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TITLE OF THESIS

**LEARNING SPACE AS A FACTOR OF CHILDREN'S
INTERACTION AND COMMUNICATION IN
MULTICULTURAL CLASSROOMS**

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SUMMARY

The content of the PhD thesis includes a theoretical part (chapter one: preschool education; chapter two: intercultural education, and chapter three: communication and interaction) and a research part (chapter four: research methodology and chapter five: data analysis, results, author's conclusions and contributions to the field of research. There is a reference list and appendices as well as a catalogue of tables and a catalogue of graphs. The dissertation is 242 pages long, of which 24 pages for bibliography and 22 pages for appendices. The text incorporates 57 tables and 51 graphs. The bibliography includes 450 titles in English language. The Summary follows the structure of the dissertation. In addition, at the end, a list of the author's publications has been included in the Summary.

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THEORETICAL PART

FIRST CHAPTER: PRESCHOOL EDUCATION

1. PRESCHOOL EDUCATION AND LEARNING SPACE

1.1 The meaning of “learning space”

The physical environment in which learning occurs is termed a learning space and can also involve the interface between a student’s environment and learning. For effective academic processes in schools, new scientific studies suggest that the quality of students’ academic outcomes is highly dependent on the function of the learning space (Walker, 2015).

Each element of this environment influences child's behavior and actions and allows him/her to build significant relationships, thanks to which he/she can communicate his/her nature and express his/her personality. The school environment consists of physical and social aspects, among which we shall consider only the physical ones, including both the interior and exterior of the school, as well as the available didactic instruments. A large physical environment, which is flexible and stimulating, offers several opportunities to children to acquire new knowledge, to practice skills, to express their creativity, to make hypotheses, to discover, experiment, draw conclusions, thus improving their competences and life skills. (Miljak, 2009).

At the same time, it helps the development of child's identity and his/her sense of belonging to a place and to a social group. The richness of materials is also needed to satisfy various interests and abilities of children, allowing them to choose among the activities offered by the environment. During the last two centuries, the preschools' environment has undergone various modifications, as it has been a subject of many types of research, experiments and opposing views by philosophers, psychologists, pedagogies, and architects. The school buildings created in that period can be divided into three categories (Paolino, 2011).

Presently, learning approaches have shifted from teacher-centred to student-centred, so research is currently on how to increase interactive teaching that will increase collaboration by adjusting the outlooks of the learning spaces (Oblinger, 2006). Some learning spaces are specifically designed in a specific fashion to promote constructivist pedagogy at another time to enable the teacher to move from the role of a “sage on the stage” to being a “guide on the side” or can be a “peer at the rear” where the instructor is involved in leading a classroom community. (Misra, 2020).

In the last decades, the relevance of classroom learning space in the shaping of how teaching and learning are undertaken has been emphasized. Classroom learning space is defined as a material reality that consists of an anthropogenic environment that deals with the models of behavior of the society, humanitarian values, and actively, and dynamically controls the role of the classroom. It is now a well-

established fact that the terrain of teaching and learning in schools is swiftly evolving (Serrano, 2019).

Presently, studies on classroom learning spaces have indicated increased chances for interaction among students, increased classroom discussions, more student-teacher out-of-class consultations, and improved grades and test scores, when compared to classes that are a par held in traditional seating patterns (Whiteside, 2010).

The pedagogical dimension of the learning environment (Skordi and Fraser, 2019) relates to the activities, tools, resources, methods, strategies, and structures involved in facilitating student learning (Hannafin and Land, 1997).

The term learning environment is regularly defined as a social, psychological or conceptual setting rather than the physical learning space (Cleveland 2009). In their wider form, learning environments are considered to “happen anywhere and at any time” (Brown and Lippincott 2003). In addition, learning environments are often defined as consisting of pedagogy, technology and physical space, where the physical is an example of ideals, but the dialogue between different factors is what matters (Cleveland and Fisher 2014).

To understand the processes of change, the underpinning theoretical premise of this study draws on relational and sociomaterial approaches in which learning spaces are not seen just as physical buildings where learning occurs, but rather as a site for collaboration and continued negotiations between the physical and the social (Mills and Comber 2015).

In other words, spaces are seen to be produced in heterogeneous relations, which generate and is generated by interaction (Boys 2011), and in which material (physical space, technology, and the curriculum) becomes visible in social relations (Fenwick 2012).

Moreover, in the relational approach, learning spaces are not understood as given or fixed, but rather as temporal processes, which provide the opportunity to see spaces as an ongoing series of redesigns always under construction (Massey 2005). Therefore, space should be considered more as a verb than a noun, because it is more what we do, not something we have (Mulcahy et al. 2015).

The way the physical environment is designed and configured influences how children feel, act, and behave. The physical environment allows growth and development through activities and materials in defined play areas. Room arrangement for play activity plays an important role in students’ social and language interactions. Poorly designed classrooms can cause disruptions and negative social interactions among students and/or between students and the teacher. For example, having the reading and writing center next to the music area would cause disruptions among children who are trying to concentrate on the skill of writing. Students can become frustrated when they do not have an organized environment to call their own (Clayton & Forton, 2001).

The physical environment is a direct image of the teacher’s planning and the student’s learning. It is where both teachers and students will spend most of their time and a place they can call their own and relate to. It should be well organized,

comfortable, and personable and offer a variety of manipulates for cognitive, social, emotional, and physical development (Catron & Allen, 2007).

1.2 Learning space in preschool education

The concept of quality in preschool education services is determined depending on the quality in learning activities, the quality of interactions with teachers, peers, and materials (Pianta et al., 2005, Thomason & La Paro, 2009), physical environment qualities, group size, balance of child teacher ratio and teacher qualifications (Howes et al., 2008, Thomason & La Paro, 2009, OECD, 2006).

Physical, preschool environment and resources, including the features and conditions of space, furniture, tools and materials, have a significant impact in supporting children's development. According to a research study examining the effects of physical environment on children, it is seen that the physical design and layout of preschool education environments have an impact on children's learning, behavior and creativity (Dearing, 2009). In addition, in an intercultural study on the quality of preschool education environments, the quality of learning conditions offered to children in preschool education varies depending on the physical conditions of the school (Sheridan, Giota, Han & Kwon, 2009).

Positive preschool classroom environments, where children feel physically and psychologically safe, allow children to perform academically and socially at higher levels (Frenzel, Pekrun, & Goetz, 2007; Sandilos, Rimm, & Cohen, 2017). Being physically safe in a classroom is readily obvious when the environment is free of unnecessary clutter and hazards such as chemicals or broken glass or some other environmental hazard. To be psychologically safe, however, children must be able to perform without fear of being belittled or harassed by their classmates or their teachers. They need to feel as if they belong in the classroom with their peers, and that they have social value, or relevance (Beamon, 2001; Mendler, 2000; Uzair-ul-Hassan, Farooq, Akhtar, & Parveen, 2017).

Outside the home, the school is often a primary environment that shapes children's sense of worth as it is reflected in the manner in which teachers and peers relate to them. Children seek to belong to social groups and to be accepted by those within those groups (Mouratidis & Sideridis, 2009; Wentzel, 2003).

When children belong socially to groups, and have relevance within those groups, they will behave in ways that benefit those groups and are expected by those groups. They are members of a learning community. Additionally, young children look to significant adults, including teachers, to provide them with models on how to behave in given social conditions and to protect them from those things that, for a child, are scary or harmful, such as aggressive and abusive classmates (Platten, Hernik, Fonagy, & Fearon, 2010).

To design a preschool environment, the needs and interests of a child in an environmental context must be analyzed. The adults often do not see the potentials of a child, they do not provide to the child enough freedom and experimentation

possibilities, they do not recognize all his qualities. The analysis of the child's image is however essential in defining the social and ethical identity of a subject, in defining his rights and educational contexts to be set. The educator who poses questions prepares experimenting materials, facilitates the confrontation, promotes the direct verification of the child's abilities, accepts the differences of a group and transfers an open and flexible communication, and knowledge model makes the child an active protagonist of his learning process. It results that, as much as the ideas, construction, and functioning of the school space are important, it is also relevant the work of the educators and their trust in the independent use of the space by each child (Ceppi & Zini, 1998).

The child is a whole being, capable of developing creative energies and learning independently. It is important to bring out curiosity and the desire to discover, as the discovery makes him develop the maximum of his capabilities and conquer the world with the power of his intelligence. It is, therefore, necessary to take care of the educational environment which needs to be organized and ready to welcome the children and allow them to choose and use the proposed material (Montessori, 2004).

Nurseries and preschools are environments that must make the child feel safe and welcomed with wide opened arms. These are living environments which are continuously marked and modified by personal and social events and stories. Careful observations of those changes lead to a need of reorganization of spaces and school architecture, transforming the existing buildings radically (Ceppi & Zini, 1998).

1.3 Student's relationship with learning space in preschool education

When a student first steps into a room they will make a judgment about the type of class they are going to be taking. They will look to see how desks are arranged. They will notice what is hanging on the walls. The way in which a teacher sets up their class allows them to communicate with their students non-verbally. By adding various learning centers or activity centers the students will know that this is a classroom that likes to do hands-on experiments. It also conveys that they will not just sit and take notes, but they will act out what ever subject they are learning. The wall art will demonstrate to the student that the teacher cares about their work enough to show it off. Students will also gain an understanding of the social expectations of the teacher in the classroom based on how the desks are organized. Each of these tools can be used in any classroom regardless of the content (Grubaugh, 1990).

Another way to modify the seating arrangement is to organize the desks in a circle around the classroom. This will work better with smaller class sizes, but can still be used occasionally in others. This strategy works well with promoting public speaking and classroom debate (Campbell, 2008). It engages students because they all become one member of the same group. They are prone to listen more actively and make more eye contact with the person who is speaking. It also allows the person

speaking to take more ownership of their ideas (Cornelius, 2013).

In this model the teacher has to make sure to create an environment where students feel invited to share their views without fear of judgment. In order to do this the teacher must make sure that the students know the consequences of inappropriate behavior. It is also a good teaching point on how to respect people who have different opinions than their own.

The literature on classroom relationships and interactions is largely informed by attachment theory and developmental systems theory (Lerner, 1998, Sameroff, 1995). Guided by theoretical notions on parent–child relationships, and central to the attachment perspective, is the idea that children derive feelings of safety and well-being from relationships with the adults with whom they interact. In the classroom context, teachers are seen as alternate caregivers (Howes, 2000), and although this relationship is not as exclusive and durable as the relationship that most children have with their parents, a positive teacher–child relationship creates feelings of security and support (Birch & Ladd, 1997, Hamre & Pianta, 2001).

In turn, this secure base for children encourages them to take risks and actively engage with and explore the classroom environment, thereby fostering their learning and development (Verschuere & Koomen, 2012). In contrast, a poor relationship with teachers will elicit feelings of insecurity and distress in children, resulting in less academic and social growth (Pianta, 1999).

Globalization and changed patterns of mobility have allowed for the emergence of new types of spatial references. Altered conditions of production and consumption, and migration-related movements lead to a far more complex spatialization of children and childhoods (Faulstich Orellana et al., 2001), both in everyday practical terms and in conceptual terms. The relations of space and childhood are therefore no longer be understood merely as spatial productions within nation-state ‘containers’, instead, they are analyzed in terms of their global-local, multiple-scaled, multilocal and transnational spatial relations (Mahon, 2006, Wells, 2015).

These new spatial relations are attended by those perspectives that have been modified in the course of the so-called ‘spatial turns’. New spatial theory approaches are united first and foremost by the notion of ever open, complex and multiple productions of space understood as dynamic and relational arrangements of things and bodies through which social relationships are materialized, represented and reproduced (Robertson, 2009).

Indoor environmental quality is a strategy which aims at ensuring that all the elements of the physical environment that may affect student’s ability to learn are optimal. It involves attending to such matters as the design and arrangement of furniture, acoustics, lighting, temperature and ventilation. Simply put learners who spend time in well-designed, well maintained classrooms that are comfortable, well-lit, reasonably quiet and properly ventilated with healthy air will learn more efficiently and enjoy their educational experiences. (Mitchell, 2008)

A study conducted in New York City showed that students in overcrowded schools scored significantly lower in both mathematics and reading than similar

students in less crowded conditions.

Although often overlooked, the quality of the classroom indoor environment plays a critical role in learner's achievement and comfort, as well as providing an optimal working environment for the educator (Rivera, 1995).

2. MODERN APPROACHES OF LEARNING SPACE

2.1 Modern pedagogical approaches

2.1.1 Student in the center

The basic principles of modern pedagogical science, which are applied in teaching practice and facilitate the teaching process, are: student in the center, self-activity, group work, the connection of the school with life and the creation of an interactive environment in order to cultivate interpersonal relationships. These principles, based on psychological and scientific findings, activate the learner and create systematic stimuli for the success of teaching. The above teaching principles are orientation indicators for the teacher and contribute to his more meaningful and efficient contribution to the course. They are always timely and they find application to any new methodology. Child in the center is defined as the structure of teaching in such a way as to correspond to the skills and psychological data of children of school age, but at the same time the needs of students and their interests are taken into account (Matsagouras, 1996).

Also, special place is given to the activities of the student, who is actively involved in teaching and is considered a person who thinks and acts. Placing student in the center is a modern concept in pedagogy and contributes to the self-energy and autonomy of the learner, to the development of their community, to the development of the ability to find techniques and solutions and to the discovery of knowledge by him. The center of the whole process of learning becomes the child. The role of the teacher in this method differs. He walks into the background. He becomes the counselor and mentor of his students and offers them help when he finds that they themselves are unable to respond (Dervisis, 1999).

2.1.2 Self-action

Self-energy is the energy of human based on their will, which activates psychosomatic powers. Self-motivation is aimed at the free placement of teaching purposes, the voluntary election of tools and work planning and the activation of the student's psycho-physical forces of their own will to achieve the teaching purpose (Dervisis, 1999).

The self-activity corresponds to the current standards of psychology that a child considers as an energetic existence that learns by activating his inner forces (Delikonstandis, 1990).

According to Kerschensteiner, the criterion of self-activity is not only the mobility and activity of the individual, but mainly the extent to which it derives from his Ego. The genuine self-energy derives from the free Ego, is an expression of this Ego and has a cultural effect on the Ego (Kerschensteiner, 1928).

The self-energy contains the element of impulse, activates the inner forces of the learner, thus understanding the new knowledge in its purest form. It is primarily, for Kerschensteiner, self-active thinking. The teacher should help the child to acquire self-active thinking and action, so that he can develop his skills and become autonomous. Self-energy is not only the energy of the hand, but mainly the free energy of the spirit. In self-employment, the pupil is placed at the center of school life and the whole learning process is determined by him. In order to achieve free energy of the spirit, the teacher must modify the manner of instruction, limit his questions, give space and time to the student to enhance the energy and mobility of his spirit (Dewey, 1924).

2.1.3 Working in groups

Effective teachers use a mix of whole-class, group and individual activities. Cooperative group teaching involves learners working together in small learning groups, helping each other to carry out individual and group tasks. It is a particularly effective strategy for teaching learners with special educational needs, especially in mixed-ability groups. In cooperative group teaching, learners are expected to work as groups, not just in groups.

