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Teaching learning spaces competence from early childhood education
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International Research Report on Learning space practices and Teachers' competence in Turkey, Romania, Portugal and Latvia

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Authors:
Zeynep ALAT, Sakire KARABAY, Gianina-Ana MASSARI, Florentina-Manuela MIRON, Cristina MESQUITA, Andreea IONEL, Merve OZTEMIR, Samet BASKONUS, Tija ZIRINA

International Research Study on Learning Spaces Practices and Competence in Turkey, Romania, Portugal and Latvia

When it is considered that there is an unlimited flow from one environment to another during learning process, researchers underline that the necessary equipment should be provided to children in order to have them gained the best the experiences that will encourage to improve all the skills in all environments (Crowther and Wellhousen, 2004). It is critical to enrich learning settings and also teach teachers how to improve and design or redefine activities according to new learning environments for supporting children' learning on 21st century skills in preschool and primary school. We have often heard the words "today's generation is different than yesterday's generation," "we do not have enough teaching materials and the ones at hand–are too outdated". The teachers do not have the necessary skills." The flow in education process should be evaluated by asking a series of questions. For example, do the teachers meet both academic and emotional requirements of children by way of positive interactions in classroom atmosphere? In other words, do education settings really cover sufficiently the needs of today's children, teachers and families or whole society? In fact children need confident relations full of love and educational atmospheres that will ensure them to improve their skills and to discover their potential

What makes an educational environment high quality has been a focus of research for many decades. Based on the quality dimensions defined by empirical findings researchers also evaluate quality of learning environments. Research in many countries reveal that only a small percentage of children currently has the chance to get high quality care (LoCasale-Crouch et al., 2006). It is usually the children living in poverty are placed in the lowest quality programs (LoCasale-Crouch et al., 2006). Especially in early childhood, it is of critical importance that the physical environment of the classrooms is designed in a supportive and instructive manner in order to minimize or compensate for the lack of educational stimuli within home environment (Jackman, 2009, p. 41; Güven and Azkeskin, 2018, pp. 13). The researchers often emphasize the necessity of priority of the investments for the children in high risk group and suggest that increasing the quality of educational programmes and atmospheres will also increase the improvements in education.

They continue to reveal these situations through a lot of research findings. Moreover, by emphasizing a common notion on the necessity of the environment that provide highly qualified learning opportunities that this is not only for the children who are in high risk group but also for all the children, they underline that this is wishful aim but not been attained yet. It should not be forgotten that each child is unique and special and has a creative potential. For that reason, children have to be provided in this period the opportunities of living through different original experiences to improve this potential. Otherwise, this potential in children may stay undiscovered and hidden forever (Fox and Schrmacher, 2014, p, 7). An important component is that the teachers should establish a sensitive, responsive and warm interactions in an effective teaching process in a not over structured classroom atmosphere. The relationship between children and adult is a significant element which leads to social, emotional and academic results in childhood (Pianta, 1998; Denham, Bassett, & Zinsser, 2012; Morris, Denham, Bassett & Timothy, 2013). Additionally, another important component is that the teachers should return supportive feedbacks and present an understandable training suitable to childrens' developmental stage. It is stated that a unified classroom atmosphere formed by with a combination of these two components that complements each other will increase the outcomes in young childrens' literacy, language, social, emotional and cognitive developments. Downer, Sabol and Hamre explains that unification of classroom atmosphere with aforementioned elements will contribute effectively to closing the gap of performance differentiation between the children in low and high risk groups (2010, 699-723). The fact that the classroom atmospheres and learning centers should be well prepared, equipped and qualified is of high importance too big to neglect in order to improve and support the preschool and elementary school childrens' all developmental fields and creative thinking skills.

Therefore, teachers must be competent on appropriate developmental practices by using a learning space that is enriched by innovative materials and tools regarding five developmental dimensions of children: 1. Learning Abilities and Attitudes 2. Development of Language, Communication and the Prerequisites of reading and writing

3. Cognitive Development 4. Socio-emotional Development, and 5. Physical Development, Personal Health and Hygiene. Synchronization with the needs and particularities of current child generations needs to take into account several variables such as aesthetics, arts, functionality of the learning spaces and innovative educational materials and toys.

For both classroom atmospheres and learning centers to be able to meet the functions such as to support outcomes of daily training flow and to have children to gain the skills of investigating, discovering, developing curiosity and imagination, and problem solving, it is necessary to arrange the educational environments consciously in the direction of these goals (Hohmann and Weikart, 2000, p, 112; Haktanır, 2014). Appreciating the interactions of children with her/his environment, listening them enthusiastically by being open to new opinions, supporting children to express themselves with a curious mode and stimulating their sense of curiosity via questions have an important function for the students (Westman and Bergmark, 2014). Thus, it is most likely that childrens' individual needs will be met, improvements of various developmental fields will be supported and the context between learning and interaction that children establish in physical environment will be strengthened.

It is suggested in the literature that, generally speaking, two basic elements – social-emotional climate and instructional support- often related to classroom process are decisive in childrens' outcomes (LoCasale-Crouch et al., 2006).When the studies related to quality are studied, the researches necessitate considering the term in a multi-dimensional way to since it covers many critical elements in itself. When the literature is studied in this context, it is stated that quality works performed pertaining to classroom functioning cover social-emotional climate and instructional support (such as physical equipment, quality of functioning in daily training flow in education process etc.) dimensions (Bassok and Galdo, 2016; LoCasale-Crouch et all.., 2006; Justice, Mashburn, Hamre and Pianta, 2007).

In addition, it is seen that many researches have also been done, which covers many different dimensions such as teachers' educatinal level, certification, professional experience (Guo, Piasta, Justice and Kaderavek, 2010; Bassok and Galdo, 2016), number of students in classrooms (Buchanan, Burts, Bidner, White and Charlesworth 1998; Bassok and Galdo, 2016), child-adult ration in classroom, location of school, teacher's self-sufficiency belief (Goddard and Goddard, 2001; Guo, Piasta, Justice and Kaderavek, 2010), teacher-child interaction, effective classroom implementations and teachers' instructively supportive interactions (Downer, Sabol and Hamre, 2010), language and literacy instruction of teachers (Justice, Mashburn, Hamre and Pianta (2007), income level (poverty), class differences (Bassok and Galdo, 2016).

But, the fact that the researches concentrate in certain dimensions reveal the needs of larger-scale researches in some dimensions. For example, Goddard and Goddard (2001), who state that there are too many researches to have studied the interrelation between teacher's competency and child's success, suggest that the researches on what kind of effect school context has over teachers' competency have not been done sufficiently.

Bassok ve Galdo (2016) also suggest that more comprehensive researches are needed on the effect of structural qualitative difference over children. On the other hand, Downer, Sabol and Hamre (2010) also explain that, even though there have been several researches on the importance and contribution of teacher-child interaction, the researches on the co-effects of the social and instructional interactions in early childhood period generally progress independently. Some examples can be given for this situation. For example, Burchanan et al. (1998) have done a research by thinking that less number of children in a classroom would increase the possibility to implement several activities that increase teacher-child interaction. In the research, the teachers expressed that they had difficulties, in more populated classroom, performing activities suitable to developmental stages of children. In another research, the quality of the programme implemented in preschool education institutions was studied in terms of literacy and language. As seen in all these researches, the effect of one factor over another was studied and only one dimension such as the importance of an understandable effective education or the effect of the well managed environment with rich interactions were put under the spotlight rather than the interactions of several factors. In fact the findings gathered from these researches gives most valuable feedbacks for the quality in an education that has a very wide dimension. However, the researchers express that studying the quality in all its dimensions is a basic requirement (Bassok and Galdo, 2016). On the other hand, they emphasize that measuring and evaluating the functions of the lives presented to children and the quality of the function in education process in daily training flow is harder than evaluating structural quality. In this process, implementations and teachers' behaviours, affirmative teacher-child interactions and instructional guidance have essential importance (Bassok and Galdo, 2016). In this context in which demographic structures and the quality of early learning experiences are studied, it is stated that there are hardly any studies that evaluated the quality of process (Bassok and Galdo, 2016). As seen here, in the

literature, the researchers of the quality in education frequently express the lack of researches on many various dimensions. In this subject, we face the basic need that these kinds of researches increase in field literature.

According to the researchers, studying classroom atmospheres with researches, evaluating several factors related to quality will be supportive in finding new ways and solutions and determining decisive factors for quality. The researchers suggest that we will be able to find the possibilities of offering children better ways and experiences that will improve education process in case we study the quality by assessing the classes (LoCasale-Crouch et al., 2006). It is essential to find out the ways that leads to better future for education. The research results will be used for planning lectures for teacher trainings and intensive programs for children. Additionally, it is claimed that researching class structure will reveal the findings about patterns, improve programme and advance the discussions about policies increasing quality (LoCasale-Crouch et all.., 2006).

Moreover, it is very constructive to diagnose relationships and to explore teachers' good practices with children in the classroom, to change professional behaviours, according to problems to promote positive relationship by conducting research design that includes interaction factors. Thus, it will be possible to make an intellectual contribution pertaining to what we can do to support and contribute more to today's and tomorrow's children. It is well known that children will be more attracted, curious and motivated to actively participate in their learning process when new learning materials are created-and applied-today's children are much more kinetic and need more new sources of stimulation and hard to to keep their attention on the learning process. Moreover, the research results would be used for planning the lectures for teacher training and intensive programs for research learners in the next project stage in order to transfer or exchange teachers who needs support about how to design and create a special learning space with enriched equipment with different kinds of educational materials - indoor and outdoor environment, such as sensorial teaching materials and a didactical sensory garden in each educational institution of the involved countries. In general, there are in the literature scarcely any researches that studied classroom qualities in preschool and primary environments in a broad perspective (Guo, Piasta, Justice, ve Kaderavek, 2010).

The evaluation, comparison and reflection of the different kinds of practices carried out by the researchers in preschool and primary institutions in different countries will give more realistic ideas about the needs of children and teachers in educational system and also a chance to think about successful solutions that lead to stimulates. The purpose of the present paper is to reveal and compare for getting general view point based on instructional and socio-emotional atmosphere in kindergarten and primary classrooms among different countries. The findings obtained from this study will provide a multidimensional assessment of the general situation by introducing both good examples and elements that are being implemented in the field in different countries. The general aim of this project is to gain a better understanding of what kinds of programming have been conducted to improve children's social and emotional competence by comparing different countries. The information we collect in this project will provide teachers and researchers with information they can use to better support children and improve their school readiness and mental health.

Education and Care of Children Aged 0 – 3 in Participating Countries

1.1 Education and Care of Children Aged 0 – 3 in Turkey.

Several state departments are involved in care and education of young children in Turkey. The Ministry of Labor (now it is the Ministry of Family, Labor and Social Services) under the Labor Law requires institutions that employ more than 150 women provide childcare services. Male employees are counted in this number only when they are widowed or have the custody of their children. Paid maternal leave amounts to 16 weeks including the 8-week-prenatal and the 8-week-postnatal periods. This could be followed by a-6-month-long unpaid leave upon request.

Crèches serving children under the age of three operate under the auspices of Ministry of Family, Labor and Social Services. Crèche and daycares are usually privately run, and even publicly owned centers charge parents some fee. According to rules and regulations, three percent of children enrolled are to be those from disadvantaged/ incarcerated families and admitted free of charge. The number of available programs, private or

public, for infants/ toddlers are very limited making this age group the most neglected in terms of education and care. Unfortunately, even in daycare centers there may be no service for children under the age of two or three.

