, students on a global level can play a key role in dealing with the challenging situations of the world and further succeeding in it. So, it is very crucial responsibility of teachers to inculcate the global values within the students. Global values such as equity, peace, justice and sustainability etc. These values are of utmost importance for developing the world into a happy place. Thus, teachers not only encourage students to analyse and understand the global issues but also further motivate them to become an active part to improve the situation and make a difference in the world.

3.5.1 Suggestions

To develop an international level kind of learning environment, it is not necessary to take students to foreign or require teachers of international background rather teachers should be encouraged to develop global competencies which can bring a big difference in the learning environment of students. To develop global competencies, teachers need to do some initiatives for which following suggestions are given:-

- 1) Teachers should develop their inquisitive nature so that they can know what new situations and circumstances are going around the world. By doing so, teachers can keep students informed and encourage students to dive deeper in understanding of situations.

- 2) Teachers should encourage intercultural communication in class. This can help students in better understanding of each other's culture and culture differences that exist. This can be done by motivating students to participate in collaborative activities which will help them in knowing each other's culture in a better way.

- 3) Teachers should learn self awareness techniques and encourage students to do as it will help to know oneself better, and also helps in knowing other people in a better way.

- 4) Teachers are the real leaders who have the capabilities to bring required social change in the society. For this, they should involve students in such activities through which they deeply understand about the various challenges of the world, realize the importance of global values such as peace, justice, equity etc. and also how to achieve them.

- 5) If teachers want to develop themselves into a global educator, learning from the experiences of global educators are very helpful in enhancing one's own global competencies.

Chapter 4

How can teachers enhance their competencies while teaching in online and blended learning environment

Online and blended learning environment is a technology based learning environment where teaching and learning goes with the support of technology. In such kind of learning environments, not only technology rather teacher competencies plays a major role in making it work efficiently. Teachers play very important roles in building relationships and engaging students in online and blended learning environments (Hoon, Kee, & Kamalu, 2018, Pg. 359). 21st century Global Teacher's Competencies Framework applies on the online and blended learning environment as all the competencies mentioned in this framework are equally necessary in such kinds of environments also. But there are still some points teachers need to keep in mind while teaching in an online or blended learning environment. These points are the suggestions which are mentioned here which are as following:-

1) As the online and blended learning environment is based on usage of technology, teachers teaching in these kinds of environments should not only have technological knowledge but should also have the competence to use educational tools and techniques in the best possible manner. There are various educational apps and softwares which can be used in very innovative ways in an educational process. Hence, teachers should have good knowledge of these educational apps and software and how to implement them. For this, teacher's basic competencies (i.e. pedagogical skills, technological skills and communication skills) and creativity skills discussed under Global Teacher's Competencies Framework plays a major role.

2) While teaching in class, teachers get the advantage of interacting directly with students or indirectly through their body language. But while teaching in an online and blended learning environment this becomes quite difficult especially when students are more in number. Here comes the test of teacher's emotional intelligence. To keep students involved in their studies especially in an online and blended learning environment it is necessary that teachers should regularly

interact with them, ask questions or give opportunities to students to explain the topic. Teachers need to be patient and deal with students with empathy. Hence, emotional intelligence skills (discussed under affective competencies of Global Teacher's Competencies Framework) play a key role in developing effective online and blended learning environments.

3) Another key factor which affects online and blended learning environments is how teachers assess students. Teachers should develop new and innovative ways to assess students so that it helps students to keep themselves motivated, express their knowledge and know about their skills in a better way . Hence, creativity competence of a teacher (discussed under affective competencies of Global Teacher's Competencies Framework) is highly necessary in such an environment.

4) In an online and blended learning environment, the role of a teacher is not just of a teacher, but a leader, how effectively and efficiently leads a group of students teaching online by involving them in their studies, motivating them throughout the process and brings out the best results from them . Hence, leadership and management skills of teachers (discussed under Expertised competencies of Global Teacher's Competencies Framework) are equally necessary in online and blended learning environments.

5) Teachers need to give special attention when teaching in a multi-cultural environment where students are of different nationalities participating in an online and blended learning environment. Intercultural communication and mutual understanding among students are some of the key factors that teachers should focus on. Hence, global competencies of teachers (discussed under Global Teacher's Competencies Framework) is equally important in online and blended learning environments.

Thus, based on the above suggestions a teacher can teach efficiently in the online and blended learning environment by enhancing their competencies discussed under Global Teacher's Competencies Framework.