According to leaders in cooperative learning, this strategy has four essential components: *interdependence*: all group members seek to achieve a group goal and help each other's achievement, *individual accountability*: each member of the group is held responsible for his or her own learning, which in turn contributes to the group goal, *cooperation*: the learners discuss, problem-solve and collaborate with each other, *evaluation*: members of the group review and evaluate how they worked together and make changes as needed. (Mitchell, 2008)

There is a rich literature on the effects of cooperative learning on achievement and social interactions in general education, as well as in classrooms including learners with special educational needs. In an extensive, early study of learners with educable mental retardation, one of the factors associated with better outcomes was the use of cooperative learning approaches. It was found that this strategy promoted these learner's interactions with their peers (Kaufman, 1985).

According to educators and psychologists, the creation of small groups responds to the innate tendency of human to form groups to meet his needs and helps students to develop their self-perception and sociability. Collaborative school work responds to the above requirements, as the student is given the opportunity to develop initiative, to cooperate with others, and also helps to get rid of intellectual egocentrism. To achieve real collaborative school work and not just grouping pupils

requires much more than just cooperation, exchange of views and superficial mutual assistance. Without ignoring the importance of these factors, both in the socialization of pupils and in the development of learning, it is necessary to co-exist other factors for the more effective functioning of the groups such as positive interdependence among members, collective responsibility, role rotation, collective work (Matsagoura, 1996).

Learning can be achieved more effectively with the cooperation of students because the controversies and opposing views expressed by the members of the team increase the interest of students, present various parameters of each problem, enable the student to analyze and compose the conflicting views and additionally help to formulate various solutions (Gonschorek & Schneider, 2000).

Cooperative teaching helps in the development of higher spiritual functions, because when students cooperate, they use higher logical processes, such as the strategy of categorization, verification, composition, material organization, investigation (Flouris, 1986).

There is also a non-competitive climate within the groups that helps children emotionally. They feel more free, more independent, more at home with their classmates, and as a result, they work more pleasantly. The weaker students are more easily activated, not isolated, not presenting psychological problems, reduced communication difficulties with their classmates and perform better.

2.1.4 The link between school and life

A key position of modern Pedagogy is the connection of the school with society and the actual situations experienced by the child outside the school (Dewey, 1982). This need arose from the finding that the school in its form did not help the socialization of students or the knowledge of their environment, since its sole purpose was always to provide knowledge. The connection of the school with life and real social situations brings great changes to the whole process of education. The school stops working as a closed system, detached from society and becomes a preparatory to life. That is, it prepares the child for the great society (Roehrs, 1984).

This new approach to teaching eliminates the cumulative nature of education and turns students into dynamic and energetic. Elements and events of the everyday, social life of the child are approached methodically and energetically by the student and complement his treatment. The center of gravity is transferred from the quantity of matter to quality, research, supervision, experience, experience. It is therefore necessary to restructure the Analytical Program and adapt it to the practical application of knowledge (Balaskas, 1984).

In this way the gap between school and society narrows and the school offers knowledge, experiences and practices useful for the life of the child (Dewey, 1982). This, after all, must be its role, to be more than simply adapting the individual to society and its rules. To give the student the opportunity to leave the school's isolation space, to create such personalities that analyze social life, to criticize and open new perspectives in its course (Kossivaki, 1998). This element, namely the connection of

the School with life, is the cornerstone of modern pedagogy.

Life is the starting point as well as the primary aim of all educative activities. The essence of education is to create conditions to support the development of individual life, as the purpose of education is to foster the healthy development of force of life in children, and education is everything that has the potential to boost their vitality (Montessori, 2004).

Successful education allows students to grow in an autonomy-supportive environment and learn to appreciate, respect, and treasure life while acquiring academic knowledge. This is the fundamental responsibility of education (Lansdown, 2005).

2.1.5 Creating an interactive environment

Modern pedagogical science formed the conditions that contributed to the creation of an interactive environment with new interpersonal relationships between teacher and students, different from those in traditional school. The teacher was the transmitter and depositor of knowledge, according to the banking concept of education. His omnipotence and omniscience were characteristic of a teacher of the traditional, so-called authoritarian school. A teacher characterized by empty rhetoric, worship of the outer shine and shrug of sonority (Papas, 1990).

In this school, the aim of education was to memorize matter, to impose physical penalties on the student, to be tough, to rebuke, and to create a climate of absolute peace of mind in the classroom and adaptation to life. In such a formed, non-democratic climate a gap was identified in teacher-student relationships. These relationships were not pedagogical, because they did not meet the needs of the child, since they did not offer love, security, kindness, free life, self realization (Kosmopoulos, 1990).

Today, there's a view of a democratic school in which its traditional functions, such as strict discipline and punishment, are abolished. Their place is the free discussions between students and teachers, the democratic climate of the class, the ability of students to express themselves without fear, the avoidance of any kind of punishment, the possibility of developing critical thinking and the encouragement of action, imagination and thought (Matsagoura, 2000).

This bridges the gap between teacher-pupil relations and creates mutual appreciation and trust. In such an environment, the student becomes self-sufficient and gradually leads to independence. This independence helps the student to mature within him the sense of responsibility and perception of the debt. In such an environment, the teacher must first of all adapt, to recognize in himself a role different from the one he had adopted for many years. To realize that he is in an equal position with the student and that his role is helpful, advisory, cooperative and mentoring. These relations are not understood as forms of coercion and intellectual servitude but operate within the framework of teacher-pupil exchange rate and reciprocity (Kogoulis, 2000).

And they're about to create mature, collaborative, critical thinkers who will research and discover knowledge for themselves. The teacher-pupil relationships thus formed will contribute to the formation of a good psychology of the learner, who through these physical conditions will be more easily led to learning. In traditional teaching we had closed communication systems, where the one-way relationship between the transmitter and the receiver was prevalent and of course the development of autonomy of the child was hampered. Modern pedagogy suggests a process of interaction, in which all actors of education, teacher and student are involved in a two-way relationship. The members of the groups put forward opinions, arguments, thoughts in an equal relationship with the educator, who conveys their own views and thoughts, not for execution but for discussion. The perception of the teacher-pupil relationship is not one against the other, but one side by side (Schier-Loddenkemper, 1980).

It is more important to exchange ideas and develop interpersonal relationships between pupils and teachers than to transfer knowledge, because it is now accepted that communication produces knowledge. The teacher is not the authoritarian, the leader, the transmitter of knowledge. He is on an equal footing with his students, and instead of trying to impose his own views, he lets his students make their own approaches. He is the coordinator of the children's work, the mentor and their partner. They give advice only when they are asked by their students, solve questions, try to trouble them and lead them to discover knowledge on their own. The teacher-pupil cooperation is genuine and sincere, without any fear on the part of the student (Arnhardt, 2000).

3. LEARNING SPACE AND EDUCATIONAL PROCESS

3.1 Traditional pedagogy

Very important aspect in education is the issue of teaching practice. How teachers and students utilize space as an element of the curriculum remains an under-researched phenomenon (Chandler, 2009). It is commonly claimed that teachers' utilization of space makes a difference to pedagogy, and must impact student learning outcome (Joint Information Systems Committee, 2006). However, it is also widely accepted that this is rarely proved—there exists a paucity of empirical evidence concerning links between learning outcomes and learning environments (Blackmore, 2011).

There are many limitations of using the traditional pedagogy in teaching and learning. This technique of teaching is a one way flow of information in which the teacher often continuously talk for an hour or more expecting that when he asks a question, the students will able to reproduce the same thing that he was talking about. Below are some of the limitations indentifying for traditional pedagogy: • Teaching and learning are concentrated on theoretical method rather than practical aspects • There is not enough interaction with students in classroom • There is less activities in

the classroom, teacher decide what to do, when and how • No creativity, learners reproduced what the teacher told them over and over again • Less integration for students, the teacher is the only individual who talks and gives command • More emphasis has been given on theory without any practice and real life time situation.

Traditional learning produces active and non-active learners as result of its conceptualization of the learning process. Traditional behavioral classes do not favour active engagement of learners in the learning process, but rather focus on the behavioral impacts of immediate context and the teacher's role on learners. However, TL which is influenced by behaviorism theory has received criticism by cognitivist advocates who believed learners' involvement in learning process is more meaningful in developing learner's skills, experience and knowledge (Dorier & Maab, 2012).

Traditional pedagogy generally consists of teacher-centered instruction delivered to students who are the receivers of information and/or theoretical knowledge. More schools still use traditional teaching methods, which are also called conventional teaching methods. This kind of education in India generally stresses lecture methods and the memorization of facts. In traditional ways of teaching, teachers ask students to repeat and remember what they have learned and what they have been taught in class. Students also take turns repeating the lesson. Everyone else listens and waits for their turn, except those who are reading. In this way, students finish the whole lesson. Then, students have to learn the lesson by heart, and based on how well they do, teachers give them homework or oral and written tests. The method implies a stereotypical acceptance of ancient routines in the classroom. "A routine in which students are expected to sit for hours taking notes and answering questions with little interaction with peers" (Nancy Frey, 2009).

Descriptions of the characteristics of students provide a rationale for challenging our space use. The entry of large numbers of previously underrepresented students—students from ethnic cultures that stress social interaction, older students, students blending work and learning—also calls for environments in which social interchange and experiential learning are valued. This demographic picture also favors standard adult furniture over juvenile tablet arm desks (Bransford, 1999).

3.2 The collaborative teaching method

Collaboration can be defined as a process that enables groups of people with diverse expertise to combine their resources to generate solutions to problems over a period of time. Collaborative teaching is sometimes referred to as collaborative consultation, cooperative teaching, co-teaching, team-based services or community of practice. In special and inclusive education patterns of collaboration vary. They range from the consultations general classroom teachers might have with special education advisers/special education needs coordinators and with multi-disciplinary teams, through co-teaching arrangements, to supervising the work of a teacher aide/teaching assistant or other professionals. (Mitchell, 2008)

Innovative learning environments have also been referred to as Modern Learning Environments (Bradbeer, 2015), new learning spaces (Hall, 2013) and new generation learning environments (Imms, 2016). These are characterized by polycentric room designs, infused information and communication technologies,

movable walls and other agile interior elements, 'student friendly' furniture and ready access to resources (Imms, 2016).

In tertiary settings, these may also include larger spaces for 60 – 100 students with features such as tiered seating that easily modify to enable students to gather in groups throughout the lecture, as well as rooms with circular or triangular pods without a clearly defined front with screens surrounding the room facing different directions (Hall, 2013).

Cooperative learning method provides many conveniences to the students. The children get socialized by gaining favor for both themselves and their friends by entering the socializing environment brought along with the cooperating in the groups. Their sense of responsibility improves and their affective developments can increase by trying to be more active with the satisfaction of contribution to others. The individual can express their opinions through discussion, criticizing and conveying and also their communication skills improve and they gain the characteristics of a democratic. With this purpose, democratic individuals that our country needs are raised. Along with providing the social development and change of the individual, cooperative learning model also provides the students to develop a positive attitude towards the class (Demirtaş, 2008).

The goals of the students in cooperative learning is not to better than each other but to accomplish the better together. Moreover, cooperative learning is a teaching and learning model which increases the motivation of the students, improves their thinking skills, makes the students respect each other's opinions, helps them learn to discuss between each, teaches them to become democratic individuals, prevent the teacher to be considered as the only teaching source and makes the teaching-learning environment to be entertaining for the students (Nayan, 2010).

3.3The experiential teaching method

The most common way to think about experiential learning has been through cognitive reflection on concrete experiences (Kolb, 2015). This way of thinking has been influenced by behaviorist ideas. Kolb's (2015) and Piaget's (1966) writings argue that the learner must analyze the facts being taught and come up with an interpretation based on past experiences, personal beliefs, and the learner's cultural background. This idea is called constructivism. However, critics of constructivism view experiential learning as a learning theory catering to the social environment of the students. They believe that experiential learning as a theory has a deterministic view of how people make sense of their experiences and an overly cognitive view of how experience relates to knowledge, both of which limit our ability to reason and may prevent us from experiencing and learning. "Experience exceeds rational attempts to bind, control, and explain it," claims Michelson (1999).

Therefore, using social constructivism, scholars like Jayson (2019) and Miettinen (2000) have tried to change how we think about experiential learning. They claim that experience is not restricted to being interpreted just on an individual and psychological level but may also be viewed as a collection of societal knowledge and abilities, as well as the method by which a man comes into direct contact with nature.

In their view, an experience is an event that occurs when an organism interacts with its physical and social surroundings and flows into and through its objective environment, modifying it. And this objective environment is defined as a "set of conditions under which individuals relate to one another, interact, and coexist." Experiential Learning Theory (ELT) provides a holistic model of the learning process and a multilinear model of development, both of which are consistent with what we know about how people learn, grow, and develop. The theory is called "experiential learning" to emphasize the central role that experience plays in the learning process, an emphasis that distinguishes experiential pedagogies from others. It defines learning as "the process whereby knowledge is created through the transformation of experience." "Knowledge results from the combination of grasping and transforming experience" (Kolb 2015).

According to Smith (2001), the first context of experiential learning is "the sort of learning undertaken by students who are given the chance to acquire and apply knowledge, skills, and feelings in an immediate and relevant setting." In other words, students are given the opportunity to acquire and apply knowledge, skills, and feelings in a setting that is immediate and relevant. It is a pedagogy that prepares students for advanced-level jobs in the workplace or for postsecondary education that might readily connect with this form of experiential learning.

These programmes train students for advanced-level vocations in the workplace or for higher education. An additional illustration of this would be a workforce education development programme with a particular emphasis on occupationally related pragmatic tasks that need a set degree of precision. Morgan (2008) suggests that the most important part of experiential pedagogy is that it involves direct experience with the learning event, rather than just thinking about the learning. The idea of a transaction between the teacher and the learner is one of the most important parts of the philosophy. The teacher is responsible for presenting opportunities for experiences, helping students utilize these experiences, establishing the learning environment, placing boundaries on the learning objectives, sharing necessary information, and facilitating learning.

Experiential education is a student-centred approach. Beavers (2009) has remarked, scholars in the field of experiential learning have used the term in two different ways. From one viewpoint, the term is recognized to depict the kind of learning attempted by students who are allowed to understand and apply information, aptitudes, and feelings in a quick and significant setting. Experiential learning, therefore, includes an immediate experience with the phenomena being examined instead of just reasoning about the experience.

The second sort of experiential learning has been alluded to by Houle (1981) as training that happens to individuals due to direct participation in active engagement from the student is required for this direct experiential encounter with a learning event. This is in contrast to the passive engagement that is typically associated with teacher-directed instruction, which typically results in very little interaction between the student and the learning process. Students' reflections on direct involvement and direct interactions within the events of daily life are the topic of discussion in the second context of experiential learning that is outlined in the research. There are many ways to learn through experience: Outbound Training, Virtual Online Team Building, Small Group Projects or Assignments, Practicums or Field Placements, Service-Learning, Adventure Based Learning, Game-Based Learning, Outdoor Learning Activities, Inhouse Learning Activities, Drama, Art, Theatre, Storytelling, Creativity Games, Mystery Games, and Using Teaching Learning Material (TLM).

3.4 The work plan-Project

Recent research in education and cognitive psychology has identified several characteristics that can hinder or improve student learning. Fink (2003) devoted several years to surveying faculty members in order to identify what constitutes “significant learning” practices that help students develop practical, life-long skills. He found positive learning gains in classrooms with integrated course design that encourages active, problem-based learning where students engage inductive thinking while building their foundational knowledge. Fink showed that active learning classrooms increased students’ knowledge retention, developed critical thinking and molded students into self-directed learners.