According to state regulations, teacher/ child ratio for children under three cannot be higher than 10 along with the presence of a caregiver. Physical environments are designed differently taking into account the needs of mobile and nonmobile children. Learning centers including blocks, dramatic play, reading, music, art, and science centers are expected to be set up.

Curriculum. A national curriculum for crèches and daycares serving children aged 0 – 36 months was released in 2013 and is synchronized with the preschool curriculum. A supplemental package for family involvement and parent education prepared by the Ministry of Education is also available for crèches. Teachers are expected to develop their monthly and daily education plans and follow a routine that is structured differently for children aged 0 – 24 months and aged 24 – 36 months.

Teacher education. Teachers with a four-year-university degree from a preschool teacher education or child development program as well as those with a child development associate or high school degree could find employment opportunities in daycares and crèches. Programs are required to deliver inservice training at least once a year. Teacher compensation in private sector is lower than that in public sector.

1.2 Education and Care of Children Aged 0 – 3 in Portugal

The education of children aged 0-3 is under the supervision of the Ministry of Solidarity and Social Security. The offer can be from private institutions or institutions of social solidarity (non-profit institutions - IPSS). According to the National Council of Education (CNE – Conselho Nacional de Educação), the supply of institutions and vacancies is still in deficit in Portugal. However, in the last years there has been an increase in the number of offered places.

In 2017, by reference to December 31, 2631 day care centers were registered in Mainland Portugal, 75% of which were owned by non-profit institutions, namely the solidarity network.

In 2017, the total number of places in day-care centers was estimated at 118,500, approximately 62% of which are shared by the State through cooperation agreements with institutions of the solidarity network. The number of children attending day-care centers has also increased significantly, reaching almost 100,000 children in 2017 (GEP / MTSSS, 2018).

Socio-educational provision geared towards children under three is made of:

a. Crèche – socio-educational provision (Ordinance n.º 262/2011, 31st August and Ordinance N.º. 411/2012, 14th December), that cares for children up to the age of three while parents or the person who has custody is unable to look after them. Crèches' main aims are the following: (i) to facilitate reconciliation of the household's family and professional life; (ii) to ensure the well-being and overall development of children in a safe and loving atmosphere through an individualized care; (iii) to collaborate with families in sharing duties of care and responsibility in child development; (iv) to be involved in the early detection of any maladjustment or disability, ensuring proper referral.

b. Child-minder – a social service (Decree-Law n.º 115/2015, 22nd June) provided by a duly licensed person by the Institute for Social Security, I.P. (Instituto da Segurança Social, I. P. - ISS) who is paid to take care of children up to 3 years of age or until they reach preschool age at their place of residence. This can be done via direct hiring by families in writing, or within an institution, called family crèche. Each child-minder can care for up to 4 children (preferably of different ages), for up to 5 days a week, between 4 and 12 hours a day.

c. Family crèche – social service/provision (Ordinance n.º 232/2015, 6th August) which consists of a group no fewer than 4 child-minders, who work within an institution (Santa Casa da Misericórdia de Lisboa or private institutions of social solidarity or legally equivalent institutions) designed to care for children aged up to three or old enough to attend a preschool establishment, during parents' or guardians' normal working hours or period that thy cannot care for their children.

d. Child-minders and family crèches aim to provide: (i) a safe and familiar environment for children; (ii) the right conditions for the child's whole development, in an environment that is both physically and emotionally safe; (iii) adequate care for the child's needs and well-being. (iv) State nursery schools are part of school clusters together with schools providing basic education (1st, 2nd and 3rd cycles) and upper secondary education.

e. School centers aim to optimize human and material resources and the equipment existing in schools of basic and upper secondary education, allowing preschool pupils to use, for example, a school library, gym, playing fields, sciences lab and school canteen. In these school clusters a common education project is designed for all education levels (Eurydice, 2019).

1.3 Education and Care of Children Aged 0 – 3 in Latvia

Latvia has a declining but also ageing population with a rising trend to migrate from the rural areas to the major cities. Within a highly decentralized system, a wide range of institutions including the Ministry of Education and Science, municipalities and educational institutions are in charge of different elements of educational provisions. It is the MoES that is responsible for policy development, setting the standards for quality of education, teacher education, and establishing a network of related institutions. The State Service of Education Quality ensures that quality measures are taken in educational institutions. Municipalities, with their varying size and capacity, on the other hand, cooperate with the MoES through the Education Boards of Municipalities, the institution that is in charge of financing staff costs, supplying educational materials, teacher training, and adult education. But, it is the schools that make the hiring decisions.

With the start of "Vouchers for the provision of flexible child-minders service to workers with nonstandard work schedules" varying needs and demands of families whose employment conditions require alternative and diversified childcare services have begun to be taken into consideration in the country where women's labor force participation is quite high.

It is the duty of the municipal governments to provide equal access to education and, when needed, to finance, through a voucher system, childcare costs of children between the ages of 1 ½ and 7 who are not placed in municipal preschool programs. However, many families cannot benefit from the voucher system because of their lack of finances to cover the remaining costs of childcare even after the fixed amount paid by the municipality. The waiting lists of children in enrollment lists of public programs is relatively long comparing to the population of the country. This leads to unregistered establishments for childcare in the hands of unqualified individuals creating risks for health and safety of children.

There is no national curriculum in use. Schools enjoy freedom to develop their own curriculum and educational plans as long as they stay within the framework of the state standards that endorse the support of whole child and promotion of school readiness.

Pre-school teachers can obtain a teacher qualification in 2 years of college studies or 4 years in studies of bachelor level. Continuing professional development is compulsory in Latvia for teachers (including school heads and their deputies) at all education levels. Preschool teacher compensation relatively low comparing to those of other levels in teaching force.

1.4 Education and Care of Children Aged 0 – 3 in Romania

As a former socialist state, Romania evolved from almost universal childcare provision to a drastic drop in enrollments following closure of programs available. Because of accessibility and affordability issues, majority of parents keep their young children at home even though a large percentage of mothers are employed. Fortunately, the age to start school is 6, but with the recent changes in educational policies, a year in kindergarten before school became mandatory in 2012. Recent progressive measures have led to an increase in enrollment rates reaching to 80% for preschool children. Child–teacher ratio averages to 16.3.

Still following the tradition of socialist times, programs for the very young are more caregiving oriented than provision of education. Nurseries used to employ nurses as the caregivers with no educator in the staff. Fortunately, recent legislative measures taken have addressed this issue bringing forth the educational element.

Now the programs follow a national curriculum that focuses on the whole child with services for parents and children with developmental delays.

Education system in Romania is highly centralized. The Ministry of National Education and Scientific Research (MNESR) is in charge of all education levels from preschool to higher education developing the strategic plans and national policies. Highly respected the Institute of Educational Sciences (IES) is responsible for conducting educational research analyzing the workings of the system, and coordination of the development of a national curriculum.

All teachers in Romania are required to have a bachelor's degree followed by a year in pedagogical training. In order to secure a permanent position, novice teachers are also required to successfully pass their probation year.

Allocations for the nurseries and preschools from the national budget is low making basic maintenance and hygiene, educational materials and furniture difficult to provide. With nowhere to turn to, school administrators ask parents to contribute to school budget.

The education requirements for ECEC staff are regulated by legal provision. Qualification in the preschool education range from graduates of pedagogical high schools (with specializations in early childhood education) to staff with university degrees in pedagogical studies and specializations in primary or preschool education. Teacher salaries are very low and below OECD average.

Education and Care of Children Aged 3-6 in Participating Countries

1.1 Preschool Education in Romania

Preschool education in Romania covers the ages of 3 to 6/7 with a year in kindergarten being mandatory. Public preschools are free of charge and fall in the responsibility of the Ministry of Education and Research and the School Inspectorates which supervise the activities of private institutions. Local governments are responsible for care and education of younger children. Within the public education system there are also variety of programs with different pedagogical approaches available including Step by Step Program, Montessori Program, Waldorf Program, Jena Plan, Freinet Program. Preschool education is addressed in the Law of Education with no mention of care and education of younger children. While in general Romanian is the medium of instruction in some schools education is provided in local languages. Children are placed in groups according to their ages and each group on average is comprised of 15 children. Programs are play based. And a national curriculum is in effect.

1.2 Preschool Education in Portugal

The Framework Law of Preschool Education (Lei n.º 5/97, of 10th of February) defines preschool education as the first stage of the Portuguese basic education system in a lifelong learning process, and as a complement of parents' role in their children's education. As such, the school should establish a close relationship with families, favoring child development, in order to assure their full integration in society as an autonomous, free and supportive human beings.

Preschool education is optional, recognizing that family plays the most important part in raising children, while making preschool education universal for children from the age of 4 (Lei n.º 65/2015, 3rd July). This educational provision is expected to be extended to children from the age of 3 by the end of this legislature (2019).

Defined as the first stage of basic education in the lifelong learning process, preschool education covers children from 3 years up to the age of compulsory schooling. Preschool education for children is still optional. It is provided by kindergartens, which are run by a variety of State organizations, charitable institutions, private schools and cooperatives, unions and other organizations.

The public and the private network of preschool education institutions, are complementary. The public network is made up of education institutions under the ME and the MTSSS. The private network is composed of for-profit and not-for-profit education institutions. The former are private and cooperative education institutions, while the later are private institutions of social solidarity (IPSS – Instituições Particulares de Solidariedade Social).

In 2017, 5900 preschool centers were registered in Mainland Portugal, 61,25% of which were owned by public institutions, and 38,74% by private institutions most of them from the solidarity network.

According to the CNE, in 2016, 92.5% of children between 4 years old and the beginning of basic education attended preschool education. Data shows a decrease of 2 percentage points since 2012. The data reveal, specifically, that the percentage of five-year-old attending preschool education is higher than the percentage of four-year-old children, showing a difference of 2.7 percentage points. However, there are no significantly gender differences.

1.3 Preschool Education in Latvia

Pre-school education for Latvian children is available from the age of 1.5 years, but children may enter from 2, 3, 4, 5 or 6 years of age. It is mandatory to participate in pre-primary education programs for five and six year old children who do not attend pre-school education institutions. The objective of the pre-school education curriculum is to ensure multi-faceted development of a child's personality, to promote health and readiness to enter the primary stage of basic education. Pre-school education is considered a comprehensive first stage of general education and all children have to complete it by the time they are 7 years old. This deadline may be extended for a year due to specific health or psychological problems by parental request or doctors' request or recommendations.

Pre-school education can be delivered at various pre-primary education institutions (kindergartens) or at special pre-primary classes at general education institutions. Children with special needs attend special pre-school institutions or classes for children with special needs within general education schools.

Since September 2013, home-based early childhood education and care has been available provided by childminders.

1.4 Preschool Education in Turkey

In the history of Turkish Republic, the first serious undertaking regarding education of young children took place in 1962 when the Ministry of Education [MoE] developed its first Preschools and Kindergartens Policy. But decades had to pass before the establishment of the Department of Preschool Education within the Ministry of Education in 1992. But, in 2011, this department was merged within the Department of Basic Education that oversees preschools, kindergartens and elementary schools. Preschools serve pre-Ks (36 -72 months) while kindergartens are a part of elementary schools. With drastic changes in Education Act in 2012, mandatory schooling age was lowered to 60 months forcing parents to enroll their very young children to first grade despite the protests of parents and educators. Following the natural failure of this practice, the age requirement increased. In 2019, 69 months olds are required to start school. A drastic decrease in 2012-2013 occurred as 60 months olds enrolled in the first grade.