5. Conclusion

Teacher's competencies are the heart of the education process. To develop an effective and efficient learning environment teachers competencies play a major role. No matter, whether it is emotional intelligence competence or leadership competence or creativity competence etc. each and every competence is important in its own way which has been analysed in a detailed way through this research. Finally, 21st century Global teacher's competencies framework can be used at every level (primary, middle, secondary class), can be used by any teacher whatever subject they teach and in any kind of learning environments such as classrooms, online and blended learning environments. Hence, this explains the universality of the above mentioned framework.

References

- Anderson, G.J., *The Assessment of Learning Environments: A Manual for the Learning Environmental Inventory*, The University of Atlanta, Halifax, Nova Scotia, Canada, 1973.
- A'sad, Y. & Thomas, A.R. (2013). Employee Engagement and Strategic Management: A Case Study from Palestine. *Strategic management in the 21st Century*. Kannan, V. R., & Wilkinson, T. J. (Eds.). Praeger.
- Babik, D., Iyer L.S., Ford, E.W. (2012). Towards a comprehensive online peer assessment system. *Design Science Research in Information Systems: Advances in Theory and Practice: 7th International Conference, DESRIST 2012, Las Vegas, NV, USA, May 14-15, 2012, Proceedings*. (2012). Springer Berlin Heidelberg, Germany.
- Bell, L & Rhodes, C.(2002). *The Skills of Primary School Management*. Taylor & Francis. United Kingdom.
- Benner, PE(1982). *From novice to expert: Excellence and Power in Clinical Nursing Practice*. editor. edition s. Brasil: Prentice-Hall, Inc: Upper Saddle River; 2001.
- Bianchini, F. & Landry, C. (1995). *The Creative City*. United Kingdom: Demos.
- Boyatzis, R.E. (1982) *The competent manager: A model for Effective performance*, John Wiley & Sons, New York, NY.
- Burke, J. (2005). *Competency Based Education And Training*.
- Burton, L. (1991). *Joy in Learning: Making it Happen in Early Childhood Classes*. NEA Professional Library, 1991. Pg. 37
- Cameron, K.S, Gretchen M. S. (2013). *The Oxford Handbook of Positive Organizational Scholarship*. (2013). Spain: OUP USA.
- Casanova, D., Huet, I., Garcia, F., Pessoa T. (2020). Role of technology in the design of learning environments. *Learning Environment Research* **23**, 413–427. <https://doi.org/10.1007/s10984-020-09314-1>
- Cato, S., Seepersad (2016). Technological Interventions: Examination of Social Exchange as an Antecedent to Academic Achievement in Online Learning. *Handbook of Research on Learning Outcomes and Opportunities in the Digital Age*. DOI: 10.4018/978-1-4666-9577-1.ch013
- Closs, L., Mahat, M. & Imms, W. Learning environments' influence on students' learning experience in an Australian Faculty of Business and Economics. *Learning Environ Res* (2021). <https://doi.org/10.1007/s10984-021-09361-2>
- Concise Oxford Dictionary. Retrieved from:- <https://languages.oup.com>

Cropley, D. (2016). Measuring Capacity for Innovation in Local Government Organizations. Journal of creativity and business innovation. Vol- 2.
Retrieved from:- <https://www.journalcbi.com%2Fideation-using-analogies.html>

Cox, J. (2019). 15 Professional Development Skills for Modern Teachers. Professional Development. Retrieved from-
<https://www.teachhub.com/professional-development/2019/11/15-professional-development-skills-for-modern-teachers/>

Dalton, M., Watts, M. W., Hoyle, D. G. (2010). Human Relations. United States: Cengage Learning.

del Bueno, (1990). "Nursing staff development: critical times". Journal of Nursing Administration.

Department of Education and Training, (2004). Competency of Teachers Framework. Department of Education and Training, Western Australia. Retrieved from-
<http://det.wa.edu.au/policies/detcms/policy-planning-and-accountability/policies-framework/guidelines/competency-framework-for-teachers.en?cat-id=3457997>

Dikilitaş, K. & Bostancıoğlu, A. (2019). Inquiry and Research Skills for Language Teachers. Springer Nature. Pg. 3.

Donovan, L. & Green, T. (2014). Making change: Creating 21 st Century Teaching and Learning Environments. Forwarded by Jerry Michel. Shell Education, 5301 Oceanus Drive, Huntington Beach, CA 92749-1030. ISBN 978-1-42580757-3.

Enger, K. (2009). Minorities and the Online University. Encyclopedia of Distance Learning, Second Edition. DOI: 10.4018/978-1-60566-198-8.ch204

Fraser, B. J. (1998a). Science learning environments: Assessment, effects and determinants. In B. J. Fraser & K. G. Tobin (Eds.), International handbook of science education (pp. 527-564). Dordrecht, The Netherlands: Kluwer Academic.