3.5 The role-playing

One of the essential steps in presenting the principles of a good lesson is the interaction between students. The key to a successful speaking lesson is a successful speaking activity. Nonetheless, it might be challenging to design, so teachers should be familiar with the basic characteristics of a profitable oral exercise. Learners should have a chance to talk using the target language (Ur, 1996). Although still possible, what is difficult to achieve is the desire to have the time devoted to such an activity filled with learner talking time to the maximum (Doff, 1988). What a teacher can do to promote speaking is to divide students into groups. Working in groups increases the amount of practice learners can get and the amount of their speaking. When students sit in a small circle, their inhibitions are lowered, and they are encouraged to speak. Nevertheless, it is more natural for them to speak in their mother tongue than in the target language, so teachers very often keep on reminding learners to use L2 (Dobson, 1989).

Because there is no precise definition of role-playing, various authors see it differently. According to Porter-Ladousse (1987), "role-play activities range from highly-controlled guided conversations at one end of the scale, to improvised drama activities at the other; from simple rehearsed dialogue performance, to highly complex simulated scenarios." The author of these words puts much emphasis on a broad scope of role-play activities. Such a speaking task may be limited and supported by prepared cues, such as dialogues; conversely, role-playing may be an activity in which students prefer to improvise rather than rely on the practiced dialogue (Huang, 2008).

Porter-Ladousse (1987) also points out that role-play may differ in complexity; some performances may be concise and simple, whereas some utterances may be very structured. The difficulty of the activity depends, therefore, on the language level. Gobio (1987) indicates that in role-play, learners are given a task to complete, and in order to do it, they are told who they are, what their opinions are, and what they know that is unknown to the other students. She stresses that students are told who they are, namely, that they play the role of somebody else. Being cast in the role of a different character may diminish the fear of speaking, as these are not the speakers who make mistakes but the personalities they play (Budden, J, 2004).

The critical feature of role-play is that learners can become anyone they want for a short time. Their task is to pretend to be a different person, and it may be, for example, a doctor, a pop star, a parent, and a millionaire (Porter-Ladousse, 1987).

For a role-play to be a successful speaking exercise, it is helpful to know some

basic principles about organizing such an activity. Firstly, it is important to mention that if a teacher is not convinced about the validity of using role-playing, the activity itself "will fall flat on its face just as you expected it to" (Porter-Ladousse 1987).

The educator has to be convinced that role playing is an exciting technique to use and has many benefits. If the teacher is not enthusiastic about the play, the students will not be as well (Scrivener, 2005). Any teaching sequence requires three vital elements: the engage stage, the study stage, and the activate stage. In the first phase, the engage stage, the teacher's task is to attract and keep learners' attention and interest in a lesson. Students' minds must be involved and emotionally connected with a lesson, for example, by a pleasant situation or a nice picture (Harmer, 2012).

Then, learners need to study the new language, grammar, or vocabulary exercises. Having learned the new item, students can activate both the new language and the language they already know. Learners do it when they speak freely. Having been engaged, being presented with the new language, and having practiced it, learners try to activate it. Students are presented with the new language, they practice it, and, finally, they make an effort to produce the new language or any language (Thornbury, 2005).

Role playing as an active learning technique involves a high level of participation from students (Tabak and Lebron, 2017). Role playing is a group activity involving more than one person who assume different roles in a given situation (Rao and Stupans, 2012) with the aim to acquire learning experiences (Sogunro, 2004).

As per Yardley-Matwiejczuk (1997), role playing puts the people in "as if" situations through simulations and actions depending on specific events and circumstances such that different behaviors, roles and arguments directly influence and deepen the learning experience. The preparatory part of role playing is crucial as it involves establishing the descriptions of roles along with the pre-requisites of the involved participants (Westrup and Planander, 2013).

Learning in role playing is facilitated by observing as well as acting out the series of events happening in the respective situation. Role playing helps students to understand the dilemmas in situations and highlight the values of interpretation, which are not possible to study in the traditional lecture mode of teaching (Bryant and Darwin, 2004).

Another study explored role playing for learning in the marketing field to help students create favorable customer experience without direct supervision from the instructor (Paul and Ponnampalnam, 2018). Business ethics is another well-suited educational realm for role playing learning (Sausser and Sims, 2018). Role playing also helps students to understand the feelings, values, attitudes and body language that provide the context of the business situation at hand. This is very valuable in business education as role playing supports cross-sectoral integration and help students experience the complexity in decision-making (Ferrero, 2018).

Moreover, as per Alkin and Christie (2002), role playing is a useful tool in teaching conflict resolution and preparing students with the necessary skills required for effective conflict management.

Doff (1988) states that if role-play is not based on a course book or text dialogue, students themselves have to decide what language to use and how a conversation should develop. Therefore, for role-playing to be profitable, careful preparation would be essential. The educator may stimulate classroom discussion about what the speakers may say. Also, writing prompts on a board, and necessary vocabulary may guide students during role-play.

Budden (2004) adds that drilling the structures the players would need to use

is very helpful, as learners are equipped with suitable language. It is also worth remembering that the teacher should make sure that students understand both the situation to be played and also what is on the role cards before the activity begins. If learners follow the activity, they can properly conduct it. Of course, role cards should be legible and within students' language level. Moreover, educators should not use too tricky or too emotionally taxing role-plays until students are used to that activity. Instead, starting with simple information-gap role-plays is advisable (Al-Arishi & Yaha, 1994).

During the first role-play, learners may be more or less inhibited, but soon they will get accustomed to role-playing (Porter-Ladousse, 1987). Beyond question, students will need time to prepare for a performance and try out their roles privately. Depending on the learners' language level, the amount of planning time may differ. Players at this stage of an activity work in pairs or groups and discuss what they might say. At higher levels, students will not need much help with the language but time to get into roles (Doff, 1988).

SECOND CHAPTER: INTERCULTURAL EDUCATION

INTERCULTURAL EDUCATION AT PRESCHOOL LEVEL

1.1 Building and promoting intercultural education in preschool

Diverse does not mean deficient. Diversity includes a number of factors such as race, ethnicity, gender, language, and income. Each factor can influence the relationship between teacher, student, family, and community. According to Rehm and Allison (2006), all students are diverse, even those from the same cultural background. Respecting diversity requires that teachers look at all students with interest and openness, and utilize flexibility when providing instruction. Students may be considered at risk and need the development of resiliency factors to be successful. Teachers who have been taught to appreciate diversity are more self-confident, have increased abilities, and move beyond judging students by superficial attributes such as skin, color, speech patterns, and exceptionality.

A Polish researcher of intercultural education, Jaroszewska, observes (2007) a number of aspects that need to be taken into account when planning for learning sessions with pre-schoolers. For one thing, it needs to be appreciated that kindergartners are not used to sitting by their desks, as is generally typical of traditional schooling, therefore they need a lot of movement. The activities planned for this age group should comprise of physical activities that allow for consuming their energy. Secondly, as these children are unable to read and write, teaching should be based on verbal and nonverbal ways of communicating knowledge.

Courses need to recognize and reflect differing beliefs about childhood held by different cultures. Within relevant courses, particular emphasis is to be given to the understanding of how children develop language, and teachers ought to be provided practical experiences in teaching a second language. Besides pre-service training,

continuing education on multicultural and indigenous issues should be made readily available for all staff working with young children. Service staffs are to be assisted to engage in professional development, which enables them to examine their own values and assumptions in relation to race, culture, class, sexuality and gender and the impact these may have on their practice. Once again, this provision will differ depending on the state of development of early childhood education in that country. Additionally, the commitment to staff's continuing professional development will also be dependent on the center's own philosophy and belief in this critical pedagogy and reflective practice which underlies an authentic perspective of diversity (Baldwin, 2007).

1.2 Learning Space and teaching methods in multicultural preschool classrooms

With the ever-increasing globalised world, there is a growing ethnic, cultural, racial, linguistic, and religious diversity and therefore an increased need for multicultural education (Banks, 2009).

According to Banks (2009), a multicultural education is one that incorporates texts, beliefs, and views that are diverse in nature and not dominated by one particular mind-set.

Banks (1995) identified five dimensions to multicultural education:

1) Content integration: The extent to which teachers use examples, data, and information from a variety of cultures and groups to illustrate key concepts, principles, generalizations, and theories in their subject area or discipline.

2) Knowledge construction process: the procedures by which social, behavioural, and natural scientists create knowledge and how the implicit cultural assumptions, frames of references, perspectives, and biases within a discipline influence the ways that knowledge is constructed within it.

3) Prejudice reduction: The characteristics of children's racial attitudes and strategies that can be used to help students develop more democratic attitudes and values.

4) Equity pedagogy: Teachers use techniques and methods that facilitate the academic achievement of students from diverse racial, ethnic, and social-class groups.

5) Empowering school culture and social structure: The process of restructuring the culture and organization of the school so that students from diverse racial, ethnic, and social-class groups will experience educational equality and cultural empowerment (Banks, 1995, p.3-5).

These dimensions help to define, categorize, and identify multicultural education. Banks (1995) argued that the purpose of multicultural education is to ensure educational equality for students from diverse racial, ethnic, and social-class

groups. He also noted that ensuring equality required multicultural education to be implemented successfully, and this needed institutional changes in schools, including changes in the curriculum, the teaching materials, teaching and learning styles, the attitudes, perceptions, and behaviors of teachers and administrators; and the goals, norms, and culture of the school.

Arslan (2009) similarly noted the numerous benefits of culturally diverse schools, as well as emphasizing the need to ensure student academic success. He also argued for the need to create culturally sensitive education and stressed the importance for the institutions to set goals. He noted the importance to teach all students ideas, values, and rituals so they could be successful within the school. He noted the importance of making students feel welcome, encouraging them to engage in learning, and ensuring all students are included in activities and curriculum. In order to reach these goals, Arslan states, principals and teachers must work collaboratively with school staff members, parents, and the community to accomplish goals.

Souto-Manning (2013) demonstrates clearly that a multicultural approach in preschool education has positive effects for both teachers and students. We live in a society that is becoming progressively diverse, therefore, it is fundamental that preschool educators recognize and acknowledge other cultures. According to Boles (2006), by learning about other cultures it might open our eyes to the fact that what we may consider unusual or a form of misbehavior is considered a sign of respect in another culture.

Banks (2009) concludes that to accomplish global education it is necessary that school environment, teacher's attitudes, curriculum, teaching strategies and materials are combined so that children will develop the knowledge and attitudes to understand and participate effectively in a highly interdependent and international society. The challenge of accepting the culturally diverse community should be confronted not only in schools or classrooms with children from different cultures, different social background and traditions but also within every non-diverse school and preschool classroom.

If preschool children are introduced into a multicultural environment it is easier for them, according to Boles (2006), to accept other perspectives and ways of doing things that are just as valuable as their own. In other words, it is in teachers' hands to create such an environment of acceptance. Children spend a significant amount of time at school and therefore it is critical that teachers are able to transmit values that will prepare these children for the future.

According to Souta (1997), multicultural education contributes to the solution for the new cultural diversity problem that is arising. Multiculturalism is present in all population and for that reason, it is necessary to approach this topic right from the beginning of early childhood education. The teachers' lack of knowledge of multicultural educational principles presents a significant dilemma in early children programs.

Ogletree and Larke (2010) present different studies on this subject and strongly conclude that children would be greatly benefitted if programs embraced

different culture during their early years.

Most of the current literatures of multicultural education in early childhood settings come from the United States. Bruch et al. (2004) identified three dominant approaches which are used, the 'celebratory', the 'critical' and the 'transformative' approaches. The celebratory approach moves away from defining differences as deficiencies to highlighting the positive accomplishments and aspects of different cultures and social groups.

The critical approach examines and challenges issues of power and privilege in society, confronts racism and other biases; whilst the transformative approach seeks to find ways to transform domination for the good of all as a means of improving society and the world. In taking a multicultural perspective in early childhood education, Gonzalez-Mena (2000) reminds us that practitioners must not forget to treat the dominant culture also as a culture, and not as a universal reality.

When the dominant culture is not named as such, the insinuation is that the dominant culture is 'normal' and that the other cultures are deviations from the norm. Another advocate of multicultural education (Banks, 1994) offers different though quite similar suggestions for how it can be accomplished in school practice. Banks suggested four approaches to multicultural education, each increasingly more significant and comprehensive: (1) teaching about contributions of culturally different groups and individuals; (2) an additive approach in which multicultural lessons and units of study are supplements or appendages to existing curricula; (3) a transformation approach in which the basic nature of curriculum and instruction are changed to reflect the perspective and experiences of diverse cultural, ethnic, racial, and social groups; and (4) a decision making and social action approach that teaches students how to clarify their ethnic and cultural values, and to engage in socio political action for greater equality, freedom, and justice for everyone. Others however, prefer to take a more holistic approach to multicultural education by advocating an anti-bias curriculum (Hohensee & Derman-Sparks, 1992). An anti-bias curriculum seeks to nurture the development of every child's fullest potential by actively addressing issues of diversity and equity in the classroom. Specific goals of an anti-bias curriculum are to foster each child's: construction of a knowledgeable, confident self-identity; comfortable, empathic interaction with people from diverse backgrounds; critical thinking about bias; and an ability to stand up for herself or himself, and for others, in the face of bias.

2. INTERCULTURAL COMMUNICATION AND INTERACTION IN THE MULTICULTURAL PRESCHOOL CLASSROOM

2.1 The dynamic process of communication/interaction of student's with different cultural backgrounds

In the ever-growing multicultural environments and institutions which host people from different social and cultural backgrounds, the abilities to deal with cultural diversities could be an important issue. Competencies in both intercultural sensitivity and intercultural communication competence are among the main elements that could affect daily personal, social and professional lives of individuals who live in multicultural environments. One of the main essential parts of daily life in a multicultural environment is intercultural communication. Therefore, their good levels of intercultural sensitivity and their competency in intercultural communication could help people from dissimilar cultures to interact with one another properly. As stated by Gudykunst and Kim (1994), intercultural communication is a mutual and symbolic process which involves meaning attribution between individuals who belong to different cultural backgrounds. However, it is important to know whether intercultural sensitivity and intercultural communication competence are the same or different, and in which ways these two elements affect each other. Ameli and Molaei (2012) believe that intercultural communication competence and intercultural sensitivity have close relationships.

Ameli and Molaei (2012) asserted that intercultural sensitivity is among the main factors that influence successful communication. At the same time, intercultural competence is among the important requirements to conduct successful interactions with different people, and to improve human relationships (Coffey, Kamhawi, Fishwick, & Henderson, 2013).

According to Chen and Starosta (1996), the embedded misperception of intercultural awareness, intercultural sensitivity, and intercultural communication competence, which are closely related to one another but different concepts, is the main cause of confusion on understanding these concepts. The core point of intercultural sensitivity is personal aspiration of a person to comprehend and appreciate different cultures and cultural norms which are not the same as his or her own cultural norms (Chen & Starosta, 1997).

However, intercultural communication competence refers to the abilities that enable individuals to conduct effective interactions in a multicultural environment and to narrate in different cultural perspectives (Bennett & Bennett, 2003). According to Marrone (2005), intercultural communication competence is the skill for conducting peaceful interactions with individuals from diverse cultures, and this ability helps individuals to find their right places in multicultural settings.

At the same time, high intercultural sensitivity is linked with the probable experiencing of competent intercultural communication (Hammer, Bennett, & Wiseman, 2003).

Teachers can make their classrooms encouraging and supportive by teaching students problem solving and conflict resolution skills in small groups and whole class meetings (Gartrell, 2006).