Curriculum. The first national preschool curriculum was released by the MoE in 2002 and updated in 2006 and, again, in 2013 MoE cooperated with teacher education programs with the support of UNICEF. During this fruitful cooperation, the 1994 curriculum for 0 – 36 months was also revised and synchronized with the preschool curriculum. A supplemental family involvement and parent education curriculum also developed for nurseries and pre-kindergarten programs.

The last and effective 2013 national curriculum is defined as eclectic in terms of pedagogical approaches, child centered, play based and addressing the whole child. Instead of classifying under certain subjects, core skills and concepts to target are listed under development areas, as physical, social, emotional and cognitive with a concern that otherwise the programs could become too academics oriented rather than being play-based. It is

also emphasized that the curriculum is a guide giving teachers some degree of flexibility to make their education more suitable for children in their groups. Teachers are expected to make necessary adaptations for children with special needs; and employ a family involvement and education plan.

Teacher education. Only teachers with a four-year-degree from a preschool teacher education program and passed an exam are employed by the MoE to be employed in its pre-k programs. Those with a child development associate or high school degree could find employment opportunities in daycares. In the beginning and the end of each semester, a-two-week inservice training is required for all teachers. There are also training opportunities provided throughout the school year.

In this research, our study was based on the following questions: a) What are the teaching and learning strategies used in their practices by the early childhood and primary school teachers from involved countries? and b) How they organize the learning environments to facilitate the learning experiences? The research aimed to evaluate the learning spaces in kindergarten and primary school, and then to make comparative analyses of involved countries to identify similarities and differences, good practices to share. In the second phase of the TELESPA project, the research will aim at how to design and create a special learning space - indoor and outdoor environment - such as sensorial teaching materials and a didactical sensory garden in each educational institution of the involved countries. The research results will be used for planning the lectures for teacher training and intensive programs for research learners in the next project stage.

Method

Day cares

Research sample. Convenient sampling was used to recruit nursery teachers who were willing to participate in the study. One infants/ toddlers classroom per a day care center was selected for data collection in each country making a total of 39 teachers and nursery programs.

Instruments. Data was collected using a Demographics Form, ITERS-3, and Caregiver Interaction Scale.

Demographics Form. This form was developed by the researchers. It included such questions as the age group served, socio-economic statuses of parents, teacher's education level, and whether the program provide free meals.

Infant/Toddler Environment Rating Scale (ITERS-3). It is a valid and reliable instrument that relies on information collected through on site three-hour-long observation of classrooms for children under 36 months. There are 33 items covering six subscales of the instrument including Space and Furnishings, Personal Care Routines, Language and Books, Activities, Interaction, and Program Structure.

Caregiver Interaction Scale. CIS was developed by Arnett (1989) and was designed to measure the emotional tone, disciplinary style, and the responsiveness of the educator. This four-point Likert style measure includes 26 items and filled out by the observer.

Data collection. After having established the test intra-rater reliability, data collection process was started and have being collected through observations on two different days two-weeks apart in this ongoing study that is a part of large scale project.

Data analysis. Once the data collection was completed, analyses within for each country and for cross-countries was made. Descriptive analyses was conducted in order to give a rich profile of institutions and country overviews. This was followed by cross country comparisons that revealed similarities and differences between countries.

Preschools

Research sample. Convenient sampling was used to recruit preschool teachers who were willing to participate in the study. One classroom per a preschool was selected for data collection in each country making a total of 52 teachers and 52 preschools.

Instruments. Data was collected using a Demographics Form, Caregiver Interaction Scale, and ECERS-R.

Demographics Form. This form was developed by the researchers. It included such questions as the age group served, socio-economic statuses of parents, teacher's education level, and whether the program provide free meals.

Early Childhood Environment Rating Scale (ECERS-R). It is a valid and reliable instrument that relies on information collected through on site three-hour-long observation of preschool classrooms. There are 43 items covering seven subscales of the instrument including Space and Furnishings, Personal Care Routines, Language and Reasoning, Activities, Interaction, Program Structure and Parents and Staff.

PK2 Teacher Roles Observation Schedule.

Data collection. Data was collected through observations on two different days two-weeks apart in this ongoing study that is a part of a large scale project. Raters who would administer the scales were trained until inter-rater reliability was established. Teachers volunteered to participate in the project.

Primary Schools

Research sample. Convenient sampling was used to recruit primary school teachers who were willing to participate in the study. One classroom per a primary school was selected for data collection in each country making a total of 54 teachers and 54 primary schools.

Instruments. Data was collected using a Demographics Form, Caregiver Interaction Scale, and ECERS-R.

Demographics Form. This form was developed by the researchers. It included such questions as the age group served, socio-economic statuses of parents, teacher's education level, and whether the program provide free meals.

The Marzano Teacher Evaluation Model is a research-based model designed both to effectively measure teacher performance and to enhance teacher development. The 2014 Marzano Teacher Evaluation Model includes 41 revised elements (i.e., categories of instructional strategies) that are organized into nine broader categories which themselves are organized into three lesson segments as listed below.

Elements of the 2014 Marzano Teacher Evaluation Model

I. Routine Strategies
A. DQ1: Communicating Learning Goals and Feedback
B. DQ6: Establishing and Maintaining Rules and Procedures

II. Content Strategies
C. DQ2: Helping Students Interact with New Knowledge
D. DQ3: Helping Students Practice and Deepen New Knowledge
E. DQ4: Helping Students Generate and Test Hypotheses

III. Strategies Enacted on the Spot
F. DQ5: Engaging Students
G. DQ7: Recognizing Adherence to Rules and Procedures
H. DQ8: Establishing and Maintaining Effective Relationships with Students
I. DQ9: Communicating High Expectations for All Students

Data collection. Data was collected through observations on two different days two-weeks apart in this ongoing study that is a part of a large scale project. Raters who would administer the scales were trained until inter-rater reliability was established. Teachers volunteered to participate in the project.

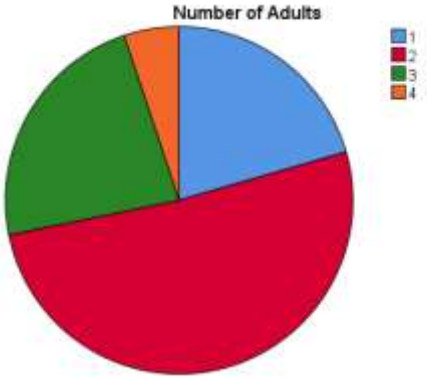
Findings

Day Cares

Number of adults. In 51% of the classrooms, there were two adults working together.

Number of Adults

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	20,5	20,5	20,5
	2	20	51,3	51,3	71,8
	3	9	23,1	23,1	94,9
	4	2	5,1	5,1	100,0
	Total	39	100,0	100,0	

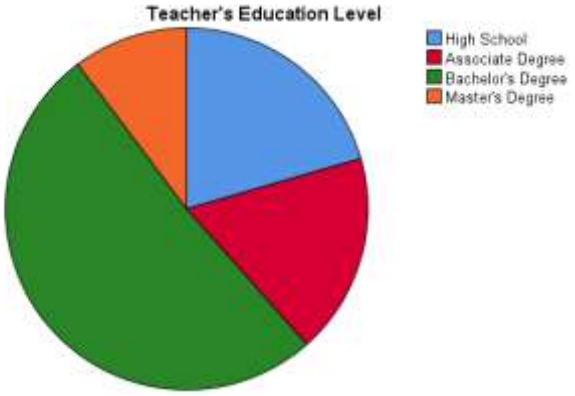


Sex of the adults. All the participating teachers working in the 0-3 programs were female.

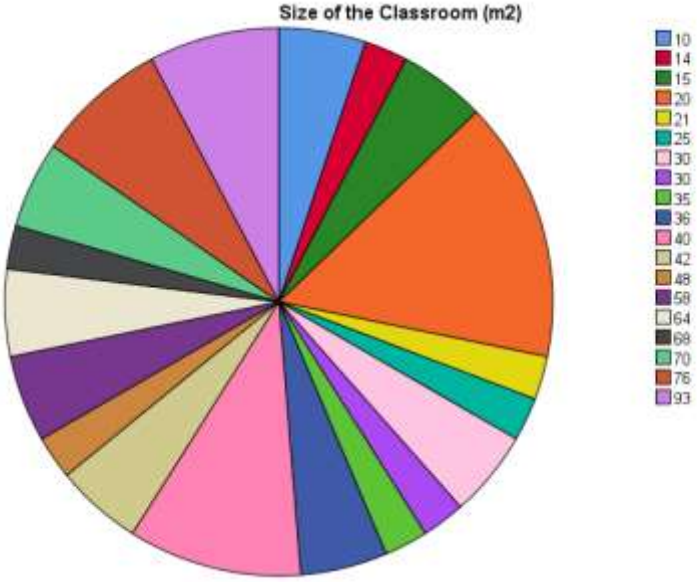
Teachers' level of education. Among the teachers observed, 51% had a B.S. degree.

Teacher's Education Level

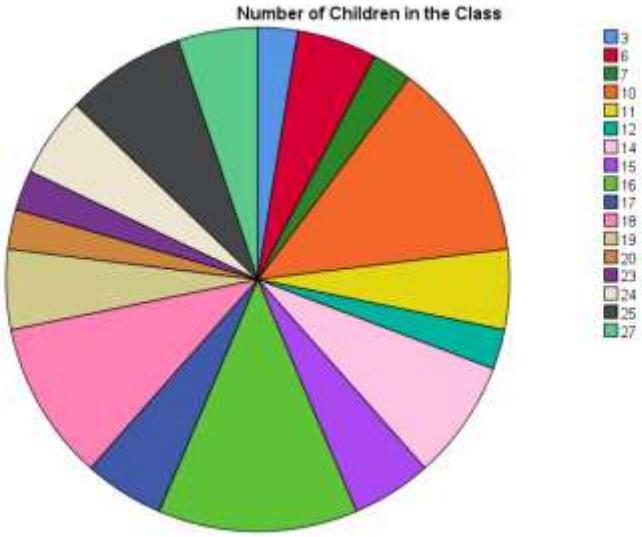
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	8	20,5	20,5	20,5
	Associate Degree	7	17,9	17,9	38,5
	Bachelor's Degree	20	51,3	51,3	89,7
	Master's Degree	4	10,3	10,3	100,0
	Total	39	100,0	100,0	



Size of the classrooms.



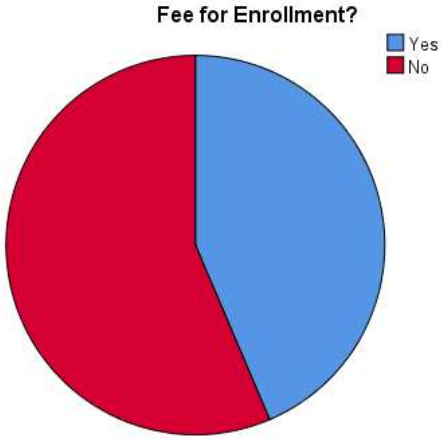
Number of children in the classroom.



Fee for enrollment. Over 56% of daycares charged a fee for enrollment.