Gilavand, A. (2016). Investigating the Impact of Environmental Factors on Learning and Academic Achievement of Elementary Students: Review. International Journal of Medical Research & Health Sciences, 2016, 5, 7S:360-369.

Goel, D. (2012). Performance Appraisal And Compensation Management: A Modern Approach. Phi Learning, India.

Goleman, D. (1999). "Emotional intelligence" key to leadership. Health Progress; Mar/Apr 80(2), 9. Retrieved <https://libproxy.tuni.fi/login?url=https://www-proquestcom.libproxy.tuni.fi/docview/274438810?accountid=14242>

Goldberg, E. (2018). *Creativity: The Human Brain in the Age of Innovation*. United States: Oxford University Press.

Guilford, J.P. (1961). Creative thinking Abilities of Ninth Grade Students. Paper presented at Annual Meeting of American Educational Research Association, Chicago.

Guo- Brennan (2020). Critical online conversations for global educators: Andragogical Considerations and Assessment strategy. *Handbook of Research onw Online Discussion-Based Teaching Methods*. Advances in Educational Technologies and Instructional Design. IGI Global

Gupta, Kavita. A. (1999). *Practical guide for need assessment*. John Wiley & Sons. Inc. San Francisco.

IUN (n.d.). Educational Leader B. School Culture And Instructional Program Knowledge Base. Retrieved from: <https://www.iun.edu/education/docs/conceptual-framework-knowlege-base.pdf>

Jackson, P. W. (1990). *Life in classrooms*. New York, NY: Teachers College Press.

Jain, L.C., Howlett, R.J., Uskov, V.L. (Eds.) (2016). *Smart Education and E-Learning* Springer International Publishing, Germany.

Hargraves, R. M. (2017). Relationship between teacher emotional intelligence and classroom climate in a school division in the Southeastern United States [degree Doctor of Education, Regent University]. ProQuest Dissertations 10746737. <https://search.proquest.com/docview/2070611782>

Hofstein, A., Yager, R. E., & Walberg, H. J. (1982). Using The Science Classroom Learning Environment For Improving Instruction. *School Science and Mathematics*, 82(4), 343–350. <https://doi.org/10.1111/J.1949-8594.1982.TB17206.X>

Holland, J.L.(2009). A Scale of Affective Satisfaction in Online Learning Communities. *Handbook of Research on Socio-Technical Design and Social Networking Systems*. DOI: 10.4018/978-1-60566-264-0.ch043

Hoon, T.S, Kee, K.L & Kamalu, N.S.M(2018). *Self Management Strategies in a student-driven learning environment*. Online Course Management: Concepts, Methodologies, Tools, and Applications. IGI Global.: United States.

Howard, L., Remenyi,Z., & Pap, G. (2006). Adaptive Blended Learning Environments. 9th International Conference on Engineering Education. Vanderbilt University, Institute for Software Integrated Systems, Nashville, TN 37235 larry.howard@vanderbilt.edu Retrieved from:- <http://ndl.iitkgp.ac.in/document/MnAvZ203TGVKbWMrVkyYdDV1TTZrR1Zzc3Q2TS90Zng5OGJmSWx2bFFUzbz0>

India NCC. (2021). The youth are the backbone of a nation. Retrieved from <https://indiancc.mygov.in/wp-content/uploads/2021/06/mygov-1000000002059563280.pdf>

Katane, Irena et al. "Teacher competence and further education as priorities for sustainable development of rural school in Latvia." *Journal of Teacher Education and Training*. 6. 2006:41-59.

Landry, C., Bianchini, F. (1995). *The Creativity city. Demos*, 1995. 12(12) Pg. 18

Lees, J. (2018). *Teachers as Researcher. Infant and toddler center, Pk- Grade 8, Preschool 2'S & 3'S*. Retrieved from <https://www.willnorth.org/teacher-researcher/>

Lestari, I., Zakiah, L. (2020). Preliminary Analysis of the Student's Creative Thinking Skills in the Elementary School Teachers Education Study Program Conference: 3rd International Conference on Learning Innovation and Quality Education (ICLIQE 2019)At: UNS, SOLO.