Nelsen, Lott, and Glenn (1997) defined class meetings as when the teacher assigns a designated time of day when students form a circle and work together to discuss and solve classroom issues and problems. Classroom meetings can help create a sense of belonging and trust for students. Classroom meetings can also encourage children to work together to solve problems while practicing pro-social skills.

Browning, Davis, and Resta (2000) used classroom meetings with twenty 1st-grade students to teach them positive forms of conflict resolution and decrease acts of verbal and physical aggression. Prior to the introduction of the class meeting acts of aggression were common in this classroom. After the use of the classroom meeting the number of aggressive acts was significantly reduced. Sisco (1992) used classroom

meetings with fourth and fifth grade students and saw a decrease in the number of disciplinary referrals to the office and an increase in self-esteem.

2.2 The characteristics of an effective intercultural communication/interaction environment

Intercultural communication is among the main factors that enable people from various cultures and countries to share their knowledge and experiences, and to establish personal, social and cultural relationships beyond their geographical and cultural borders. As argued by Kim and McKaySemmler (2013), intercultural communication plays a key role on enabling people on establishment of cross-cultural relationships. Intercultural communication competence and intercultural sensitivity are key factors helping people to conduct successful intercultural interactions. Even though these two variables have some similarities, they are not the same. Intercultural communication competence mainly belongs to the skills of individuals that enable them to interact properly, while intercultural sensitivity refers to their perceptions towards differences and their personal willingness towards involving in daily contacts with people of different cultures.

Chen and Starosta (1996) also stated that intercultural sensitivity and intercultural communication competence are closely related to each other, but they are different. The findings from this study are supportive of these arguments. Based on the results from this study, intercultural communication competence and intercultural sensitivity have close relationships, but they are different in function and perception.

Attention in the basic and fundamental parts and micro levels of interface and interactions of people across different cultures and societies maintain the main domains for theories and studies of intercultural communication (Kim, 2010). Based on Kim's (1992) systems theory, "the systems perspective emphasizes on the dynamic, interactive nature of the communication process between two or more individuals." The theory also focuses as "all parties involved in a given encounter, including the conditions of the social context in which the encounter takes place, codetermine the communication outcomes.

It means that no one element in a multi-person communication system can be singled out for being solely responsible for the outcomes." Kim's (1992) systems theory introduces intercultural communication competence as "overall capacity to facilitate the communication process between people from differing cultural backgrounds." While, intercultural sensitivity refers to a mental state that includes the consideration of understanding and appreciation of different cultures during intercultural communication.

The Bennett's (1998) Developmental Model of Intercultural Sensitivity focuses on six steps towards the development of intercultural sensitivity and communication competence among people. The model illustrates that based on these steps individuals can build their cultural directions towards individuals from different cultural backgrounds. The proposed steps are three for ethnocentrism as: denial of differences, defense of differences, minimization of differences, and three for ethno-relativism as: acceptance of differences, adaption to cultural differences, and integration into cultural differences (Bennett, 1998). The cited steps and suggestions from the mentioned theory and model are suitable to guide such a study on intercultural communication.

Principally, intercultural communication competence deals with interpersonal interactions among individuals from different cultural backgrounds, and looks for manners of understanding the probable disputes, challenges and disagreements in direct individual communication, and to deal with these issues (Bennett, 1998, Stepanovienè, 2011).

One of the first things a teacher does at the beginning of the school year is organize, arrange, and decorate the classroom. The physical environment of a classroom plays a part in the ownership students feel about their school and more specifically their class. The classroom environment should do as much to foster cooperation and acceptance as the instructional method the teacher uses. Children are sensitive to the atmosphere created in the classroom. Is the classroom warm and inviting? Are all areas of the classroom accessible to all children? Are the walls bleak and lacking in color or do the decorations help to make the students feel comfortable? Are areas well defined as to their design and purpose? (Scott, Leach, & Bucholz, 2008).

Decorating a classroom with some kind of warmth can help promote a sense of comfort and security. Classrooms tend to be rather cold, bare places until they are decorated. Adding a splash of color can bring life to a sterile environment. Color choice is important when decorating a classroom. Teachers should keep in mind that red and orange can make children feel nervous and unsettled while blue and green can help students feel calm. Furthermore, dark colors take natural sunlight out of a room and can even make people feel drowsy and listless (Hathaway, 1987). Plants, soft chairs, rugs, and pillows can help to add warmth and comfort to a class environment (Rutter, Maughan, Mortimore, & Ouston, 1979).

While decorations help create a warm environment, organization of the furniture in the room is also important. There should be enough space for all students to easily move throughout the classroom. Teachers should consider the use of universal design. Universal design is designing products and environments to be usable by all people, to the greatest extent possible, without the need for modification or specialized design (Burgstahler, 2008). This approach began in the field of architectural design when architects started to engineer accessible buildings from the beginning rather than making renovations to those buildings later (Lieberman, Lytle, & Clarcq, 2008).

Traditions can help create positive feelings and bond students to their class. Start the morning with a beginning of the day tradition. Students could work together to create a class pledge that is recited every morning before the day begins. One example of a class pledge created by Ms. Fitting from Oysterponds Elementary School includes the three Cs: "We will Cooperate, We will Communicate, We will Concentrate, We will have a Good Day." The use of a thought provoking and memorable quote is another possible way to create a special tradition in class. Begin by reading a quote to the class and have students share their thoughts and feelings about what the quote means to them. Traditions can also be used to end the day. Teachers can give students time at the end of each day for a reflective activity. Examples of activities could include creating a picture of something students learned that day, writing a reflective paragraph in a journal, or writing a note to their teacher stating one thing they learned during the day and one thing that confused them (Lasater, Johnson, & Fitzgerald, 2002). Teachers could also have the class write their own song to sing or a poem to recite at the end of every day.

Classroom interactions have been shown to be a critical mechanism by which children develop (Mashburn, 2008, Pianta, 2007, Rutter & Maughan, 2002).

According to the bioecological model of development (Bronfenbrenner & Morris, 1998), classroom interactions constitute proximal processes—the reciprocal interactions between the individual and their environment—which drive development. Proximal processes need to have continuity and consistency over time to be effective. Therefore, proximal processes have continuity over short durations of time (“microtime”).

Interactions that happen in a classroom matter for children. However, these studies have not examined the interactions as they occur in time and often aggregate and average ratings over the course of a day as a way to summarize what is happening in a classroom. By virtue of the fact that the same teachers and children are interacting suggests their interactions will have stable elements based on their attributes, traits, and relationship history (Pianta, 1999) and, thus, supports the idea of averaging across cycles of observation. But, we also know that interactions will not be entirely stable, and that interactions will change as the classroom context changes throughout a day. For example, a teacher may provide higher levels of Emotional Support as children are first coming in to the classroom to help them transition into the school day. Thus, by averaging across observation cycles important information may be lost about how classroom interactions change during a day. In this way, the instructional, organizational, and emotional classroom interactions offered to children could be viewed as a function of both an underlying teaching style and an overt response to what is happening in the class and with whom the teacher is interacting.

The degree to which classroom interactions are stable has consequences for children’s experiences. Stability in the quality of classroom interactions primarily speaks to the consistency of classroom interactions over time, which, in turn, speaks to the consistency of children’s experience. The experiences of children in highly stable classrooms versus those in highly variable classrooms could have important ramifications for children’s development (Kern & Clemens, 2007).

In a classroom with highly stable classroom interactions, children know what to expect (good or bad). For example, in a classroom with stable interactions, children know that if they were disciplined for doing something before, they will again if they repeat their behavior. In this way, regardless of its quality, simply being able to predict their environment may also be related to children’s development aside from the overall quality (Curby, 2009). In less-stable classrooms, child misbehavior may be excused at one point in the day, but dealt with harshly a short time later. This unpredictable, seemingly chaotic environment may influence a child’s ability to function. Thus, combining what we know about the levels of quality in classroom interactions with an understanding of the degree to which teachers’ behaviors are stable over time helps our understanding of children and classrooms.

Not only is stability important for the experience of children, but stability also has important implications for the measurement of classrooms. If classrooms are not relatively stable in their interactions, then measurements are capturing more of a transient state of a highly dynamic process than a characteristic of the classroom. Therefore, sampling techniques with few observations would not be appropriate and may not lead to replicable results (Meyer, 1991).

2.3 The importance of communication/interaction in multicultural environments

Communication is about sending and receiving messages. To plan effectively for the communication needs of children with special needs, it is important to know at which stage of communication development the child currently functions. The important thing to remember is that before a child can effectively communicate, he must have the tools he needs to do so and he must know how to use those tools. Communication goes far beyond just knowing how to talk; it involves the child having a reason or motivation to communicate as well. The first step in planning for communication is to recognize the various levels of communication and determine which level best describes the child's current level of functioning. (Sussman, 1999).

According to Mahoney, Cairns, and Farmer (2003), the development of communication competence among individuals from various backgrounds increases their professional achievements as well. It was also pointed out that intercultural communication competence has useful impacts on the social and professional relationships among people. The main three elements of intercultural communication competence are attitudes, skills and knowledge. The skills and knowledge elements construct through the three different stages which are: to know (basic), to understand (advanced) and to apply (proficiency) (Catteeuw, 2012).

Early childhood educators work with children and families from a range of diverse backgrounds (Ladson Billings, 2005). As society becomes increasingly multiracial, multilingual, and multicultural, so too grows the need for educators' abilities to support children's development by instilling in them the tools they need to live together respectfully and stand up to prejudice. Teachers of young children play a pivotal role in laying this foundation (Gay, 2002, Hein & Miller, 2004), so they must be prepared to develop environments that are inclusive and respectful to all.

Early educators have already adopted multiculturalism and anti-bias curriculum frameworks to address issues of culture and diversity.

- Multiculturalism focuses on the creation of equal educational opportunities and positive attitudes toward differences (Banks & Banks, 2004).

- An anti-bias curriculum, articulated by Derman Sparks and Ramsey (2006), adds an emphasis on the individual's actions in response to discrimination and prejudice.

The models to put both of these frameworks into practice generally follow a top-down structure in which teachers educate children about various cultures. Interculturalism adds a new layer for addressing diversity through its attention to the bi-directionality that is needed in an authentic sharing of cultural contexts. "Interculturalism is the sharing and learning across cultures that promotes understanding, equality, harmony, and justice in a diverse society" (Loyola Marymount University, 1990).

With interculturalism, individuals learn from each other and engage in an ongoing exploration of the historical and cultural contexts that influence individual development. Instead of a top-down transmission of knowledge, an intercultural environment is one in which there are authentic and meaningful exchanges of

information about each person's individual experiences that transform all involved. Imagine an early childhood classroom where the teachers, children, and families learn together in an environment that facilitates a deep level of sharing about their cultural contexts.

The intercultural approach realizes that not one individual fully represents an ethnicity or a race. Each person represents his or her own experience as a member of a group and within his or her cultural context. The phrase cultural context within the early childhood education setting is inclusive of all aspects of a child's cultural identity that are unique and influential: ethnicity and race, primary language, family composition, socioeconomic status, and special needs. Each individual can simultaneously contribute in multiple ways to the richness of the cultural context (Campinha-Bacote, 1994).

Preschoolers ask questions about their own and others' racial, linguistic, and gender attributes (Ramsey, 2004). Preschoolers are cognizant of family structure and socio-economic differences and the values society attaches to them (Tatum, 2003). Although some may think prejudice is minimal or does not really exist in the early childhood years (Holmes, 1995), research has demonstrated quite the contrary. Children develop an increasingly accurate awareness and acceptance of their identity. As a consequence of young children's growing positive feelings about their in-group, there is a simultaneous increase in negative feelings toward out-groups (Aboud, 1980).

Teachers of young children typically find themselves navigating multiple cultures, individual development needs, and various special needs, while simultaneously working to develop curriculum and provide inclusive environments that nurture development and engage all young children (Ladson-Billings, 2005).

Early childhood professionals have the responsibility to demonstrate sensitivity, inclusiveness, and respect toward all family compositions, regardless of how they differ from their own experiences of family life (Turner-Vorbeck, 2005).

THIRD CHAPTER: Communication and Interaction

1. THE CONCEPT OF INTERACTION AND COMMUNICATION AT PRESCHOOL EDUCATION

1.1 Defining Communication and Interaction

The general view of communication is that it is an interaction within a social context. Communication usually involves a sender (source) and a receiver. It involves the interlocutors exchanging signals. These signals could be verbal or graphic, it could be gestural or visual (photographic). In essence, communication involves using codes that are done with the eyes, body movement or sounds made with the voice. Whichever way it is done, there is always a process in which someone initiates a meaning intent that is passed to the interlocutor (receiver). Daniel (2016) asserts that it is when feedback, which involves the receiver responding to the signal by initiating another circle of meaning exchange, has been sent to the sender (source) that the

communication process has gone full circle and become complete.

Giffin & Patten (1976) also state that communication is the process of creating meaning as well as ascribing it. It is the exchange of ideas and interaction among group members. The Oxford Advanced Learner's Dictionary of Current English (2004) defines communication as the activity or process of expressing ideas and feelings or of giving people information. One can safely say that communication is the act of transferring information and messages from one place to another and from one person to another. In a related manner, the Online Business Dictionary describes communication as a two way process. It involves participants reaching a mutual understanding beyond merely encoding and decoding information, news, ideas and feelings.

Effective communication is essential but some factors can hinder it. Effective communication requires that a number of simple conditions are met. First, speakers should express themselves accurately, clearly and correctly; listen carefully to one another and decode message correctly. According to Breshears, possible barriers to communication include physical barriers, psychological barriers, cultural barriers and language barriers. Saxena (2008) lists five impediments to communicating effectively as unfamiliar language, relationships, bad timing, attitude and differences such as age, gender, intelligence, and race.

The significance of dialogic interaction in communication has been extensively studied (Hundeide, 2002). Hundeide described communication as a dialogic interaction with verbal, non-verbal and physical interactions between adults and children. This means that teachers' speech and actions are considered to depend on what children express, and thus a sense of caring is created between people.

Related to a child perspective in early childhood education (Sommer, Pramling Samuelsson, & Hundeide, 2010), it is also a question of teachers being sensitive and supportive in communication, as a means of supporting children's opportunities to learn and develop.

Nowadays, interaction in a classroom between students-students or students teacher become something challenging to be investigated. People can learn the effectiveness of the learning process through the pattern of the classroom interaction since it influences teacher and students or among students who involved in the communication transfer (Dagarin, 2004). For decades, researcher and professional experiences have shown that interaction in a classroom gives a significant impact toward foreign language learning.

Those studies present important details on many perspectives of interaction. Vygotsky (1978) through his social cultural theory believes that learning is an important process which can only be operated when there is an interaction between student and people around him including teacher and his peers. When these processes are internalized by students, they will become students with an independent developmental achievement for the language learning.

On the other hand, Thapa & linas cited in Rukmini&Jiwandono (2015) believe that classroom interaction can help students in building their confidence, developing their communication skill, strengthening their social relationship, and also increasing students' language store. Based on this information, it can be inferred that classroom interaction gives positive impact not only for student's language development but also on their social relationship as well.

Some research studies have been done in order to find the types of students' interaction. One of the studies is conducted by Angelo (1993) who divides classroom interaction into two kinds: 1) student- teacher interaction, 2) student- student

interaction. Through these kinds of interaction, the student can maximize their learning by actively participating in the interaction process. These two types of interaction also give different opportunities for student's learning therefore it is important for educators to put attention on both of them.