Fee for Enrollment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	17	43,6	43,6	43,6
	No	22	56,4	56,4	100,0
	Total	39	100,0	100,0	

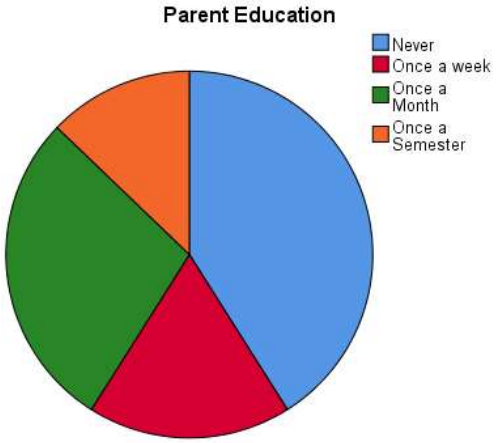


Parent education.

Parent Education

	Frequency	Percent	Valid Percent	Cumulative Percent

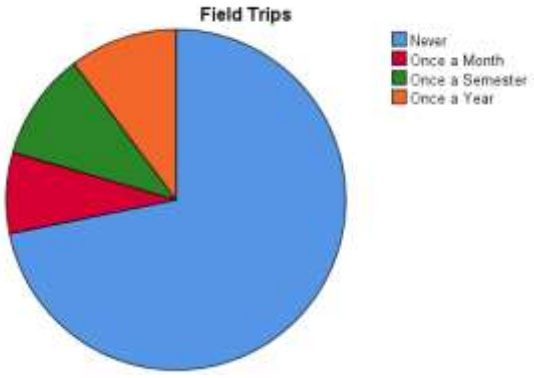
Valid	Never	16	41,0	41,0	41,0
	Once a week	7	17,9	17,9	59,0
	Once a Month	11	28,2	28,2	87,2
	Once a Semester	5	12,8	12,8	100,0
	Total	39	100,0	100,0	



Field trips. In majority of the programs observed, taking children for a field trip was something that never occurred.

Field Trips

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	28	71,8	71,8	71,8
	Once a Month	3	7,7	7,7	79,5
	Once a Semester	4	10,3	10,3	89,7
	Once a Year	4	10,3	10,3	100,0
	Total	39	100,0	100,0	



Caregiver Interaction Scale (Arnett, 1989). It is a widely used instrument to measure the quality of caregiver–child interactions and categorizes the interaction styles in four types as sensitivity, harshness, detachment, and permissiveness.

Country comparisons.

Teacher sensitivity

A one-way between subjects ANOVA was conducted to compare the countries in terms of sensitivity of teachers. There was a significant difference between Turkey and Latvia and Turkey and Portugal (F (3, 35) = 7.80, p = .000). Post hoc analyses indicated that the mean scores of Portuguese (39.83) and Latvian (M=32.88) teachers were significantly higher than Turkish (M=26.08) teachers meaning they were more sensitive towards children in their care.

Descriptives

Teacher Sensitivity

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	12	26,0833	9,04995	2,61249	20,3333	31,8334	11,00	37,00
Latvia	12	32,8750	2,73134	,78847	31,1396	34,6104	29,50	38,00
Portugal	6	39,8333	,40825	,16667	39,4049	40,2618	39,00	40,00
Romania	9	32,3333	5,07445	1,69148	28,4328	36,2339	25,00	39,00
Total	39	31,7308	7,22828	1,15745	29,3876	34,0739	11,00	40,00

ANOVA

Sensitivity

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	795,611	3	265,204	7,801	,000
Within Groups	1189,813	35	33,995		
Total	1985,423	38			

Harshness

A one-way between subjects ANOVA was conducted to compare the countries in terms of harshness of teachers. Results indicated that there were no significant difference among study countries. However, Turkish daycare teachers scored the highest (M=15.75) compared to the teachers from other countries.

Descriptives

Harshness

N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum

					Lower Bound	Upper Bound		
Turkey	12	15,7500	6,98212	2,01556	11,3138	20,1862	10,00	31,00
Latvia	12	12,9167	1,67649	,48396	11,8515	13,9819	10,50	16,00
Portugal	6	13,0000	,00000	,00000	13,0000	13,0000	13,00	13,00
Romania	9	11,4444	2,55495	,85165	9,4805	13,4084	9,00	16,00
Total	39	13,4615	4,36400	,69880	12,0469	14,8762	9,00	31,00

ANOVA

Harshness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	104,303	3	34,768	1,965	,137
Within Groups	619,389	35	17,697		
Total	723,692	38			

Detachment

A one-way between subjects ANOVA was conducted to compare the countries in terms of detachment of teachers. Post hoc analysis indicated a significant difference between Turkey and Romania and Portugal (F (3, 35) = 4.55, p = .009). The mean scores of Turkish teachers (M=7.58) were significantly higher than Portuguese (M=4.00) and Romanian teachers (M=4.55) meaning Turkish teachers were more detached from children in their care.

Descriptives

Detachment

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Turkey	12	7,5833	3,84846	1,11095	5,1381	10,0285	4,00	16,00
Latvia	12	6,2917	1,33924	,38660	5,4408	7,1426	4,00	9,00
Portugal	6	4,0000	,00000	,00000	4,0000	4,0000	4,00	4,00
Romania	9	4,5556	,88192	,29397	3,8777	5,2335	4,00	6,00
Total	39	5,9359	2,62874	,42093	5,0838	6,7880	4,00	16,00

ANOVA

Detachment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	73,722	3	24,574	4,554	,009
Within Groups	188,868	35	5,396		
Total	262,590	38			

Permissiveness

A one-way between subjects ANOVA was conducted to compare the countries in terms of permissiveness of teachers. There was no significant difference among the countries.

Descriptives

Permissiveness

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	12	7,7500	1,76455	,50938	6,6289	8,8711	5,00	10,00
Latvia	12	6,9583	1,07573	,31054	6,2748	7,6418	5,00	9,00
Portugal	6	7,0000	,00000	,00000	7,0000	7,0000	7,00	7,00
Romania	9	6,8889	1,61589	,53863	5,6468	8,1310	3,00	8,00
Total	39	7,1923	1,38894	,22241	6,7421	7,6425	3,00	10,00

ANOVA

Permissiveness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,440	3	1,813	,935	,434
Within Groups	67,868	35	1,939		
Total	73,308	38			

Quality. ITERS- 3

Space and Furnishing

A one-way between subjects ANOVA was conducted to compare the countries in terms space and furnishing of the physical environment. There was a significant difference between Portuguese and Latvian day cares and Turkish and Romanian day cares (F (3, 35) = 159.03, p = .000). The mean scores of Portuguese day care (M=6.25) and Latvian day cares (M= 5.16) were significantly higher than Turkish (M= 1.47) and Romanian day cares (M= 1.86) meaning they were in higher quality Turkish and Romanian day cares.

Descriptives

Space and Furnishings

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	12	1,47	,443	,128	1,19	1,76	1	2
Latvia	12	5,16	,607	,175	4,78	5,55	5	6
Portugal	6	6,25	,500	,204	5,73	6,77	6	7
Romania	9	1,86	,677	,226	1,34	2,38	1	3
Total	39	3,43	2,071	,332	2,76	4,10	1	7

ANOVA

Space and Furnishings

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	151,802	3	50,601	159,030	,000
Within Groups	11,136	35	,318		
Total	162,938	38			

Personal Care Routines

A one-way between subjects ANOVA was conducted to compare the countries in terms personal care routines of the classrooms. There was a significant difference between Portuguese and Latvian day cares and Turkish and Romanian daycares (F (3, 35) = 29.21, p = .000). The mean scores of Portuguese and Latvian day cares (M=8.13 and M= 5.29, respectively) were significantly higher than Turkish (M= 2.36) and Romanian day cares (M= 3.76) meaning they were higher in quality than Turkish and Romanian day care centers.

Descriptives

Personal Care Routines

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Turkey	12	2,36	1,289	,372	1,54	3,18	1	5
Latvia	12	5,29	,875	,253	4,74	5,85	4	7
Portugal	6	8,13	1,671	,682	6,37	9,88	6	11
Romania	9	3,76	1,489	,496	2,62	4,91	2	6
Total	39	4,47	2,321	,372	3,72	5,22	1	11

ANOVA

Personal Care Routines

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	146,253	3	48,751	29,214	,000
Within Groups	58,406	35	1,669		
Total	204,658	38			

Language and Books

A one-way between subjects ANOVA was conducted to compare the countries in terms of language and books provided in the classrooms. There was a significant difference between Portuguese and Latvian day cares and Turkish and Romanian day cares (F (3, 35) = 10.28, p = .004). The mean scores of Portuguese (5.44) and Latvian day cares (M= 4.25) were significantly higher than Turkish (M= 2.90) and Romanian day cares (M= 2.83) meaning they were higher in quality than Turkish and Romanian day care centers in terms of this subscale.

Descriptives

Language and Books

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	12	2,90	1,456	,420	1,97	3,82	1	5
Latvia	12	4,25	1,011	,292	3,61	4,89	3	6
Portugal	6	5,44	,455	,186	4,96	5,92	5	6
Romania	9	2,83	,844	,281	2,18	3,48	1	4
Total	39	3,69	1,429	,229	3,22	4,15	1	6

ANOVA

Language and Books

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	36,369	3	12,123	10,279	,000
Within Groups	41,277	35	1,179		
Total	77,646	38			

Activities

A one-way between subjects ANOVA was conducted to compare the countries in terms activities provided in the classrooms. There was a significant difference between Portuguese and Latvian day cares and Turkish and Romanian day cares (F (3, 35) = 54.75, p = .00). The mean scores of Portuguese (M=5.36) and Latvian day cares (M= 4.26) were significantly higher than Turkish (M= 1.20) and Romanian day cares (M= 1.88) meaning they were higher in quality than Turkish and Romanian day care centers in terms of this subscale.

Descriptives

Activities

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	12	1,20	,228	,066	1,05	1,34	1	2
Latvia	12	4,26	,707	,204	3,81	4,70	3	5
Portugal	6	5,36	1,665	,680	3,62	7,11	2	7
Romania	9	1,88	,494	,165	1,50	2,26	1	3
Total	39	2,94	1,811	,290	2,35	3,52	1	7

ANOVA

Activities

	Sum of Squares	df	Mean Square	F	Sig.

Between Groups	102,694	3	34,231	54,746	,000
Within Groups	21,885	35	,625		
Total	124,579	38			

Interaction

A one-way between subjects ANOVA was conducted to compare the countries in terms of interactions occurring in the classrooms. There was a significant difference between Portuguese and Latvian day cares and Turkish and Romanian day cares (F (3, 35) = 11.98, p = .000). The mean scores of Portuguese (M=7.00) and Latvian day cares (M= 4.84) were significantly higher than Turkish (M= 3.10) and Romanian day cares (M= 3.81) meaning they were higher in quality than Turkish and Romanian day care centers in terms of this subscale.

Descriptives

Interaction

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Turkey	12	3,10	1,584	,457	2,09	4,10	1	5
Latvia	12	4,84	1,027	,296	4,19	5,50	4	6
Portugal	6	7,00	,000	,000	7,00	7,00	7	7
Romania	9	3,81	1,784	,595	2,44	5,18	1	6
Total	39	4,40	1,857	,297	3,80	5,00	1	7

ANOVA

Interaction

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	66,425	3	22,142	11,985	,000
Within Groups	64,660	35	1,847		
Total	131,086	38			

Program Structure

A one-way between subjects ANOVA was conducted to compare the countries in terms of program structure. There was a significant difference between Portuguese and Latvian day cares and Turkish and Romanian day cares (F (3, 35) = 19.94, p = .000). The mean scores of Portuguese (M=6.06) and Latvian day cares (M= 5.44) were significantly higher than Turkish (M= 1.59) and Romanian day cares (M= 4.31) meaning they were higher in quality than Turkish and Romanian day care centers in terms of this subscale.