Li, W. & Lui, L. (2013). An Exploratory Study of the Experiences of Older NonTraditional Students in an Online Learning Environment. *Handbook of Research on Technologies for Improving the 21st Century Workforce: Tools for Lifelong Learning*. DOI: 10.4018/978-1-4666-2181-7.ch024

Lim, C.P., Juliana & Liang, M (2020). An activity theory approach toward teacher professional development at scale (TPD@Scale): A case study of a teacher learning center in Indonesia. *Asia Pacific Educ. Rev.* **21**, 525–538. <https://doi.org/10.1007/s12564-020-09654-w>

Lin, Y.S. (2011). Fostering creativity through education: A conceptual framework of creative pedagogy. *Creative Education*, 2(3), 149-155

Lovell, D. (2018). *Gale Researcher Guide for: Political Ideology*. Gale, Cengage Learning.

Macquarie Concise Dictionary. Retrieved from: [-https://www.macquariedictionary.com.au](https://www.macquariedictionary.com.au)

Maamari, B. E., & Majdalani, J. F. (2019). The effect of highly emotionally intelligent teachers on their students' satisfaction. *International Journal of Educational Management*, 33 (1), 179 – 193. <https://www.emerald.com/insight/content/doi/10.1108/IJEM-11-2017-0338/full/html>

McRae, P. & Parsons, J. (2007). *Teachers as Researchers. (Re)Searching within Alberta's schools. The Alberta Teachers' Association. Volume- 87*. Reterved from: - <https://www.teachers.ab.ca/News%20Room/ata%20magazine/Volume%20087/Number%203/Articles/Pages/Teachers%20as%20Researchers.aspx>

Mayer JD, Salovey P. What is emotional intelligence? In Salovey P. & Sluyter D. J. (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3–34). New York: Harper Collins; 1997.

Melser, N. A. (2018). *Teaching Soft Skills in a Hard World: Skills for Beginning Teachers*. Rowman & Littlefield Publishers. United States.

Mersino, A.C. (2007). *Emotional Intelligence for Project Managers*, New York.

Meyer, D. K., & Turner, J. C. (2007). Scaffolding emotions in classroom. In P. A. Schutz, & R. Pekrun (Eds.), *Emotion in Education* (pp. 243 – 258). Elsevier Inc.

Miller, P. , Wedellsborg, T.W. (2013). *Innovation as Usual: How to Help Your People Bring Great Ideas to Life*. Harvard Business Press, 2013

Moore, R.L.(2016). Interacting at a Distance: Creating Engagement in Online Learning Environments. *Handbook of Research on Strategic Management of Interaction, Presence, and Participation in Online Courses*. DOI: 10.4018/978-14666-9582-5.ch016

N & D, G. (2021). Influence of Teacher Empowerment and Teaching Effectiveness on their Quality of Work Life. (2021). (n.p.): Ashok Yakkaldevi.

Nessipbayeva, O. (2012). The competencies of the modern teacher. Part 2: Pre-Service and In-Service Teacher Training. Pg. 148-154. Retrieved from:- <https://files.eric.ed.gov/fulltext/ED567059.pdf>

Nobile, Lyons & Kelly, 2017. *Positive Learning Environment: Creating and maintaining productive classrooms*. Cengage AU, 207. Pg. 4

Nolte, G., Zimmermann, A & Krieger, H. (2019). *The International Rule of Law: Rise Or Decline?.* (2019). United Kingdom: OUP Oxford. (Editor)

NPA (nd). National Postdoctoral Association. 15800 Crabbs Branch Way · Suite 300, Rockville, MD 20855. 301-984-4800 . Retrieved from:- <https://www.nationalpostdoc.org/page/CoreCompetencies>

NPE-20 (2020). National Education Policy-2020. Ministry of Education (formerly known as Ministry of Human Resource development). Government of India. Retrieved from:- https://www.mhrd.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

OAM, Joy M. de Leo (2012). *The Global Values within Education for Sustainable Development. A Case Study of Education for Sustainable Development in the Australian National Curriculum. Volume 1*. GradDipEd Counselling (University of South Australia)

Olajire, B. (nd). *21st Century Skills For Teachers And Students*. Retrieved from- <https://servantboy.com/21st-century-skills-teachers-students/>

Oman, C.B., Gamaniel, K.S. & Addy, M.E. (2006). Properly Functioning Scientific Equipment in Developing Countries. *Analytical Chemistry*. Retrieved from: <https://pubs.acs.org/doi/pdf/10.1021/ac069434o>

Padhi, Dr. G. (2021). Factors Affecting Teaching-Learning Process. *International Journal of creative research thoughts*. Volume 9, Issue 4, April 2021. ISSN 2320-2882. Retrieved from: <https://ijcrt.org/download>

Paniagua, A. and Instance, D. (2018). Teachers as Designers of Learning Environments: The importance of innovative pedagogies, *Educational research and Innovation*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264085374-en>.