Nowadays, students' interaction as a part of collaborative learning becomes an important aspect that needs to be considered in the teaching and learning process. Many studies have found that this collaboration is effective in enhancing students learning. Interaction between students' different background experiences, prior knowledge and perspectives develops their literate thinking and promotes their high-level comprehension (Anderson & Soden, 2001). Students who are engaged in a meaningful discussion also tend to demonstrate better text comprehension. Moreover, involving in a meaningful discussion helps them to achieve a new understanding which also leads to a better text comprehension.

1.2 The concept of pedagogical communication and interaction in preschool

Interpersonal interactions during childhood form the foundation for development and learning (Tomasello, 2014). Numerous studies have documented the impact of interactions between teachers/preschool teachers and preschool-aged children between 3 and 6 years of age (Denham et al., 2003, Hamre et al., 2013).

It is highly desirable that young children are given the opportunity to spend some hours in pre-school settings with many facilities and qualified staff to enrich and stimulate them socially and intellectually (Ogunyemi, 2002). Allied to this, is the fact that healthy intellectual, social and emotional development of young children requires the formation of stable and loving relationships with parents and caregivers. A recent study revealed that children exposed to high quality settings exhibit better language and mathematical skills, better cognitive and social skills and better relationships with classmates (Layzer & Goodson, 2006). It is therefore imperative to provide a quality learning environment for young children in their schools.

The significance of dialogic interaction in communication has been extensively studied (Braten, 1998, Hundeide, 2002). Hundeide described communication as a dialogic interaction with verbal, non-verbal and physical interactions between adults and children. This means that adult's (i.e. teachers') speech and actions are considered to depend on what children express, and thus a sense of caring is created between people (Hundeide, 2002).

Related to a child perspective in early childhood education (Sommer, Pramling Samuelsson, & Hundeide, 2010), it is also a question of teachers being sensitive and supportive in communication, as a means of supporting children's opportunities to learn and develop. Early childhood research (Pramling Samuelsson & Asplund Carlsson, 2008, Thulin, 2011) emphasizes communication about learning content (the question of what could be learned) between children and teachers as essential for children's learning.

Johansson (2005) emphasized the importance of relational strategies for teachers working with young children where the overall atmosphere in learning encounters, as well as teachers' perspectives and understandings of the child, is central. Equally important is the knowledge of learning and development as a means of attaining quality in interaction and learning encounters with children. In the same

study, Johansson found that the most common ways of communicating with children are a combination of dialogue, instruction and a more distanced kind of talk. Often communication has a close connection to what is going on in the immediate environment, but does not seem to relate to common pedagogical strategies in the team (Johansson, 2005).

1.3 Basic conditions for communication and interaction in preschool

Learning to communicate is the key for children to interact with others. In early childhood education (henceforth: ECE), communication is important to help children build academic skills and feel confidence in learning. Effective communication should take place with shared meaning and understanding between teachers and children in early childhood settings (Velentzas & Broni, 2014, Nurani, 2017). Children learn to express thought, feeling, and information through communication (Gooden & Kearns, 2013). One type of communication often used in ECE classroom interactions is verbal oral-face-to-face formal or informal communication (Bubikova-Moan, 2019). Oral communication may include speech acts. An effective communication strategy builds and maintains connections, allowing interactions to work efficiently toward the learning goals.

Few researches conducted on the effectiveness of speech acts and communication strategies in early childhood education. However, (Ryckebusch & Marcos, 2004) conducted a study on pragmatic development in terms of speech acts in young children. Different speech act types were used in children's conversational with partners as long when they played. The three groups of ten French urban middleclass children became the participants of the study. They were observed in 8 and 12 minutes they played and interacted with their parents. The results showed parent's gender had a significant effect on the production of directive acts and assertive acts, while the play type had an impact on the production of requests and expressive acts.

The author who first spoke of development changes in quantitative features of social interaction with preschool children was Parten (1932, according to Coplan, & Arbeali, 2011).

Parten tried to describe the levels of development of social participation during the preschool development period. The author names the first level of social participation as non-social behavior that is marked by a lack of intention for interaction. Such social interactions (interactions that are not present respectively) mark parallel play during which children play but are thereby not together. The following level of development of social interaction is made up of associative play which includes social interactions during which children use similar objects but without any cooperation. The last phase of social interaction development is made up of cooperation that plays a significant role in organizing group activities and harmonizing mutual goals. These two last forms of social interaction, associative and cooperative, are later named social interaction.

With regard to the level of development of social interaction, Coplan, Rubin and Findlay (2006) speak of unsocial play marked by independent play in the presence of other children, and social play that implies cooperation and social interaction. Thereby, parallel play represents the function of an important sequential bridge in the development of peer interactions with preschool children. Social behavior of preschool children is developed from onlooker behavior across parallel-

conscious play into social peer interaction. Parallel play has a two-way influence between independent activity and social activity (Howes, & Matheson, 1992).

The development of social interactions in peer groups and changes in the complexity of these interactions is manifested in play activity. Thereby nonsocial activities that include independent play without social interaction can differ; parallel play that includes more children but not the interaction among them; associative play includes sharing but not participating in joint tasks; cooperative play implies cooperation, a true reciprocal social interaction during which children cooperate in joint activities (Coplan, Rubin, & Findlay, 2006).

Children of older preschool age spend all the more time in conversation which is a reflection of joint tasks (rules, negotiation, and argumentation). There is more direct and verbal communication (Rubin, Bukowski, & Parker, 1998).

2. INTERACTION AND COMMUNICATION IN THE CLASSROOM

2.1 Communication and interaction in the educational process

Communication is an ongoing process of sending and receiving messages that enable humans to share knowledge, attitudes, and skills. Effective teaching depends on successful communication. When teachers and students interact, explicit communication is occurring (Miller, 1988).

Interaction between teacher and students and students and students are needed in the classroom activities taking communicative approach. It will maintain communication to happen in the classroom. It will help the teaching and learning process run smoothly. When the teacher and students, and students and students' interactions happen, the instruction will reach the target. The gap between teacher and students in the classroom will disappear. So, the teaching and learning process will be balanced between the teacher and the students. Not only the teacher who will be active in communication but the students will also participate in the teaching and learning process. Ellis (1990) stated that interaction is meaning-focused and carried out to facilitate the exchange of information and prevent communication breakdowns.

2.2 Systems of social communication and interaction in the classroom

Communication competence and effectiveness have been defined in a variety of ways (Spitzberg, 1987), however, much of this research has examined competence and effectiveness in the interpersonal arena. One approach to effectiveness that has been examined in the instructional context is socio-communicative style. Socio-communicative style consists of a person's assertiveness and responsiveness. Assertiveness and responsiveness have been defined as two major dimensions of social style, which refers to an individual's tendency to react, associate, and adapt to another in communication situations (Wheless & Reichel, 1990).

Assertiveness is defined as the "capacity to make requests, actively disagree, express positive or negative personal rights and feelings, initiate, maintain or

disengage from conversations, and stand up for oneself without attacking another”. Responsiveness is defined as the “capacity to be sensitive to the communication of others, to be a good listener, to make others comfortable in communicating, and to recognize the needs and desires of others” (McCroskey & Richmond, 1996).

Being appropriately assertive and appropriately responsive is considered to be a component of effective communication (McCroskey & Richmond, 1996). Socio-communicative style consists of one’s perceptions of another’s assertiveness and responsiveness. Related to this construct is socio-communicative orientation, which is a person’s perception of his or her own assertiveness and responsiveness. While socio-communicative style is based primarily on observed behaviors, sociocommunication orientation is based primarily on personality and orientation toward relationships (Wooten & McCroskey, 1996). Therefore socio-communicative orientation is descriptive of one’s approach towards others and how one perceives him/ herself, and is much less descriptive of how a person actually behaves than sociocommunicative style.

The interaction involvement construct consists of three dimensions. The first is responsiveness. As just discussed, responsiveness is also conceptualized as a dimension of socio-communicative orientation (McCroskey & Richmond, 1996, Richmond & McCroskey, 1990).

However, Myers and Bryant (2002) examined students’ self-reported interaction involvement in the classroom along with their feelings of being understood. Myers and Bryant found that interaction involvement was associated with increased affect toward the instructor, increased state motivation to study, and satisfaction with the classroom communication; however, interaction involvement did not account for as much variance as did feelings of understanding. This research supports the notion that students who communicate more effectively with their instructor learn more and are more successful in the classroom.

2.3 Forms of communication and interaction

The motivation to form and maintain social relationships appears to be universal for humans. Baumeister and Leary (1995) conceptualized it as a fundamental motivation in the sense that goal-oriented behaviors are carried out to satisfy a need to create and maintain close social relations. Accordingly, successfully establishing meaningful social connections has positive effects on mental health and development (Ryan and Deci, 2000, Moeller et al., 2020, Watts and Thrasher, 2023).

Having positive attitudes towards peer groups and perceiving the learning environment as caring are factors that relate to the degree to which students feel connected with their school environment (Ryzin et al., 2007). Belongingness is also discussed as a protective factor against developmental risk, such as substance abuse, delinquency, and depression (Arslan, 2021).

Sense of belongingness in an academic setting has also been shown to have implications for students’ decisions to enter health professions and STEM fields, where lower levels of belongingness are attributed with lower levels of interest and engagement in these fields (Vivekananda-Schmidt and Sandars, 2018).

According to previous research, culture plays an important role in shaping school belongingness (Kumar and Maehr, 2010, Crul, 2018). Sense of belongingness has been reported to be lower for immigrants and racial minority groups compared to groups from the majority culture (Lardier et al., 2019).

Additionally, there is evidence that sense of belongingness varies across

countries (Glass and Westmont, 2014, Seo, 2019). Cortina et al. (2017) investigated sense of belongingness cross-nationally reanalyzing data from the 2003 cycle of the Programme for International Student Assessment (PISA) commissioned by the Organization for Economic Co-operation and Development (OECD). The authors documented systematic differences in average sense of belongingness in 15-year-old students across nations and explained them in part through Hofstede's cultural dimension theory (Hofstede et al., 2010). They examined the cultural dimensions of power distance and individualism/collectivism and explored how the macro level cultural differences between East Asian and Western countries in these dimensions manifested in meso-level differences in school climate.

The incorporation of competitive learning styles or pedagogical practices that encourage a competitive learning environment has been a controversial topic in the educational discourse for decades (Maehr and Midgley, 1996).

The effects of a competitive learning environment have been well-documented in multiple domains. Some studies showed that higher achievement levels were associated with competitive learning styles if the competition was perceived as constructive (Fülöp, 2004, Williams and Sheridan, 2010).

Other researchers argued that alternative motivational factors, in particular mastery orientation, are more beneficial than competition and emphasized the negative repercussions of competition as a source of motivation (Ames and Ames, 1984). For college students Bergin (1995) showed that performance on a cognitive learning task was higher in students who were motivated by mastery goals as opposed to competitive motivation, i.e., performance goals. In Lam et al.'s (2001) study, competitive motivation was associated with higher achievement on easier tasks, but often reduced students' willingness to attempt tasks that were more challenging. Some researchers maintained that competition can be harmful when students feel that success in the learning process comes at the expense of the success of other students, in which case the learning of all parties are hindered (Johnson and Johnson, 1989, Slavin, 2000).

Additionally, Posselt and Lipson (2016) demonstrated that overemphasis of competition in the learning environment has a particularly negative impact on the psychological well-being of students from underrepresented minority groups. According to Canning et al. (2019), perceived classroom competition fosters imposter syndrome in first-generation college students accompanied by a lack of identification within their academic field which, in turn, reduced their engagement in STEM courses that are perceived as highly competitive. On the other hand, there is a large converging body of research demonstrating the benefits of a cooperative school climate. Cooperative learning styles have been observed to contribute to higher levels of self-efficacy, learning engagement, and deep learning processes. The benefits of cooperative learning methods have been demonstrated consistently across different cultures as well (Keramati and Gillies, 2021).

Lätsch (2017) reported from a study on German secondary school students that perceived helpfulness, which was related to feelings of cooperativity between peers, had a mediating effect on the relationship between prosocial behavior and perceived stress. In addition, perceived competition exacerbated the effect of peer conflict on perceived stress. Other studies have shown that cooperative learning styles, which encouraged group coherence and positive social relations with peers, were associated with increased sense of belongingness and less instances of bullying (Ryzin et al., 2020).

Given that competitive and cooperative learning environments have important

implications on the academic and psychological development of students, we argue that student perception of levels of competition and cooperation in their learning environment are critical explanatory constructs to understand cultural differences in sense of belonging in international comparative studies. Thus, examining how sense of belongingness is related to perceived climate in terms of competition and cooperation in the learning environment may provide important contributions towards our understanding of the international differences in the learning context of students from a psychological perspective. Stable cultural differences require a process of reproduction through the generations and stable institutional setting like schools play a key role as socialization agents (Wentzel, 2015).

RESEARCH PART

FOURTH CHAPTER: Methodology

1. RESEARCH DESIGN

Intercultural education is a very important topic in today's general context of research in the field of education sciences. The concept of the space has many different definitions depending on the function that needs to be highlighted, so in the specific research learning space shall be considered as an essential factor in the learning process in preschool education. In addition the pre-school period is a very critical period for the development of children. In this critical period the physical, socio-emotional, cognitive and language developments of children are shaped by the quality of their environment and learning experiences.

Therefore, preschool education is based on meeting the children's educational needs with rich stimulating environmental opportunities which were suitable for their developmental levels. A well-organized learning space in preschool education causes more time for classroom interactions and supports the development of children positively. In this context, good arrange of the learning space will be important for the development of children because the children are developing by being influenced by the environment.

The role of the learning space in the multicultural classroom is very important as it is a significant factor that helps preschool children from different cultures that speak different languages to interact and communicate in a more effective and pleasant way with each other. A good quality environment with intercultural elements from their countries will make children feel accepted, improve the quality of their intercultural interaction and affect positive attitudes in a way that will promote intercultural communication.

Our present study aims to discuss, examine and specify the way space helps children in early childhood to interact and communicate with each other promoting their creativity and overcoming their differences such as language, cultures by creating a positive intercultural climate.

2. AIM OF RESEARCH

The main aim of the research is to investigate and identify the correlation between the two variables, learning space and the development of two basic parameters which are interaction and communication in preschool education between children from different countries. More specifically the main goal is to determine teachers' views and highlight their opinion about the importance of the learning environments and to investigate which are the models of school space in preschool education in Greece that they use and in which way and to what extent they affect aspects of interaction and communication. Furthermore, the main aim of the research is to make an intervention in learning spaces by designing learning centers in a way that they can develop, support and influence the increase of interaction and communication between children in multicultural preschool classrooms.

3. GOALS OF RESEARCH

1. Researching multicultural teachers' opinion about learning space by using a questionnaire
2. Experiment-setting two different types of preschool environments in which children interact and communicate in the multicultural classroom, before and after the intervention.
3. Observations of children interactions and communications.

4. RESEARCH QUESTIONS

1. Is there a link between learning space and interaction and communication between children in multicultural preschool education in Greece?
2. How do teachers use learning space and what are their views about its importance in education?

5. RESEARCH HYPOTHESES

According to the *first hypothesis* of the research we suppose that a well-organized learning space in preschool education will have more positive outcomes in children's intercultural interaction and communication.

This correlation will be examined and compared in two stages. We believe that there will be significant differences in the correlation between the learning space and children's interaction and communication on the pre-test stage and post-test stage.