Descriptives

Program Structure

				95% Confidence Interval for Mean			
N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum

Turkey	12	1,59	,878	,253	1,03	2,15	1	3
Latvia	12	5,44	,944	,272	4,84	6,04	4	7
Portugal	6	6,06	1,868	,763	4,09	8,02	2	7
Romania	9	4,31	2,088	,696	2,71	5,92	2	7
Total	39	4,09	2,244	,359	3,36	4,82	1	7

ANOVA

Program Structure

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	120,675	3	40,225	19,943	,000
Within Groups	70,596	35	2,017		
Total	191,270	38			

Preschools

Number of preschools observed were given in the table below.

Country

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Turkey	14	26.9	26.9	26.9
	Latvia	14	26.9	26.9	53.8
	Romania	17	32.7	32.7	86.5
	Portugal	7	13.5	13.5	100.0
	Total	52	100.0	100.0	

Number of adults working in the classrooms during the observation is given in the table below.

Number of Adults

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	23.1	23.1	23.1
	2	32	61.5	61.5	84.6
	3	7	13.5	13.5	98.1
	4	1	1.9	1.9	100.0
	Total	52	100.0	100.0	

Among the participants, only one was male.

Teacher's Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	51	98.1	98.1	98.1
	Male	1	1.9	1.9	100.0
	Total	52	100.0	100.0	

Mean age of the participating teachers was given in the table below.

Descriptives

Teacher's Age

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	14	38.57	6.745	1.803	34.68	42.47	30	54
Latvia	14	43.57	9.304	2.487	38.20	48.94	25	57
Romania	17	40.24	10.739	2.604	34.71	45.76	21	61
Portugal	7	37.43	3.259	1.232	34.41	40.44	32	40

Total	52	40.31	8.717	1.209	37.88	42.73	21	61

Majority of the teachers held a bachelors degree while one fourth of the participants had a lesser degree.

Teacher's Education Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	6	11.5	11.5	11.5
	Associate Degree	1	1.9	1.9	13.5
	Bachelor's Degree	31	59.6	59.6	73.1
	Master's Degree	14	26.9	26.9	100.0
	Total	52	100.0	100.0	

Teacher's Education Level by Country

		Turkey		Latvia		Romania		Portugal	
		#	%	#	%	#	%	#	%
Valid	High School			3	21%	3	17%		
	Associate Degree	1	7%						
	Bachelor's Degree	11	78%	9	64%	6	35%	5	71%
	Master's Degree	2	14%	2	14%	8	47%	2	28%

Number of children in the classroom

A one-way between subjects ANOVA was conducted to compare the countries in terms of the number of the children placed in the classrooms. There was a significant difference between Romanian preschools and that of Latvian and Turkish preschools (F (3, 48) = 5.75, p = .002). On average, more children enrolled in Romanian (M=25.94)classrooms than Turkish (M=21.29) and Latvian classrooms (M=21.57).

Descriptives

Number of Children in the Class

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	14	21.29	3.407	.910	19.32	23.25	16	27
Latvia	14	21.57	2.848	.761	19.93	23.22	14	24
Romania	17	25.94	3.976	.964	23.90	27.99	19	33
Portugal	7	22.43	4.077	1.541	18.66	26.20	14	25
Total	52	23.04	4.029	.559	21.92	24.16	14	33

ANOVA

Number of Children in the Class

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	218.982	3	72.994	5.754	.002

Within Groups	608.941	48	12.686		
Total	827.923	51			

Multiple Comparisons

Dependent Variable: Number of Children in the Class

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Turkey	Latvia	-.286	1.346	.997	-3.87	3.30
	Romania	-4.655*	1.285	.004	-8.08	-1.23
	Portugal	-1.143	1.649	.899	-5.53	3.25
Latvia	Turkey	.286	1.346	.997	-3.30	3.87
	Romania	-4.370*	1.285	.007	-7.79	-.95
	Portugal	-.857	1.649	.954	-5.25	3.53
Romania	Turkey	4.655*	1.285	.004	1.23	8.08
	Latvia	4.370*	1.285	.007	.95	7.79
	Portugal	3.513	1.600	.139	-.74	7.77
Portugal	Turkey	1.143	1.649	.899	-3.25	5.53
	Latvia	.857	1.649	.954	-3.53	5.25
	Romania	-3.513	1.600	.139	-7.77	.74

*. The mean difference is significant at the 0.05 level.

Fee for Enrollment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	13	25.0	25.0	25.0
	No	39	75.0	75.0	100.0
	Total	52	100.0	100.0	

Provision of Free Meal

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	24	46.2	46.2	46.2
	No	28	53.8	53.8	100.0
	Total	52	100.0	100.0	

Provision of Parent Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	5.8	5.8	5.8

	Once a week	11	21.2	21.2	26.9
	Once a Month	18	34.6	34.6	61.5
	Once a Semester	16	30.8	30.8	92.3
	Once a Year	4	7.7	7.7	100.0
	Total	52	100.0	100.0	

Field Trips

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	8	15.4	15.4	15.4
	Once a week	4	7.7	7.7	23.1
	Once a Month	20	38.5	38.5	61.5
	Once a Semester	15	28.8	28.8	90.4
	Once a Year	5	9.6	9.6	100.0
	Total	52	100.0	100.0	

Size of the classrooms

A one-way between subjects ANOVA was conducted to compare the countries in terms of the size of the classrooms in the preschools observed. There was a significant difference between Turkish preschool classrooms and that of Latvian preschool (F (3, 48) = 25.81, p = .000). The mean score of the size of Turkish classrooms (M=39.93m2) was significantly lower than that of the Latvian preschools (M=103.29).

Descriptives

Size of the Classroom (m2)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	14	39.93	13.590	3.632	32.08	47.78	20	64
Latvia	14	103.29	17.054	4.558	93.44	113.13	57	116
Romania	17	44.80	21.387	5.187	33.80	55.79	20	77
Portugal	7	59.10	37.970	14.351	23.98	94.22	21	140
Total	52	61.16	33.690	4.672	51.78	70.54	20	140

ANOVA

Size of the Classroom (m2)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	35735.948	3	11911.983	25.813	.000
Within Groups	22150.468	48	461.468		
Total	57886.417	51			

Multiple Comparisons

Dependent Variable: Size of the Classroom (m2)

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Turkey	Latvia	-63.357*	8.119	.000	-84.97	-41.75
	Romania	-4.869	7.753	.923	-25.50	15.76
	Portugal	-19.171	9.944	.230	-45.64	7.29
Latvia	Turkey	63.357*	8.119	.000	41.75	84.97
	Romania	58.488*	7.753	.000	37.85	79.12
	Portugal	44.186*	9.944	.000	17.72	70.65
Romania	Turkey	4.869	7.753	.923	-15.76	25.50
	Latvia	-58.488*	7.753	.000	-79.12	-37.85
	Portugal	-14.302	9.647	.456	-39.98	11.37
Portugal	Turkey	19.171	9.944	.230	-7.29	45.64
	Latvia	-44.186*	9.944	.000	-70.65	-17.72
	Romania	14.302	9.647	.456	-11.37	39.98

*. The mean difference is significant at the 0.05 level.

ECERS-R comparisons

Countries' ECERS-R subscale mean scores

Country		Space and Furnishings	Personal Care Routines	Language and Reasoning	Activities	Interaction	Program Structure	ParentsStaff
Turkey	Mean	3.9043	4.3379	3.6054	2.6518	4.6500	3.1061	3.6075
	N	14	14	14	14	14	14	14
	Std. Deviation	1.51333	1.41760	1.85032	1.33634	2.11142	1.77904	1.41937
	Minimum	1.50	2.40	1.00	1.20	1.10	1.13	1.90
	Maximum	6.87	7.00	7.00	6.60	7.00	7.00	7.00
Latvia	Mean	4.6111	5.0225	4.1996	3.9975	5.0357	4.3321	4.5907
	N	14	14	14	14	14	14	14
	Std. Deviation	1.35721	1.24250	1.36646	.50842	1.83873	1.41603	.90002
	Minimum	2.63	3.25	2.25	3.20	2.50	2.00	3.44
	Maximum	6.13	6.25	6.63	5.30	7.00	6.33	5.67
Romania	Mean	4.1115	4.9180	4.7321	4.0555	5.4612	4.6230	4.6233

	N	17	17	17	17	17	17	17
	Std. Deviation	1.08316	1.51445	1.14317	1.07694	1.38404	1.69252	1.22330
	Minimum	2.38	2.50	3.00	2.30	3.00	2.25	2.83
	Maximum	6.74	7.20	7.20	6.83	7.24	7.18	6.30
Portugal	Mean	4.4414	5.4229	4.9643	4.8286	6.7714	6.3214	5.0000
	N	7	7	7	7	7	7	7
	Std. Deviation	1.28516	.90426	2.58775	1.72212	.60474	1.08605	1.04465
	Minimum	2.50	4.50	1.00	2.30	5.40	4.33	3.67
	Maximum	5.88	6.83	7.00	6.70	7.00	7.00	7.00
Total	Mean	4.2346	4.8579	4.3166	3.7660	5.3046	4.3649	4.3918
	N	52	52	52	52	52	52	52
	Std. Deviation	1.30210	1.35949	1.67457	1.33127	1.75588	1.82709	1.25149
	Minimum	1.50	2.40	1.00	1.20	1.10	1.13	1.90
	Maximum	6.87	7.20	7.20	6.83	7.24	7.18	7.00

Space and Furnishings

A one-way between subjects ANOVA was conducted to compare the countries in terms of space and furnishings of the preschools. There was no significant difference among the countries. Turkish preschool classrooms were in minimally acceptable condition while those from other countries received scores pointing a place between minimal to good.

Space and furnishings

	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Turkey	14	3.9043	1.51333	.40446	1.50	6.87
Latvia	14	4.6111	1.35721	.36273	2.63	6.13
Romania	17	4.1115	1.08316	.26270	2.38	6.74
Portugal	7	4.4414	1.28516	.48575	2.50	5.88
Total	52	4.2346	1.30210	.18057	1.50	6.87

ANOVA

Space and Furnishings

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.069	3	1.356	.790	.505
Within Groups	82.400	48	1.717		
Total	86.469	51			

Multiple Comparisons

Space and Furnishings

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Turkey	Latvia	-.70679	.49522	.489	-2.0247	.6112
	Romania	-.20718	.47286	.972	-1.4657	1.0513
	Portugal	-.53714	.60651	.812	-2.1513	1.0770
Latvia	Turkey	.70679	.49522	.489	-.6112	2.0247
	Romania	.49960	.47286	.717	-.7589	1.7581
	Portugal	.16964	.60651	.992	-1.4445	1.7838
Romania	Turkey	.20718	.47286	.972	-1.0513	1.4657
	Latvia	-.49960	.47286	.717	-1.7581	.7589
	Portugal	-.32996	.58840	.943	-1.8959	1.2360
Portugal	Turkey	.53714	.60651	.812	-1.0770	2.1513
	Latvia	-.16964	.60651	.992	-1.7838	1.4445
	Romania	.32996	.58840	.943	-1.2360	1.8959

Personal Care Routines

A one-way between subjects ANOVA was conducted to compare the countries in terms of personal care routines of the preschools. There was no significant difference among the countries. Turkish preschool classrooms were in minimally acceptable condition while Portuguese, Latvian and Romanian preschools were in good condition.