Paris, D. (2012) 'Culturally sustaining pedagogy: A needed change in stance, terminology, and practise'. *Educational Researcher* 41, 93–7.

PISA (2018). PISA 2018 Global Competence. Retrieved from <https://www.oecd.org/pisa/pisa-2018-global-competence.htm>

Pollock, M.B. (1981). Speaking of competencies. *Health Education*. Jan/Feb, 1981.

Ragan, L.C. (2009). Operational Performance Guidelines for Online Instructors. *Encyclopedia of Distance Learning*, Second Edition. DOI: 10.4018/978-160566-198-8.ch229

Reddy, P. M. (2021). *The Awakening*. Clever Fox Publishing, Chennai, India.

Rhodes, M. (1961). An analysis of creativity. *Phi Delta Kappan*, 42, 305–310.

Said, N.Mhod & Rogayah, J. (2009). Great Teacher creates effective learning environment: A Study through IIUM nursing students' eyes.

Salovey P, Mayer JD. Emotional intelligence. *Imagination, Cognition, and Personality*, 1990; 9: 185–211.

Sharpe, C. (1985). *How to Create a Good Learning Environment*. United States: American Society for Training & Development.

Shaughnessy, J., Shaughnessy, J. M., & Haladyna, T. M. (1983). Relations of Student, Teacher, and Learning Environment Variables to Attitude toward

Slaatte, H. A. (1983). *The Creativity of Consciousness: An Empirico-phenomenological Psychology*. United Kingdom: University Press of America.

Mathematics. *School Science and Mathematics*, 83(1), 21–38. <https://doi.org/10.1111/J.1949-8594.1983.TB10088.X>

Sari, M. & Yolcu, E. (2020). Students' Resistance Behaviors: What Do Turkish Primary Teachers Face?. *Acta Educationis Generalis*. 10. 1-25. 10.2478/atd-2020-0008.

Shermon, G. (2017). *Gamification Competency Assessments - Life Sciences*. (n.p.): Lulu.com.

Sinha, E. (2021). Towards an Integrative Framework of Intrapreneurship by Focusing on Individual Level Competencies. 17. 106-163.

Susanti, T., Damris, D., Maison, M., & Tanti, T(2020). Learning Environment and Motivation in Junior High School. *Universal Journal of Educational Research*, 8(5), 2047–2056. <https://doi.org/10.13189/UJER.2020.080542>.

Susanto, R., Rozali, Y. A., & Agustina, N. (2019). Development of Pedagogical Competency Models for Elementary School Teachers: Pedagogical Knowledge, Reflective Ability, Emotional Intelligence and Instructional Communication Pattern. *Universal Journal of Educational Research*, 7(10), 2124–2132. <https://doi.org/10.13189/UJER.2019.071010>

Sternberg, R.J. (Ed.) (1999). *Handbook of creativity*. Cambridge. Cambridge University Press.

Stronge, J. H. (2018). *Qualities of Effective Teachers*. ASCD United States.

Thompson, C.J.(2009). Online Learning Teams. *Encyclopedia of Distance Learning*, Second Edition. Pg. 6. Retrieved from: <https://www.igiglobal.com/dictionary/face-to-face-learning-environment/10804>.

UQ (nd). *Research Skills*, University of Queensland, Australia. Retrieved from:- <https://cdf.graduate-school.uq.edu.au/events/research-skills>

Urabe, K. (1988). *Innovation and Management: International Comparison. Innovation under Japanese Management*. De Gruyter studies in organization 13(13).Author-Nihon Keiei Gakkai. Editors-Kuniyoshi Urabe, John Child, Tadao Kagono

Vijaylakshmi, P., Devi, D.D.A.D., Seethalakshmi, V. & Martin, N. (2020). Factors Contributing Towards Constructivist Learning Environment - Analysis Using Fcm With Interval Valued LncH Approach. (N.D.). (N.P.): Infinite Study.

Wang, Q. (2008). A generic model for guiding the integration of ICT into teaching and learning. *Innovations in Education and Teaching International*, 45 (4), 411–419

Waxman, H.C, Walberg, H.J. (1991). *Effective Teaching: Current Research*. Series on contemporary educational issues. McCutchan Publishing Corporation, 1991.

Wilson, B.G. (1996). Introduction- What is a Constructivist Learning Environment? Constructivist Learning Environments: Case Studies in Instructional Design. Educational Technology. Pg. 3

Worldairco_admin (nd). Fostering Intellectual Improvement Through Multilingual Education. Retrieved from:-
<https://www.worldairco.org/fostering-intellectual-improvement-through-multilingual-education/>