According to the *second hypothesis* we believe that teachers will be aware of the importance of learning space in education.

6. THE PARTICIPANTS

The participants of the observation of the research were a multicultural group of *children* at the age of 5-6 who go to three Kindergartens in Greece and more specifically in the town of Thessaloniki. Foreign children were from Albania, Afghanistan, Pakistan, Syria and Ukraine. In every observation the observers were three, in order to establish the maximum of reliability, accuracy and validity of measurements. The *three observers* involved in the research were the researcher and two teachers who teach in other Kindergartens. The research took place in *five classrooms* before and after the intervention. The number of *children* that took part in the observation before and after the intervention was 109. Two classrooms had 20 children, one classroom 22 children, one classroom 23 children and one classroom 24 children. The participants of the research who answered the questionnaires were 47 *teachers*.

7. RESEARCH INSTRUMENTS

In order to conduct the research and collect the data about teachers' opinions we used a *questionnaire* which was designed by the OECD Learning Environments Evaluation Programme (LEEP) as a tool for school self-assessment. The questions asked for background information about school, as well as information about the allocation of learning spaces and the use of technology. The survey had 37 questions and took about 20 minutes to be completed.

The type of questions that were included in the questionnaire made the participants feel comfortable and was posed in a non-intrusive way so participants did not get the feeling that we were judging their work.

Another research instrument which is important when studying behavior in school environments and that helped us examine and understand children's interaction

and communication in school space was *observation*. Observation was held by using observation guides from the researcher and two other researchers, in order to focus thoroughly on what we needed to research at two stages, before and after the intervention. The duration of the observation was 6 weeks, 3 weeks before the intervention and three weeks after, in all five classrooms.

More specifically, the observation protocol had questions concerning the classroom environment such as class material features, shape, lighting, acoustics, temperature, color, size, furniture, desks, educational material and tools. Also, the observation included information about the class interior design such as security, aesthetics and effective implementation of teaching activities. Another dimension was the classroom organization, which is the teachers' space and children's space and how they use space. Children's interaction and children's communication were observed and the arrangement of children in groups or individual rows and if there is a seating plan that has been created by the teacher.

Furthermore, we observed how diversity is demonstrated in the classroom through wall decoration, if there are posters, quotations from a wide range of language or intercultural elements. We observed how the teacher encouraged class discussion and children's interaction and to what degree the classroom interaction among children reflect a community of learners. Another dimension was the teachers care about children's interaction and communication, children's recognition and collaborative work. We also observed which children are participating actively and which aren't and to what extent children's feel connected. The use of assessment methods was also examined and if they affect interaction and communication and to what extent.

8. RESEARCH OBJECTIVES

<i>FIRST OBSERVATION</i>
<i>A.SCHOOL SPACE IN PRESCHOOL EDUCATION</i>
✓ Class material features: shape, surface, lighting, acoustics, temperature, color, size, furniture, desks, educational material, tools
✓ Class interior design: security, aesthetics, effective implementation of teaching activities
✓ Classroom organization: teachers' space, children's space
✓ Children's' Interaction, Children's Communication
<i>QUESTIONNAIRE</i>
<i>B.TEACHERS OPINIONS ABOUT SCHOOL SPACE</i>
✓ How they use school spaces
✓ How school spaces affects the emotional and physical safety and well-being
✓ Overall Satisfaction
<i>INTERVENTION</i>
<i>C.RELATIONSHIP OF SPACE WITH THE DEVELOPMENT OF</i>

<i>COMMUNICATION AND INTERACTION</i>
✓ Upgrading, reshaping and changing the learning space of multicultural classes, intercultural elements
<i>SECOND OBSERVATION (AFTER INTERVENTION)</i>
<i>A.SCHOOL SPACE IN PRESCHOOL EDUCATION</i>
✓ Class interior design: security, aesthetics, effective implementation of teaching activities
✓ Classroom organization: teachers space, children's space
✓ Children's Interaction, Children's Communication

9. THE INTERVENTION

The learning spaces were changed by enriching multicultural elements such as holiday celebration calendars from different countries, flags from the countries of the children, a word map in order to learn about countries and how big the word is and posters with words from the countries of foreign children. Children brought photos from people from different ethnicity and different traditions to decorate the classroom. We created in every classroom a multicultural reading corner where children also learned to sing songs from different countries, look at picture books from different cultures, learn how to say hello, goodbye and I love you in different languages and practiced storytelling, children from foreign countries shared a story with their classmates. The classroom culture corner was a reflection of children's identity as it included elements from their country.

Children's interaction and communication were observed in all five classrooms before and after the intervention by the same three observers. The type of observation was non-participant. It is a way to learn about children's interaction and communication by observing them in their natural environment which is their classroom before and after the intervention. This kind of research helps researchers figure out how children act in different situations and what things in the environment affect their actions.

The intervention took place in all five classrooms. Three observers collected the data observing the education process for 6 weeks in each classroom. Three weeks before the intervention and three after the intervention for each of the five classrooms. The number of children that took part in the observation before and after the intervention was 109. Two classrooms had 20 children, one classroom 22 children, one classroom 23 children and one classroom 24 children. According to the analysis of the data the effect of intervention had statistically significant differences to all variables.

The variables which were observed and compared before and after the intervention were the class material features, the color, the furniture, the educational materials and tools. Also we observed the class interior design, the security, the aesthetics and the teaching activities. Another dimension was the classroom organization, teachers' space and children's space. Children's interaction and communication was observed before and after the intervention. Furthermore, the intercultural elements that existed before and after the intervention were observed, how and in what ways is diversity demonstrated in the classroom. Another element that was observed was how children's are arranged, if there is a working plan, if they work in groups or individual. The encouragement of children's communication and interaction by the teacher was also observed before and after the intervention so we

can find differences. Another variable was the children's interaction as a community before and after the intervention and the ways teachers use to demonstrate care to this dimension. We also observed the way the objectives of the lesson were made clear, if it is more orally or visually in each stage. In what degree children's' recognition and collaboration exists and if there is a difference observed in two stages of the research. Finally, we observed the assessment methods and their effectiveness before and after the intervention.

FIFTH CHAPTER: Data Analysis- Results

Methodology

Data were coded in Microsoft Office Excel 2016 and analyzed in IBM SPSS 26. Nominal variables were presented with frequencies and percentages while Likert type questions with mean, standard deviation, minimum and maximum value (Field, 2017). Reliability of factors was tested via the Cronbach Alpha coefficient. Values in the interval [0,6, 0,7) present moderate reliability, while satisfactory are considered values 0,7 or greater. In cases that reliability in some sections was poor, factor analysis was used to examine factors with acceptable reliability (Galanis, 2013). Factors were calculated using the mean value of the corresponding questions and their values were transformed in the interval [0,100], using the mathematical formula $100 * [X_i - \min(X)] / \text{Range}(X)$. 95% confidence intervals of mean value were calculated to generalize the results (Field, 2017). Normality of factors was tested via the Shapiro Wilk test (*Razali and Wah, 2011*). Because normality of factors was not accepted, the non-parametric tests Spearman (to examine correlations between scale or ordinal variables), Mann Whitney (to examine mean rank differences between 2 independent samples), Wilcoxon ((to examine mean rank differences between 2 dependent samples) and Kruskal Wallis (to examine mean rank differences between 3 or more independent samples) with Post Hoc Analysis Bonferonni were used (Field, 2017).

Results-Teachers

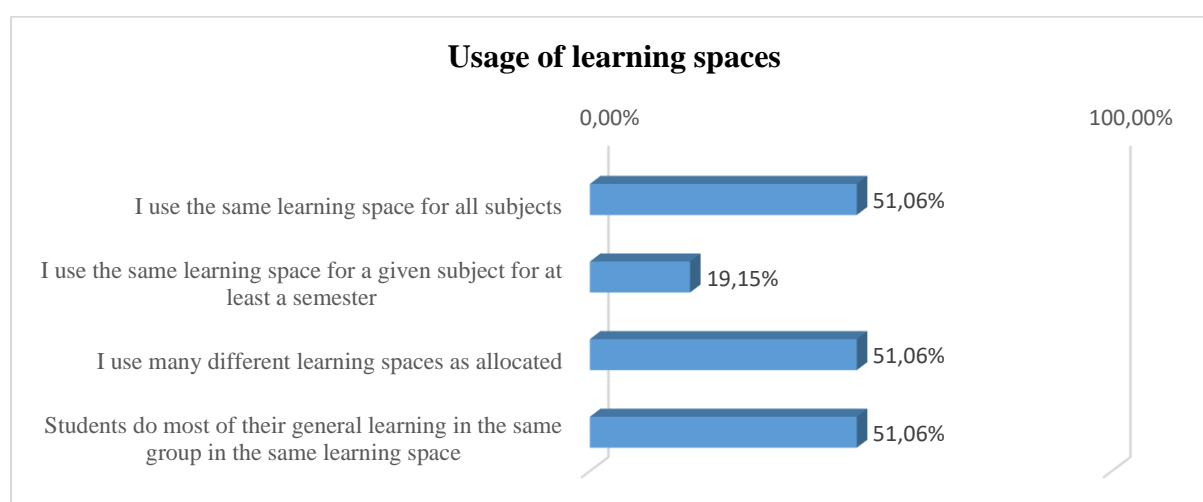
Herein below we have presented the results of our survey among teachers. The survey consists of seven sections. Section 1. About you has 8 questions on demographics. Section 2. The spaces you use has 9 questions. Section 3. Comfort has 6 questions. Section 4. Arrangement of the space has 5 questions. Section 5. Emotional and physical safety and well-being has 5 questions. Section 6. Technology at the school has 3 questions. Section 7. Overall satisfaction has 1 question.

Usage of learning spaces

Table 1 indicates the results regarding usage of learning spaces. Half of participants (51,06%, $N=24$) use the same learning space for all subjects, many different learning spaces as allocated and declared that children do most of their general learning in the same group in the same learning space.

Table 1: Usage of learning spaces

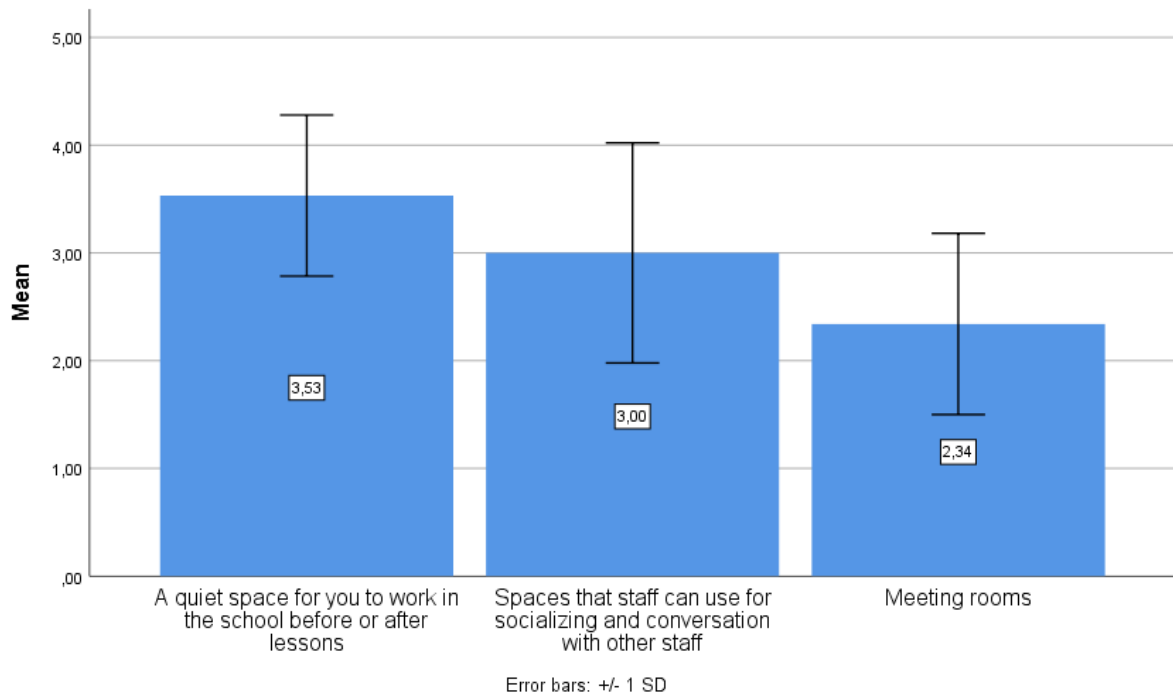
How are learning spaces used in your school?	N	f%
I use the same learning space for all subjects	24	51,06
I use the same learning space for a given subject for at least a semester	9	19,15
I use many different learning spaces as allocated	24	51,06
Children do most of their general learning in the same group in the same learning space	24	51,06



Graph 1: Usage of learning spaces

Table 2: Satisfaction from usage of spaces

How satisfied are you with the provision of:	M	SD	Range
A quiet space for you to work in the school before or after lessons	3,53	0,75	[2,5]
Spaces that staff can use for socializing and conversation with other staff	3,00	1,02	[2,5]
Meeting rooms	2,34	0,84	[1,4]



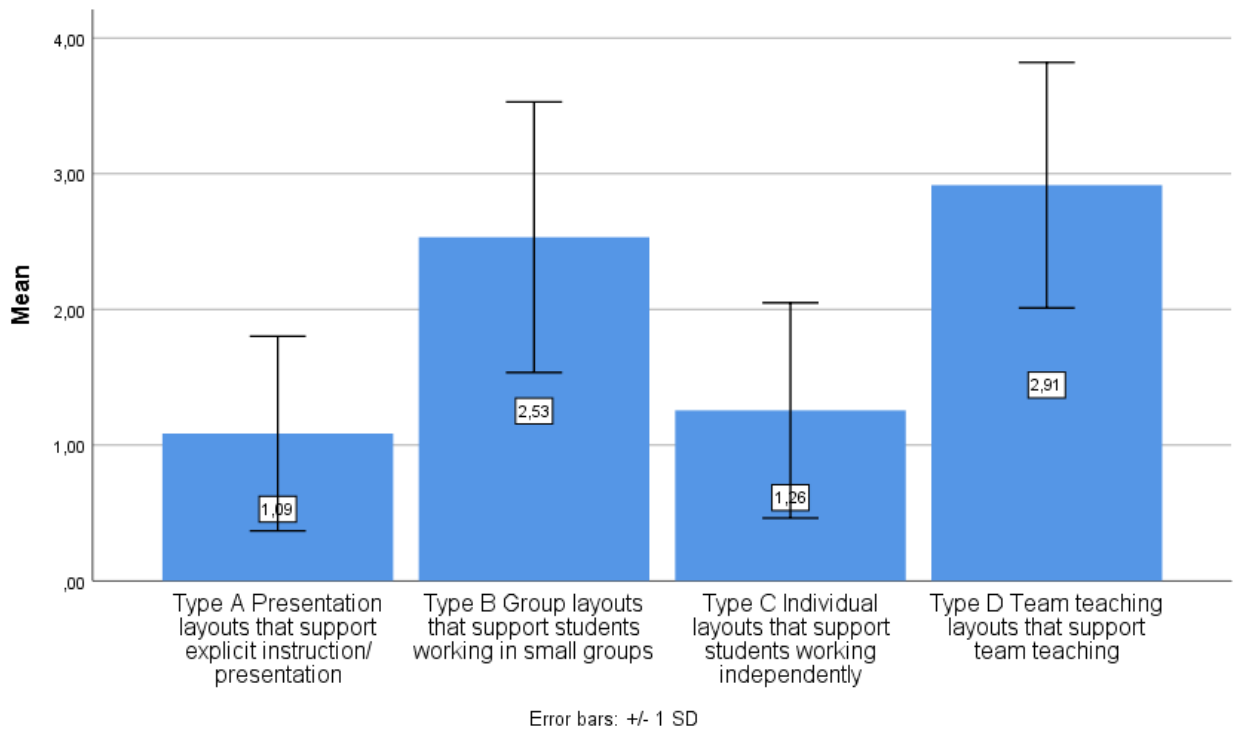
Graph 2: Satisfaction from usage of spaces

Table 3 indicates the statements that refer to the usage of spatial arrangements. Participants indicate their degree of frequency from 0 to 4-point scale (0= Never or hardly ever, 1= 1-3 times a month, 2= once a week, 3= 2-4 times a week, 4= everyday).