Descriptives

Personal Care Routines

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Turkey	14	4.3379	1.41760	.37887	3.5194	5.1564	2.40	7.00
Latvia	14	5.0225	1.24250	.33207	4.3051	5.7399	3.25	6.25
Romania	17	4.9180	1.51445	.36731	4.1394	5.6967	2.50	7.20
Portugal	7	5.4229	.90426	.34178	4.5866	6.2592	4.50	6.83
Total	52	4.8579	1.35949	.18853	4.4794	5.2364	2.40	7.20

ANOVA

Personal Care Routines

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.461	3	2.154	1.177	.328
Within Groups	87.797	48	1.829		
Total	94.259	51			

Multiple Comparisons

Personal Care Routines

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Turkey	Latvia	-.68464	.51118	.543	-2.0451	.6758
	Romania	-.58018	.48810	.637	-1.8792	.7188
	Portugal	-1.08500	.62606	.318	-2.7512	.5812
Latvia	Turkey	.68464	.51118	.543	-.6758	2.0451
	Romania	.10446	.48810	.996	-1.1946	1.4035
	Portugal	-.40036	.62606	.919	-2.0665	1.2658
Romania	Turkey	.58018	.48810	.637	-.7188	1.8792
	Latvia	-.10446	.48810	.996	-1.4035	1.1946
	Portugal	-.50482	.60737	.839	-2.1213	1.1116
Portugal	Turkey	1.08500	.62606	.318	-.5812	2.7512
	Latvia	.40036	.62606	.919	-1.2658	2.0665
	Romania	.50482	.60737	.839	-1.1116	2.1213

Language and Reasoning

A one-way between subjects ANOVA was conducted to compare the countries in terms of personal care routines of the preschools. There was no significant difference among the countries. All the preschool classrooms observed were in minimally acceptable condition while Turkish classrooms received lowest score (M= 3.60) Portuguese classrooms received the highest (M=4.96) indicating almost good condition.

Descriptives

Language and Reasoning

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Turkey	14	3.6054	1.85032	.49452	2.5370	4.6737	1.00	7.00
Latvia	14	4.1996	1.36646	.36520	3.4107	4.9886	2.25	6.63
Romania	17	4.7321	1.14317	.27726	4.1443	5.3198	3.00	7.20
Portugal	7	4.9643	2.58775	.97808	2.5710	7.3576	1.00	7.00
Total	52	4.3166	1.67457	.23222	3.8504	4.7828	1.00	7.20

ANOVA

Language and Reasoning

	Sum of Squares	df	Mean Square	F	Sig.

Between Groups	13.144	3	4.381	1.619	.197
Within Groups	129.869	48	2.706		
Total	143.014	51			

Multiple Comparisons

Dependent Variable: Language and Reasoning

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) Country	(J) Country	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Turkey	Latvia	-.59429	.62170	.775	-2.2489	1.0603
	Romania	-1.12670	.59364	.243	-2.7066	.4532
	Portugal	-1.35893	.76143	.293	-3.3854	.6675
Latvia	Turkey	.59429	.62170	.775	-1.0603	2.2489
	Romania	-.53242	.59364	.806	-2.1123	1.0475
	Portugal	-.76464	.76143	.748	-2.7911	1.2618
Romania	Turkey	1.12670	.59364	.243	-.4532	2.7066
	Latvia	.53242	.59364	.806	-1.0475	2.1123
	Portugal	-.23223	.73869	.989	-2.1982	1.7337
Portugal	Turkey	1.35893	.76143	.293	-.6675	3.3854
	Latvia	.76464	.76143	.748	-1.2618	2.7911
	Romania	.23223	.73869	.989	-1.7337	2.1982

Activities

A one-way between subjects ANOVA was conducted to compare the countries in terms of activities provided. There was a significant difference between Turkish preschools and those of others (F (3, 48) = 6.98, p = .001). The mean scores of Portuguese (M=4.82), Latvian (M=3.99), and Romanian preschool (M= 4.05) were significantly higher than Turkish preschools (M= 2.65) meaning they were higher in quality than Turkish preschools in terms of this subscale.

Descriptives

Activities

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Turkey	14	2.6518	1.33634	.35715	1.8802	3.4234	1.20	6.60
Latvia	14	3.9975	.50842	.13588	3.7039	4.2911	3.20	5.30
Romania	17	4.0555	1.07694	.26120	3.5018	4.6092	2.30	6.83
Portugal	7	4.8286	1.72212	.65090	3.2359	6.4213	2.30	6.70
Total	52	3.7660	1.33127	.18461	3.3954	4.1367	1.20	6.83

ANOVA

Activities

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27.459	3	9.153	6.982	.001
Within Groups	62.927	48	1.311		
Total	90.386	51			

Multiple Comparisons

Activities

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) Country	(J) Country	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Turkey	Latvia	-1.34571*	.43276	.016	-2.4975	-.1940
	Romania	-1.40370*	.41323	.007	-2.5035	-.3040
	Portugal	-2.17679*	.53002	.001	-3.5874	-.7662
Latvia	Turkey	1.34571*	.43276	.016	.1940	2.4975
	Romania	-.05799	.41323	.999	-1.1577	1.0418
	Portugal	-.83107	.53002	.406	-2.2417	.5795
Romania	Turkey	1.40370*	.41323	.007	.3040	2.5035
	Latvia	.05799	.41323	.999	-1.0418	1.1577
	Portugal	-.77308	.51420	.443	-2.1416	.5954
Portugal	Turkey	2.17679*	.53002	.001	.7662	3.5874
	Latvia	.83107	.53002	.406	-.5795	2.2417
	Romania	.77308	.51420	.443	-.5954	2.1416

*. The mean difference is significant at the 0.05 level.

Interaction

A one-way between subjects ANOVA was conducted to compare the countries in terms of interactions. There was a significant difference between Turkish preschools and those of Portuguese (F (3, 48) = 2.67, p = .05). The mean score of Portuguese preschools (M=6.77) was significantly higher than Turkish preschools (M= 4.65) meaning they were higher in quality than Turkish preschools in terms of this subscale.

Descriptives

Interaction

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Turkey	14	4.6500	2.11142	.56430	3.4309	5.8691	1.10	7.00
Latvia	14	5.0357	1.83873	.49142	3.9741	6.0974	2.50	7.00
Romania	17	5.4612	1.38404	.33568	4.7496	6.1728	3.00	7.24

Portugal	7	6.7714	.60474	.22857	6.2121	7.3307	5.40	7.00
Total	52	5.3046	1.75588	.24350	4.8158	5.7935	1.10	7.24

ANOVA

Interaction

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	22.489	3	7.496	2.670	.058
Within Groups	134.751	48	2.807		
Total	157.240	51			

Multiple Comparisons

Dependent Variable: Interaction

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) Country	(J) Country	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Turkey	Latvia	-.38571	.63328	.929	-2.0711	1.2997
	Romania	-.81118	.60470	.542	-2.4205	.7981
	Portugal	-2.12143*	.77561	.042	-4.1856	-.0573
Latvia	Turkey	.38571	.63328	.929	-1.2997	2.0711
	Romania	-.42546	.60470	.895	-2.0348	1.1839
	Portugal	-1.73571	.77561	.128	-3.7999	.3285
Romania	Turkey	.81118	.60470	.542	-.7981	2.4205
	Latvia	.42546	.60470	.895	-1.1839	2.0348
	Portugal	-1.31025	.75245	.314	-3.3128	.6923
Portugal	Turkey	2.12143*	.77561	.042	.0573	4.1856
	Latvia	1.73571	.77561	.128	-.3285	3.7999
	Romania	1.31025	.75245	.314	-.6923	3.3128

*. The mean difference is significant at the 0.05 level.

Program Structure

A one-way between subjects ANOVA was conducted to compare the countries in terms of program structure. There was a significant difference between Turkish preschools and those of Portuguese (F (3, 48) = 6.67, p = .001). The mean score of Portuguese preschools (M=6.32) was significantly higher than Turkish preschools (M= 3.10) meaning they were higher in quality than Turkish preschools in terms of this subscale.

Descriptives

Program Structure

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Turkey	14	3.1061	1.77904	.47547	2.0789	4.1333	1.13	7.00

Latvia	14	4.3321	1.41603	.37845	3.5146	5.1497	2.00	6.33
Romania	17	4.6230	1.69252	.41050	3.7528	5.4933	2.25	7.18
Portugal	7	6.3214	1.08605	.41049	5.3170	7.3259	4.33	7.00
Total	52	4.3649	1.82709	.25337	3.8563	4.8736	1.13	7.18

ANOVA

Program Structure

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	50.129	3	16.710	6.677	.001
Within Groups	120.122	48	2.503		
Total	170.251	51			

Multiple Comparisons

Dependent Variable: Program Structure

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) Country	(J) Country	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Turkey	Latvia	-1.22607	.59792	.184	-2.8174	.3652
	Romania	-1.51697	.57093	.051	-3.0364	.0025
	Portugal	-3.21536*	.73230	.000	-5.1643	-1.2664
Latvia	Turkey	1.22607	.59792	.184	-.3652	2.8174
	Romania	-.29090	.57093	.956	-1.8104	1.2286
	Portugal	-1.98929*	.73230	.044	-3.9382	-.0404
Romania	Turkey	1.51697	.57093	.051	-.0025	3.0364
	Latvia	.29090	.57093	.956	-1.2286	1.8104
	Portugal	-1.69839	.71043	.093	-3.5891	.1923
Portugal	Turkey	3.21536*	.73230	.000	1.2664	5.1643
	Latvia	1.98929*	.73230	.044	.0404	3.9382
	Romania	1.69839	.71043	.093	-.1923	3.5891

*. The mean difference is significant at the 0.05 level.

Parents and Staff

A one-way between subjects ANOVA was conducted to compare the countries in terms of provisions provided for parents and staff. No statistically significant difference found among the countries (F (3, 48) = 3.01, p = .039). But Turkish preschools received the lowest score (M=3.60), a score indicating minimally acceptable quality while the mean score of the Portuguese preschools fell in the good quality status. The mean score of Portuguese preschools (M=5.00) was significantly higher than Turkish preschools (M= 3.60) meaning they were higher in quality than Turkish preschools in terms of this subscale.

Descriptives

Parents and Staff

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	14	3.6075	1.41937	.37934	2.7880	4.4270	1.90	7.00
Latvia	14	4.5907	.90002	.24054	4.0711	5.1104	3.44	5.67
Romania	17	4.6233	1.22330	.29669	3.9944	5.2523	2.83	6.30
Portugal	7	5.0000	1.04465	.39484	4.0339	5.9661	3.67	7.00
Total	52	4.3918	1.25149	.17355	4.0433	4.7402	1.90	7.00

ANOVA

Parents and Staff

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.666	3	4.222	3.015	.039
Within Groups	67.212	48	1.400		
Total	79.878	51			

Multiple Comparisons

Parents and Staff

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Turkey	Latvia	-.98321	.44725	.138	-2.1735	.2071
	Romania	-1.01583	.42707	.095	-2.1524	.1207
	Portugal	-1.39250	.54777	.066	-2.8503	.0653
Latvia	Turkey	.98321	.44725	.138	-.2071	2.1735
	Romania	-.03262	.42707	1.000	-1.1692	1.1040
	Portugal	-.40929	.54777	.877	-1.8671	1.0485
Romania	Turkey	1.01583	.42707	.095	-.1207	2.1524
	Latvia	.03262	.42707	1.000	-1.1040	1.1692
	Portugal	-.37667	.53142	.893	-1.7910	1.0376
Portugal	Turkey	1.39250	.54777	.066	-.0653	2.8503
	Latvia	.40929	.54777	.877	-1.0485	1.8671
	Romania	.37667	.53142	.893	-1.0376	1.7910

PK2 Teacher Roles Observation Schedule

Interaction

A one-way between subjects ANOVA was conducted to compare the countries in terms of the nature of the interactions between teachers and children. There was statistically significant difference between Latvian and Portuguese teachers in regards to time spent without any interaction with children (F (2, 34) = 44.19, p = .01). The mean score of the Portuguese teachers (M=0.00) was significantly lower than Latvian teachers (M= 4.21) meaning Portuguese teachers were always interacting with children during the observation period.

A one-way between subjects ANOVA was conducted to compare the countries in terms of instructional instruction. There was statistically significant difference between Latvian teachers and Portuguese and Turkish teachers in regards to time spent engaging in instructional interaction with children (F (2, 34) = 33.04, p = .000). The mean score of the Latvian teachers (M=8.28) was significantly higher than Turkish teachers (M= 3.17) and Portuguese teachers (M=1.14).

A one-way between subjects ANOVA was conducted to compare the countries in terms of managerial interaction. There was statistically significant difference between Latvian teachers and Portuguese and Turkish teachers in regards to time spent engaging in interaction with children with classroom management purposes (F (2, 34) = 66.73, p = .000). The mean score of the Latvian teachers (M=6.92) was significantly higher than Turkish teachers (M= 0.07) and Portuguese teachers (M=0.00).

A one-way between subjects ANOVA was conducted to compare the countries in terms of social/personal interaction with children. There was statistically significant difference between Latvian teachers and Turkish teachers in regards to time spent engaging in social/personal interaction with children (F (2, 34) = 15.34, p = .000). The mean score of the Latvian teachers (M=6.50) was significantly higher than Turkish teachers (M= 1.17).

A one-way between subjects ANOVA was conducted to compare the countries in terms of collaborative adult interaction with children. There was statistically significant difference among all countries (F (2, 34) = 28.46, p = .000). The mean score of the Latvian teachers (M=8.14) was followed by Portuguese teachers (M=5.00) while Turkish teachers lagging behind with the lowest score (M= 1.50).

Descriptives

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
No Interaction	Turkey	14	2.000	2.4573	.6567	.581	3.419	.0	7.0
	Latvia	14	4.214	3.7862	1.0119	2.028	6.400	1.0	9.0
	Portugal	7	.000	.0000	.0000	.000	.000	.0	.0
	Total	35	2.486	3.2233	.5448	1.378	3.593	.0	9.0
Instructional Interaction	Turkey	14	3.179	2.8528	.7625	1.531	4.826	.0	10.0
	Latvia	14	8.286	1.4373	.3841	7.456	9.116	5.0	10.0
	Portugal	7	1.143	1.4639	.5533	-.211	2.497	.0	3.0
	Total	35	4.814	3.6220	.6122	3.570	6.058	.0	10.0
Managerial Interaction	Turkey	14	.071	.1816	.0485	-.033	.176	.0	.5
	Latvia	14	6.929	2.7023	.7222	5.368	8.489	1.0	10.0
	Portugal	7	.000	.0000	.0000	.000	.000	.0	.0
	Total	35	2.800	3.8083	.6437	1.492	4.108	.0	10.0

Social/Personal Interaction	Turkey	14	1.179	2.1178	.5660	-.044	2.401	.0	7.5
	Latvia	14	6.500	3.3684	.9002	4.555	8.445	1.0	10.0
	Portugal	7	3.857	.3780	.1429	3.508	4.207	3.0	4.0
	Total	35	3.843	3.4509	.5833	2.657	5.028	.0	10.0
Collaborative Interaction	Turkey	14	1.500	2.6312	.7032	-.019	3.019	.0	8.5
	Latvia	14	8.143	2.3487	.6277	6.787	9.499	1.0	10.0
	Portugal	7	5.000	1.4142	.5345	3.692	6.308	3.0	6.0
	Total	35	4.857	3.7682	.6369	3.563	6.152	.0	10.0

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
No Interaction	Between Groups	88.386	2	44.193	5.339	.010
	Within Groups	264.857	32	8.277		
	Total	353.243	34			
Instructional Interaction	Between Groups	300.525	2	150.263	33.043	.000
	Within Groups	145.518	32	4.547		
	Total	446.043	34			
Managerial Interaction	Between Groups	397.743	2	198.871	66.737	.000
	Within Groups	95.357	32	2.980		
	Total	493.100	34			
Social/Personal Interaction	Between Groups	198.225	2	99.113	15.347	.000
	Within Groups	206.661	32	6.458		
	Total	404.886	34			
Collaborative Interaction	Between Groups	309.071	2	154.536	28.467	.000
	Within Groups	173.714	32	5.429		
	Total	482.786	34			

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
No Interaction	Turkey	Latvia	-2.2143	1.0874	.120	-4.886	.458
		Portugal	2.0000	1.3318	.304	-1.273	5.273
	Latvia	Turkey	2.2143	1.0874	.120	-.458	4.886
		Portugal	4.2143*	1.3318	.009	.942	7.487
	Portugal	Turkey	-2.0000	1.3318	.304	-5.273	1.273
		Latvia	-4.2143*	1.3318	.009	-7.487	-.942
	Turkey	Latvia	-5.1071*	.8060	.000	-7.088	-3.127

Instructional Interaction		Portugal	2.0357	.9871	.114	-.390	4.461
	Latvia	Turkey	5.1071*	.8060	.000	3.127	7.088
		Portugal	7.1429*	.9871	.000	4.717	9.569
	Portugal	Turkey	-2.0357	.9871	.114	-4.461	.390
		Latvia	-7.1429*	.9871	.000	-9.569	-4.717
Managerial Interaction	Turkey	Latvia	-6.8571*	.6525	.000	-8.460	-5.254
		Portugal	.0714	.7991	.996	-1.892	2.035
	Latvia	Turkey	6.8571*	.6525	.000	5.254	8.460
		Portugal	6.9286*	.7991	.000	4.965	8.892
	Portugal	Turkey	-.0714	.7991	.996	-2.035	1.892
		Latvia	-6.9286*	.7991	.000	-8.892	-4.965
Social/Personal Interaction	Turkey	Latvia	-5.3214*	.9605	.000	-7.682	-2.961
		Portugal	-2.6786	1.1764	.074	-5.569	.212
	Latvia	Turkey	5.3214*	.9605	.000	2.961	7.682
		Portugal	2.6429	1.1764	.079	-.248	5.534
	Portugal	Turkey	2.6786	1.1764	.074	-.212	5.569
		Latvia	-2.6429	1.1764	.079	-5.534	.248
Collaborative Interaction	Turkey	Latvia	-6.6429*	.8806	.000	-8.807	-4.479
		Portugal	-3.5000*	1.0785	.008	-6.150	-.850
	Latvia	Turkey	6.6429*	.8806	.000	4.479	8.807
		Portugal	3.1429*	1.0785	.017	.492	5.793
	Portugal	Turkey	3.5000*	1.0785	.008	.850	6.150
		Latvia	-3.1429*	1.0785	.017	-5.793	-.492

*. The mean difference is significant at the 0.05 level.

Setting

A one-way between subjects ANOVA was conducted to compare the countries in terms of time spent in whole-class instruction. There was no statistically significant difference among the countries (F (2, 34) = 2.83, p = .07).

A one-way between subjects ANOVA was conducted to compare the countries in terms of time spent in small-group activities. There was statistically significant difference among all countries (F (2, 34) = 29.78, p = .000). The mean score of the Latvian teachers (M=7.35) was the highest that was followed by Portuguese teachers (M=4.28) while Turkish teachers receiving the lowest score (M= 0.78).

A one-way between subjects ANOVA was conducted to compare the countries in terms of time spent in individual activities. There was statistically significant difference among all countries (F (2, 34) = 32.41, p = .000). The mean score of the Latvian teachers (M=7.28) was the highest that was followed by Turkish teachers (M=0.14) while Portuguese teachers receiving the lowest score (M= 0.75), meaning in the majority of the time during the observation period, Latvian children were allowed to work individually.

Descriptives

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Whole class	Turkey	14	6.929	3.4854	.9315	4.916	8.941	1.0	10.0
	Latvia	14	8.429	2.0273	.5418	7.258	9.599	2.0	10.0
	Portugal	7	5.571	1.7182	.6494	3.982	7.161	4.0	8.0
	Total	35	7.257	2.8164	.4761	6.290	8.225	1.0	10.0
Small group	Turkey	14	.786	1.7510	.4680	-.225	1.797	.0	5.5
	Latvia	14	7.357	2.8718	.7675	5.699	9.015	1.0	10.0
	Portugal	7	4.286	1.6036	.6061	2.803	5.769	2.0	6.0
	Total	35	4.114	3.6983	.6251	2.844	5.385	.0	10.0
Dyads	Turkey	14	.000	.0000	.0000	.000	.000	.0	.0
	Latvia	14	5.357	3.5649	.9528	3.299	7.415	1.0	9.0
	Portugal	7	.000	.0000	.0000	.000	.000	.0	.0
	Total	35	2.143	3.4568	.5843	.955	3.330	.0	9.0
Individual	Turkey	14	.750	1.4511	.3878	-.088	1.588	.0	5.0
	Latvia	14	7.286	3.5176	.9401	5.255	9.317	1.0	10.0
	Portugal	7	.143	.3780	.1429	-.207	.492	.0	1.0
	Total	35	3.243	4.1023	.6934	1.834	4.652	.0	10.0
Traveling	Turkey	14	.000	.0000	.0000	.000	.000	.0	.0
	Latvia	14	2.714	3.7913	1.0133	.525	4.903	.0	8.0
	Portugal	7	.000	.0000	.0000	.000	.000	.0	.0
	Total	35	1.086	2.7048	.4572	.157	2.015	.0	8.0

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Whole class	Between Groups	40.614	2	20.307	2.837	.073
	Within Groups	229.071	32	7.158		
	Total	269.686	34			
Small group	Between Groups	302.543	2	151.271	29.789	.000
	Within Groups	162.500	32	5.078		
	Total	465.043	34			
Dyads	Between Groups	241.071	2	120.536	23.346	.000
	Within Groups	165.214	32	5.163		

	Total	406.286	34			
Individual	Between Groups	383.096	2	191.548	32.416	.000
	Within Groups	189.089	32	5.909		
	Total	572.186	34			
Traveling	Between Groups	61.886	2	30.943	5.299	.010
	Within Groups	186.857	32	5.839		
	Total	248.743	34			