According to the results, 2-4 times a week they use the Type D Team teaching layouts that support team teaching ($M= 2,91$, $SD=0,90$). In addition, they use from “once a week” to “2-4 times a week” the type B Group layouts that support children working in small groups ($M= 2,53$, $SD=1,00$).

Table 3: Usage of Spatial arrangements

How often do you actually use the following spatial arrangements?	M	SD	Range
Type D Team teaching layouts that support team teaching	2,91	0,90	[1,4]
Type B Group layouts that support children working in small groups	2,53	1,00	[1,4]
Type C Individual layouts that support children working independently	1,26	0,79	[0,3]
Type A Presentation layouts that support explicit instruction/ presentation	1,09	0,72	[0,3]



Graph 3: Usage of Spatial arrangements

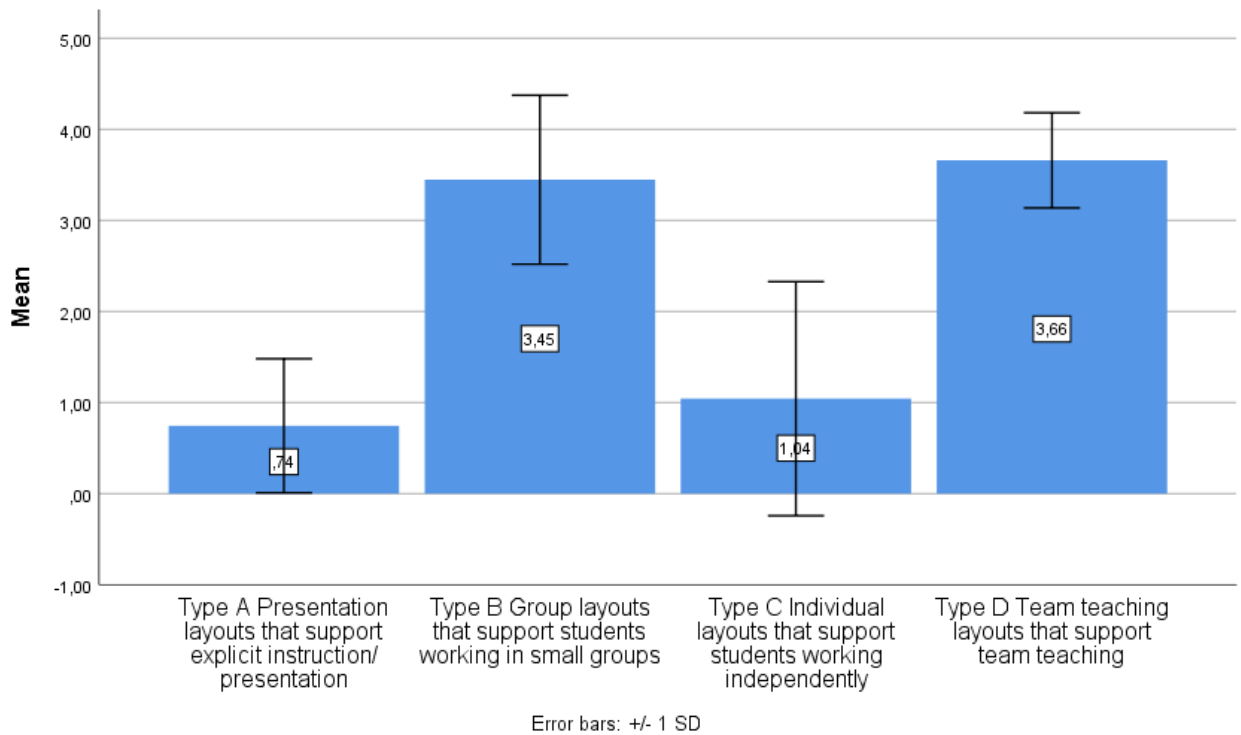
Usage of Spatial arrangements for teaching

Table 4 indicates the statements that refer to the usage of spatial arrangements for teaching. Participants indicate their degree of frequency from 0 to point scale 4 (0= never or hardly ever, 1= 1-3 times a month, 2= once a week, 3= 2-4 times a week, 4=everyday).

Participants would use in daily basis, to support their approach to learning and teaching, type D team teaching layouts that support team teaching ($M= 3,66$, $SD=0,52$). Also, they would use for the same purpose from “2-4 times a week” to “everyday” the type B group layouts that support children working in small groups ($M= 3,45$, $SD=0,95$).

Table 4: Usage of Spatial arrangements for teaching

How often would you use the spatial arrangements to support your approach to learning & teaching?	M	SD	Range
Type D Team teaching layouts that support team teaching	3,66	0,52	[2,4]
Type B Group layouts that support children working in small groups	3,45	0,93	[1,4]
Type C Individual layouts that support children working independently	1,04	1,28	[0,4]
Type A Presentation layouts that support explicit instruction/ presentation	0,74	0,74	[0,3]



Graph 4: Usage of Spatial arrangements for teaching

Results- Effect of Intervention

Below we describe the results of the experiment. As we mentioned we did an experiment in 5 classrooms. Three experts evaluated different classroom arrangement aspects on a 5 point Likert Scale. The above tables and graphs present the results of the experiment reported at two stages, before and after the intervention.

The intervention focused on improving multicultural elements in the classroom. By fostering an environment where children felt comfortable sharing their thoughts and collaborating, the classroom dynamics transformed into a more supportive and inclusive space. This experiment underscores the importance of targeted interventions in promoting effective communication and interaction among children from diverse cultural backgrounds.

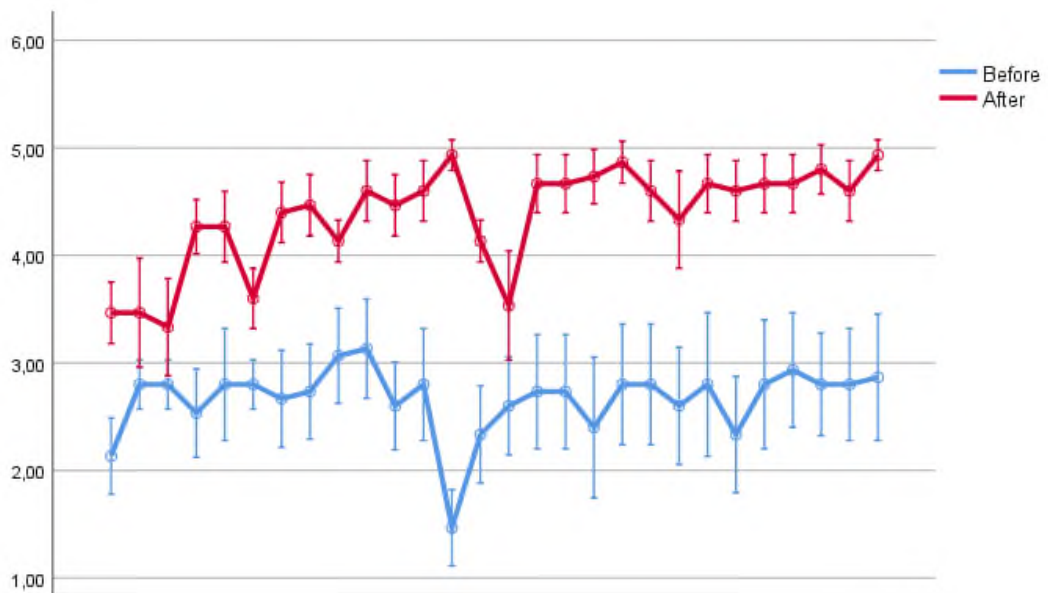
According to Table 5, higher levels appeared after intervention than before for all variables which refer to children and in particular for “Color” ($M_{before}=2,13$ vs $M_{after}=3,47$, $p=0,001$), “Furniture” ($M_{before}=2,80$ vs $M_{after}=3,47$, $p=0,004$), “Desks” ($M_{before}=2,80$ vs $M_{after}=3,33$, $p=0,005$), “Educational material” ($M_{before}=2,53$ vs $M_{after}=4,27$, $p=0,001$), “Tools before” ($M_{before}=2,80$ vs $M_{after}=4,27$, $p=0,002$), “Class interior design security” ($M_{before}=2,80$ vs $M_{after}=3,60$, $p=0,006$), “Aesthetics” ($M_{before}=2,67$ vs $M_{after}=4,40$, $p=0,001$), “Effective teaching activities” ($M_{before}=2,73$ vs

$M_{after}=4,47, p=0,001$), “Classroom organization teachers’ space” ($M_{before}=3,07$ vs $M_{after}=4,13, p=0,001$), “Children’s space” ($M_{before}=3,13$ vs $M_{after}=4,60, p=0,001$), “Children’s interaction (1)” ($M_{before}=2,60$ vs $M_{after}=4,47, p=0,001$), “Children’s communication” ($M_{before}=2,80$ vs $M_{after}=4,60, p=0,001$), “Intercultural elements” ($M_{before}=1,47$ vs $M_{after}=4,93, p<0,001$), “Group” ($M_{before}=2,33$ vs $M_{after}=4,13, p=0,001$), “Individual” ($M_{before}=2,60$ vs $M_{after}=3,53, p=0,009$), “Children’s communication” ($M_{before}=2,73$ vs $M_{after}=4,67, p=0,001$), “Children’s interaction (2)” ($M_{before}=2,73$ vs $M_{after}=4,67, p=0,001$), “Children’s interaction as community” ($M_{before}=2,40$ vs $M_{after}=4,73, p=0,001$), “Children’s interaction / teachers’ ways” ($M_{before}=2,80$ vs $M_{after}=4,87, p=0,001$), “Children’s communication/ teachers’ ways” ($M_{before}=2,80$ vs $M_{after}=4,60, p=0,001$), “Visual use” ($M_{before}=2,60$ vs $M_{after}=4,33, p=0,001$), “Oral use” ($M_{before}=2,80$ vs $M_{after}=4,67, p=0,002$), “Children’s recognition” ($M_{before}=2,33$ vs $M_{after}=4,60, p=0,001$), “Collaboration” ($M_{before}=2,80$ vs $M_{after}=4,67, p=0,001$), “Children’s participation” ($M_{before}=2,93$ vs $M_{after}=4,67, p=0,001$), “Children’s connection” ($M_{before}=2,80$ vs $M_{after}=4,80, p=0,001$), “Assessment methods” ($M_{before}=2,80$ vs $M_{after}=4,60, p=0,001$) and “Effectiveness” ($M_{before}=2,87$ vs $M_{after}=4,93, p=0,001$).

Table5: Effect of Intervention

Variable	Before	After	Z	p-value
Color	2,13 (0,64)	3,47 (0,52)	-3,270	0,001
Furniture	2,80 (0,41)	3,47 (0,92)	-2,887	0,004
Desks	2,80 (0,41)	3,33 (0,82)	-2,828	0,005
Educational material	2,53 (0,74)	4,27 (0,46)	-3,305	0,001
Tools before	2,80 (0,94)	4,27 (0,59)	-3,100	0,002
Class interior design security	2,80 (0,41)	3,60 (0,51)	-2,762	0,006
Aesthetics	2,67 (0,82)	4,40 (0,51)	-3,305	0,001
Effective teaching activities	2,73 (0,80)	4,47 (0,52)	-3,244	0,001
Classroom organization teachers’ space	3,07 (0,80)	4,13 (0,35)	-3,176	0,001
Children’s space	3,13 (0,83)	4,60 (0,51)	-3,244	0,001
Children’s interaction (1)	2,60 (0,74)	4,47 (0,52)	-3,373	0,001
Children’s communication	2,80 (0,94)	4,60 (0,51)	-3,304	0,001
Intercultural elements	1,47 (0,64)	4,93 (0,26)	-3,493	<0,001
Group	2,33 (0,82)	4,13 (0,35)	-3,270	0,001
Individual	2,60 (0,83)	3,53 (0,92)	-2,626	0,009

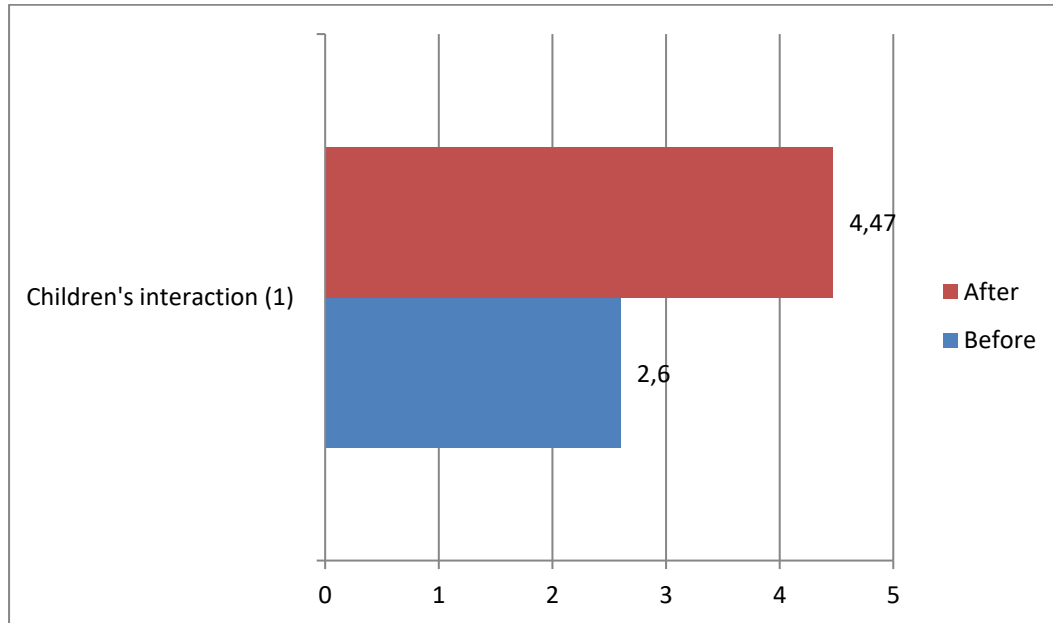
Children's communication	2,73 (0,96)	4,67 (0,49)	-3,345	0,001
Children's interaction (2)	2,73 (0,96)	4,67 (0,49)	-3,228	0,001
Children's interaction as community	2,40 (1,18)	4,73 (0,46)	-3,449	0,001
Children's interaction / teachers' ways	2,80 (1,01)	4,87 (0,35)	-3,473	0,001
Children's communication/ teachers' ways	2,80 (1,01)	4,60 (0,51)	-3,337	0,001
Visual use	2,60 (0,99)	4,33 (0,82)	-3,360	0,001
Oral use	2,80 (1,21)	4,67 (0,49)	-3,142	0,002
Children's recognition	2,33 (0,98)	4,60 (0,51)	-3,370	0,001
Collaboration	2,80 (1,08)	4,67 (0,49)	-3,337	0,001
Children's participation	2,93 (0,96)	4,67 (0,49)	-3,464	0,001
Children's connection	2,80 (0,86)	4,80 (0,41)	-3,460	0,001
Assessment methods	2,80 (0,94)	4,60 (0,51)	-3,354	0,001
Effectiveness	2,87 (1,06)	4,93 (0,26)	-3,354	0,001



Error bars: 95% CI

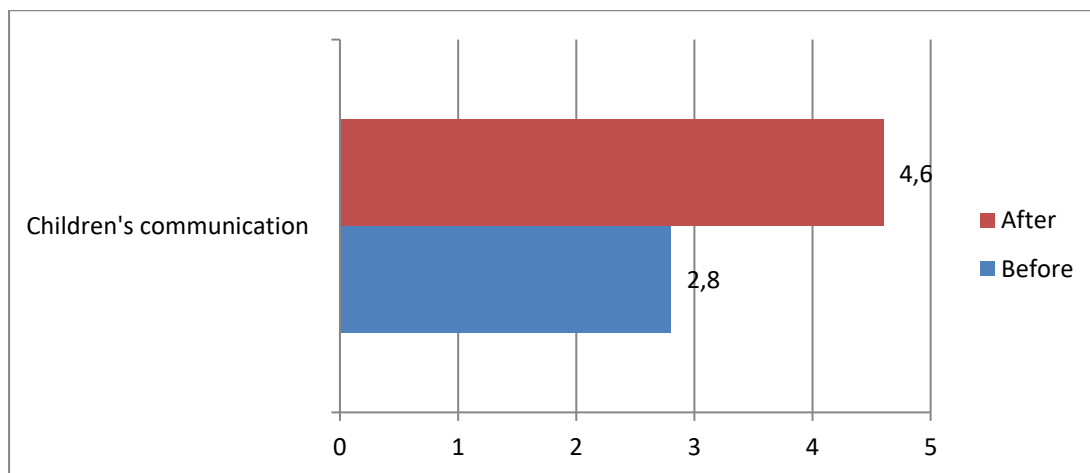
Graph 5: Effect of Intervention

The specific graph shows the results of every variable observed before and after the intervention according to the data collected by the three observers. We can clearly see the statistically important differences between all 27 variables.



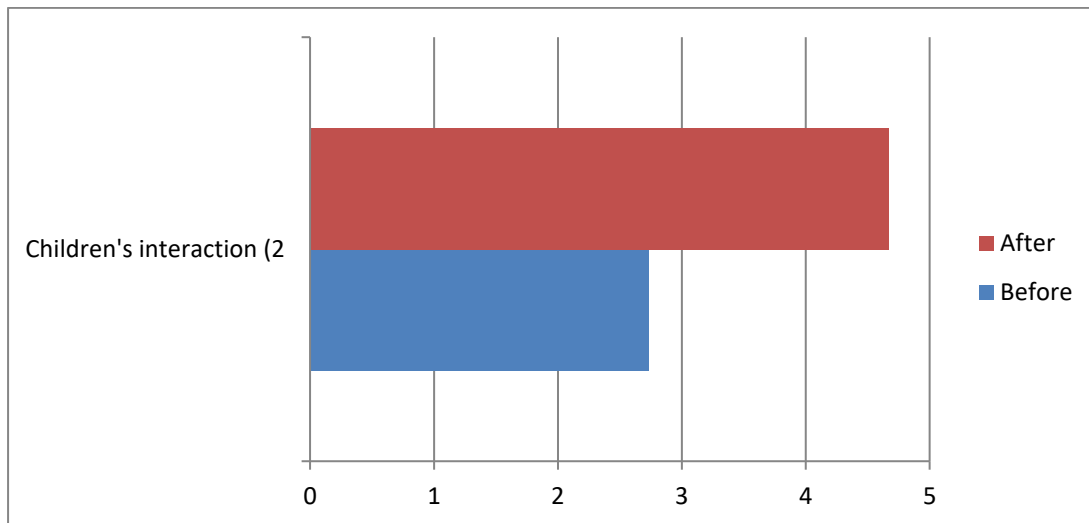
Graph 6: Children's interaction

Graph 6 presents the results from the observation of the children's interaction before and after the intervention. According to the results, higher levels appeared after intervention than before for the variable which refers to children's interaction.



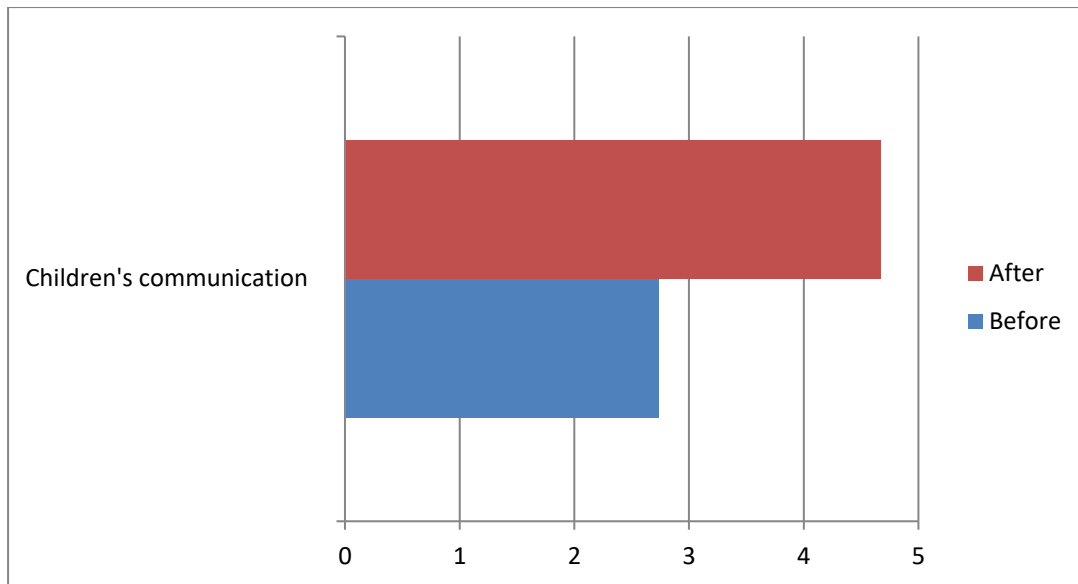
Graph 7: Children's communication

Graph 7 presents the results of the children's communication before and after the intervention. According to the results of the observations, higher levels appeared after intervention than before for the variable which refers to children's communication.



Graph 8: Teachers encouraging children's interaction

Graph 8 presents the results of children's interaction encouraged by teachers before and after the intervention. According to the results of the observations, higher levels appeared after intervention than before for the variable which refers to children's interaction.



Graph 9: Teachers encouraging children’s communication

Graph 9 also presents the results of the children’s communication encouraged by teachers before and after the intervention. According to the results of the observations, higher levels appeared after intervention than before for the variable which refers to children’s communication.

SIXTH CHAPTER: Conclusions

Conclusions

Aim of current study was to examine and specify the way space helps children in early childhood to interact and communicate with each other promoting their creativity and overcoming their differences such as language, cultures by creating a positive intercultural climate. In particular, the effect of an intervention program about space on children’s views about communication and interaction was examined.

In addition, current survey examined the views of preschool teachers about the usage and arrangement of spaces in school, the existing facilities, safety and technology, the schools’ leadership and the quality of learning environment, as well as the factors that enhance their general satisfaction from space. Sample was conducted by 47 pre-school teachers, mainly females, 36-55 years old, with average total experience of 15,5 years as a teacher and 5,5 at current school, who work full time in kindergarten, teaching basic subjects, at a class of 20 children alongside with another teacher.

Considering the role of school leadership and learning environment, teachers

agreed that the design of the learning spaces supports collaboration with other teachers and the use of a variety of teaching practices. In addition, they are provided with time to plan collaboratively with other teachers. High was the impact of buildings and facilities, on teachers to be more inclined to stay (employed) at this school, to attract new teachers and parents looking to place their children in this school.

As far as usage of spaces is concerned, teachers use simultaneously the same learning space for all subjects or many different learning spaces as allocated. Most claimed that in their school is available a traditional classroom with direct or no access to break out spaces, a collaborative teaching area, with the teachers and children sharing a variety of connected learning spaces and a library. However, they prefer almost every day to teach in a traditional classroom with direct access to break out spaces. Considering the availability of external spaces, in all schools is available a school yard and in the majority of schools there is an external (outside) classroom or space – usually with seating and directly accessible from a classroom and an external (outside) hard ball court/sports court/hard paved area. Regarding the usage of accessible spaces from classroom during lesson, teachers use everyday school yard over a year and 2-4 times a week or more an external (outside) classroom or space – usually with seating.

As far as usage of non-accessible spaces from classroom during lesson is concerned, teachers declared that they use once a week or less the school yard and the grassed area. In addition, they stated that they were slightly satisfied from the provision of a quiet space for them to work in the school before or after lessons. Generally, in all spaces, the feeling of comfort with cold, heat, air, light and hearing was high, however the sense of control was moderate and in particular the control of heating.

Considering the usage of spatial arrangements, teachers prefer approximately 2-4 times a week to use the Type D Team teaching layouts that support team teaching and the type B Group layouts that support children's working in small groups and the same types would be used almost every day, for learning and teaching, if they were readily available. Regarding rearrangement, teachers once a week they encourage children to move around a space during a class and the furniture during class to suit group formation or participation in activities and move the technology (data projectors), to support different furniture arrangements. However, they were neutral concerning how easy they could rearrange the furniture to create type B group layouts, that support children working in small groups and type D team teaching layouts that support team teaching.

Safety during and after school hours was rated high mostly for outside parts of the school, followed by the inside, with moderate to be the sense of safe regarding the building of the school. The majority of teachers stated that there are no spaces in the school that teachers can use for relaxation and retreat.

As far as availability of technology at school is concerned, the charge points (for mobile devices) are in most spaces available, followed by the wireless internet access and the projector or large TV with audio which are all used 2-4 times per

week. In addition, teachers use in-school laptops/ note books (stored in that room) once a week or more, which are however available in few spaces. Furthermore, once a week or more, teachers use technology devices or they ask the children to use them to express ideas creatively, practice skills, for online research, to listen to audio and to complete homework.

The effect of demographic profile on teachers' views was examined. Males identified more the need for individual rearrangement of spaces, while females use more frequently technology for teaching. In addition, use of technology for learning tasks is mainly used by teachers 36-55 years old and less by teachers 56 years old or older. Teachers of arts and music rated higher the availability of spaces at school and use more frequently the technology for teaching and learning tasks.

Teachers of foreign language rated higher their comfort with cold in the classroom and the ability to succeed a quick rearrangement. Those who teach in kindergarten were more satisfied from the quality of buildings and facilities than those who teach in pre-kindergarten, use more frequently the spatial arrangements B & D and presented higher confidence to succeed a quick rearrangement. Teachers of higher working experience at current school, teach more frequently in the available technology spaces. Those of higher working experience in other education roles, rated higher the role of schools' leadership and the quality of learning environment, use more frequently the technology for teaching and learning tasks and presented lower need for individual rearrangement of spaces. Working experience in other jobs was related with the usage of spatial arrangements A & C.

Higher number of teachers in the classroom was linked with higher usage of different learning spaces and technology for teaching and learning tasks, higher availability of spaces and external sport field at school, more frequently teaching in traditional classroom with direct access to break out spaces and in available library-art spaces, higher usage of spatial arrangements B & D and lower usage of A & C, lower tendency for rearrangement, higher safety at school after school hours and lower comfort with control.

Overall satisfaction from spaces was slightly above average. Higher satisfaction from spaces was linked with higher availability of spaces and usage of different spaces at school, more frequently teaching in library-art spaces, with the recognition of the role of schools' leadership and the quality of learning environment, comfort with cold, higher number of teachers in the classroom, lower working experience in other jobs, higher usage of spatial arrangements B & D and lower usage of A & C, lower frequency of rearrangement, higher safety at school, during and after school hours and higher use of technology for teaching and learning tasks.

Effect of intervention program was crucial as all parameters of communication and interaction which refer to children were improved. The correlation between the two variables, learning space and the development of two basic parameters which are interaction and communication in preschool education between children from different countries showed a statistically significant difference, before and after the classroom intervention with the intercultural changes, as we expected at the hypothesis of our research.

Contribution

The specific research contributes significantly to the field of education, particularly in understanding how learning environments impact children's social interactions and communication in multicultural settings. Here are some key contributions of the research:

1. **Understanding the Role of Learning Spaces:** The research provides insights into how the design and organization of learning spaces influence children's behaviors, interactions, and communication patterns in multicultural classrooms. By systematically studying different aspects of learning environments, such as layout, furniture, materials, and cultural elements, the research sheds light on their impact on children's experiences.
2. **Enhancing Intercultural Communication:** By enriching learning spaces with multicultural elements and interventions, the research shows the importance of creating environments that foster positive intercultural interactions among children from diverse cultural backgrounds. This includes integrating cultural artifacts, language elements, and collaborative activities that promote mutual understanding and respect.
3. **Practical Implications for Educators:** The findings of the research offer practical recommendations for educators and policymakers on how to optimize learning spaces to support effective communication and interaction in multicultural classrooms. This may involve designing inclusive classroom layouts, implementing culturally relevant teaching materials, and promoting collaborative learning experiences.
4. **Methodological Contributions:** The research contributes methodologically by employing a mixed-methods approach, including observational studies and questionnaire surveys. This comprehensive methodological framework allows understanding the complex of interactions between learning spaces and children's behaviors.
5. **Theoretical Insights:** The research contributes to theoretical frameworks related to educational psychology, environmental psychology, and multicultural education. By exploring how physical spaces mediate social interactions and communications between children in preschool education, it enriches theoretical discussions on the impact of environment on educational practices and peer relationships from different countries.
6. **Empirical Evidence:** Through empirical evidence gathered from classrooms, the research provides concrete data and examples of how specific changes in learning spaces can lead to observable improvements in children's interactions and communication skills. This evidence can support future research endeavors and policy decisions aimed at enhancing educational multicultural environments.

Overall, the specific research on learning spaces in multicultural classrooms makes a significant contribution by bridging the gap between learning environment design and educational outcomes, with a focus on promoting positive social interactions and communication among children from diverse cultural backgrounds. Concluding, this research contributes to the field of education by illuminating the

critical role of learning spaces in supporting children's communication and interaction and fostering a positive intercultural climate within preschool settings.

Publications

1. Bougioukli, P. (2022). The importance of learning environment in preschool education, *Third scientific and practical conference education and the arts: traditions and perspectives, Sofia*, pp. 971-976

2. Bougioukli, P. (2022). Learning environment as a factor of children's interaction and communication in multicultural classrooms, *Third scientific and practical conference education and the arts: traditions and perspectives, Sofia*, pp.964-970

3. Bougioukli, P. (2023). Creating Learning Environments in Multicultural Preschool Classrooms: Teachers' Opinions, *Fourth scientific and practical conference education and the arts: traditions and perspectives, Sofia*, pp. 776-784

4. Bougioukli, P. (2023). The Challenge of Conducting Intercultural Education in Preschool Settings, *Fourth scientific and practical conference education and the arts: traditions and perspectives, Sofia*, pp. 768-775