Multiple Comparisons

Tukey HSD

			Mean			95% Confidence Interval	
Dependent Variable	(I) Country	(J) Country	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Whole class	Turkey	Latvia	-1.5000	1.0113	.312	-3.985	.985
		Portugal	1.3571	1.2385	.524	-1.686	4.401
	Latvia	Turkey	1.5000	1.0113	.312	-.985	3.985
		Portugal	2.8571	1.2385	.069	-.186	5.901
	Portugal	Turkey	-1.3571	1.2385	.524	-4.401	1.686
		Latvia	-2.8571	1.2385	.069	-5.901	.186
Small group	Turkey	Latvia	-6.5714*	.8517	.000	-8.664	-4.478
		Portugal	-3.5000*	1.0432	.006	-6.063	-.937
	Latvia	Turkey	6.5714*	.8517	.000	4.478	8.664
		Portugal	3.0714*	1.0432	.016	.508	5.635
	Portugal	Turkey	3.5000*	1.0432	.006	.937	6.063
		Latvia	-3.0714*	1.0432	.016	-5.635	-.508
Dyads	Turkey	Latvia	-5.3571*	.8588	.000	-7.468	-3.247
		Portugal	.0000	1.0518	1.000	-2.585	2.585
	Latvia	Turkey	5.3571*	.8588	.000	3.247	7.468
		Portugal	5.3571*	1.0518	.000	2.772	7.942
	Portugal	Turkey	.0000	1.0518	1.000	-2.585	2.585
		Latvia	-5.3571*	1.0518	.000	-7.942	-2.772
Individual	Turkey	Latvia	-6.5357*	.9188	.000	-8.793	-4.278
		Portugal	.6071	1.1253	.852	-2.158	3.372
	Latvia	Turkey	6.5357*	.9188	.000	4.278	8.793
		Portugal	7.1429*	1.1253	.000	4.378	9.908
	Portugal	Turkey	-.6071	1.1253	.852	-3.372	2.158
		Latvia	-7.1429*	1.1253	.000	-9.908	-4.378
Traveling	Turkey	Latvia	-2.7143*	.9133	.015	-4.959	-.470
		Portugal	.0000	1.1186	1.000	-2.749	2.749
	Latvia	Turkey	2.7143*	.9133	.015	.470	4.959
		Portugal	2.7143	1.1186	.054	-.035	5.463

Portugal	Turkey	.0000	1.1186	1.000	-2.749	2.749
	Latvia	-2.7143	1.1186	.054	-5.463	.035

*. The mean difference is significant at the 0.05 level.

Instructional Orientation

A one-way between subjects ANOVA was conducted to compare the countries in terms of time teachers spent in direct instruction. There was statistically significant difference between Lavian teachers and the others (F (2, 34) = 13.79, p = .000). The mean score of the Latvian teachers (M=5.50) was the highest that was followed by Turkish teachers (M=1.07). Portuguese teachers did not use direct instruction during the time period they were observed (M= 0.00).

A one-way between subjects ANOVA was conducted to compare the countries in terms of time spent in seat work. There was statistically significant difference between Latvian teachers and Portuguese and Turkish teachers in regards to time spent in activities that required children to work in their seats (F (2, 34) = 8.87, p = .001). The mean score of the Latvian teachers (M=6.14) was significantly higher than Turkish teachers (M= 2.57) and Portuguese teachers (M=0.85).

A one-way between subjects ANOVA was conducted to compare the countries in terms of time spent in learner-centered activities. There was statistically significant difference between Turkish teachers and Portuguese and Latvian teachers (F (2, 34) = 16.06, p = .000). The mean score of the Turkish teachers (M= 2.10) was significantly lower than that of the Latvian teachers (M=6.64) and Portuguese teachers (M=9.14).

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Direct instruction	Turkey	14	1.071	1.7081	.4565	.085	2.058	.0	5.0
	Latvia	14	5.500	3.8381	1.0258	3.284	7.716	1.0	10.0
	Portugal	7	.000	.0000	.0000	.000	.000	.0	.0
	Total	35	2.629	3.5446	.5991	1.411	3.846	.0	10.0
Seatwork	Turkey	14	2.571	3.2573	.8705	.691	4.452	.0	10.0
	Latvia	14	6.143	3.2071	.8571	4.291	7.995	1.0	10.0
	Portugal	7	.857	1.4639	.5533	-.497	2.211	.0	3.0
	Total	35	3.657	3.6071	.6097	2.418	4.896	.0	10.0
Learner centered	Turkey	14	2.107	2.9883	.7987	.382	3.833	.0	9.0
	Latvia	14	6.643	3.2959	.8809	4.740	8.546	1.0	10.0
	Portugal	7	9.143	1.4639	.5533	7.789	10.497	7.0	10.0
	Total	35	5.329	3.9907	.6746	3.958	6.699	.0	10.0

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Direct instruction	Between Groups	197.743	2	98.871	13.790	.000
	Within Groups	229.429	32	7.170		
	Total	427.171	34			
Seatwork	Between Groups	157.886	2	78.943	8.879	.001
	Within Groups	284.500	32	8.891		
	Total	442.386	34			
Learner centered	Between Groups	271.311	2	135.655	16.068	.000
	Within Groups	270.161	32	8.443		
	Total	541.471	34			

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Direct instruction	Turkey	Latvia	-4.4286*	1.0120	.000	-6.916	-1.942
		Portugal	1.0714	1.2395	.666	-1.974	4.117
	Latvia	Turkey	4.4286*	1.0120	.000	1.942	6.916
		Portugal	5.5000*	1.2395	.000	2.454	8.546
	Portugal	Turkey	-1.0714	1.2395	.666	-4.117	1.974
		Latvia	-5.5000*	1.2395	.000	-8.546	-2.454
Seatwork	Turkey	Latvia	-3.5714*	1.1270	.009	-6.341	-.802
		Portugal	1.7143	1.3803	.438	-1.678	5.106
	Latvia	Turkey	3.5714*	1.1270	.009	.802	6.341
		Portugal	5.2857*	1.3803	.002	1.894	8.678
	Portugal	Turkey	-1.7143	1.3803	.438	-5.106	1.678
		Latvia	-5.2857*	1.3803	.002	-8.678	-1.894
Learner centered	Turkey	Latvia	-4.5357*	1.0982	.001	-7.234	-1.837
		Portugal	-7.0357*	1.3450	.000	-10.341	-3.730
	Latvia	Turkey	4.5357*	1.0982	.001	1.837	7.234
		Portugal	-2.5000	1.3450	.167	-5.805	.805
	Portugal	Turkey	7.0357*	1.3450	.000	3.730	10.341
		Latvia	2.5000	1.3450	.167	-.805	5.805

*. The mean difference is significant at the 0.05 level.

Instructional Practices

A one-way between subjects ANOVA was conducted to compare the countries in terms of time allocation for students to engage in play and projects. There was a statistically significant difference between Latvian teachers and Portuguese and Turkish teachers in terms of this item (F (2, 34) = 34.03, p = .000). The mean

score of the Latvian teachers (M=8.21) was significantly higher than Turkish teachers (M= 2.50) and Portuguese teachers (M=1.85).

A one-way between subjects ANOVA was conducted to compare the countries in terms of facilitating opportunities for students to play with and learn from each other. There was a statistically significant difference between Latvian teachers and Portuguese and Turkish teachers in terms of this item (F (2, 34) = 47.85, p = .000). The mean score of the Latvian teachers (M=7.71) was significantly higher than Turkish teachers (M= 1.07) and Portuguese teachers (M=2.42).

A one-way between subjects ANOVA was conducted to compare the countries in terms of interacting with students during their play, while avoiding interference. There was a statistically significant difference between Latvian teachers and Portuguese and Turkish teachers in terms of this item (F (2, 34) = 28.18, p = .000). The mean score of the Latvian teachers (M=7.42) was significantly higher than Turkish teachers (M= 1.28) and Portuguese teachers (M=1.00).

A one-way between subjects ANOVA was conducted to compare the countries in terms of teachers' talks with students about ideas related to their play. There was a statistically significant difference between Latvian teachers and Portuguese and Turkish teachers in terms of this item (F (2, 34) = 41.52, p = .000). The mean score of the Latvian teachers (M=7.21) was significantly higher than Turkish teachers (M= 1.17) and Portuguese teachers (M=2.00).

A one-way between subjects ANOVA was conducted to compare the countries in terms of teachers' observing and documenting students play to assess progress. There was a statistically significant difference between Latvian teachers and Portuguese and Turkish teachers in terms of this item (F (2, 34) = 90.60, p = .000). The mean score of the Latvian teachers (M=7.14) was significantly higher than Turkish teachers (M= 0.00) and Portuguese teachers (M=0.71).

A one-way between subjects ANOVA was conducted to compare the countries in terms of teachers' providing opportunities for students to sing, listen to, and/or move to music. There was a statistically significant difference between Latvian and Turkish teachers in terms of this item (F (2, 34) = 6.49, p = .004). The mean score of the Latvian teachers (M=4.64) was significantly higher than Turkish teachers (M= 0.82).

Descriptives

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
plenty of time for play and projects	Turkey	14	2.500	3.1194	.8337	.699	4.301	.0	9.5
	Latvia	14	8.214	.9750	.2606	7.651	8.777	7.0	10.0
	Portugal	7	1.857	.3780	.1429	1.508	2.207	1.0	2.0
	Total	35	4.657	3.5846	.6059	3.426	5.889	.0	10.0
oportunities to play with peers	Turkey	14	1.071	1.9201	.5132	-.037	2.180	.0	5.5
	Latvia	14	7.714	2.1278	.5687	6.486	8.943	1.0	9.0
	Portugal	7	2.429	.7868	.2974	1.701	3.156	1.0	3.0
	Total	35	4.000	3.6015	.6088	2.763	5.237	.0	9.0
interact with children during play	Turkey	14	1.286	3.0929	.8266	-.500	3.071	.0	9.5
	Latvia	14	7.429	2.0649	.5519	6.236	8.621	1.0	9.0
	Portugal	7	1.000	1.0000	.3780	.075	1.925	.0	3.0

	Total	35	3.686	3.8845	.6566	2.351	5.020	.0	9.5
talk about play ideas	Turkey	14	1.179	2.0058	.5361	.020	2.337	.0	7.5
	Latvia	14	7.214	1.8472	.4937	6.148	8.281	3.0	9.0
	Portugal	7	2.000	1.4142	.5345	.692	3.308	1.0	4.0
	Total	35	3.757	3.3898	.5730	2.593	4.922	.0	9.0
observe play for assessment	Turkey	14	.000	.0000	.0000	.000	.000	.0	.0
	Latvia	14	7.143	2.3157	.6189	5.806	8.480	1.0	9.0
	Portugal	7	.714	.4880	.1844	.263	1.166	.0	1.0
	Total	35	3.000	3.7338	.6311	1.717	4.283	.0	9.0
opportunities for music and dance	Turkey	14	.821	1.0850	.2900	.195	1.448	.0	3.0
	Latvia	14	4.643	4.3959	1.1749	2.105	7.181	.0	10.0
	Portugal	7	1.571	.7868	.2974	.844	2.299	.0	2.0
	Total	35	2.500	3.3431	.5651	1.352	3.648	.0	10.0

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
plenty of time for play	Between Groups	297.171	2	148.586	34.032	.000
	Within Groups	139.714	32	4.366		
	Total	436.886	34			
opportunities to play with peers	Between Groups	330.500	2	165.250	47.855	.000
	Within Groups	110.500	32	3.453		
	Total	441.000	34			
interact with children during play	Between Groups	327.257	2	163.629	28.184	.000
	Within Groups	185.786	32	5.806		
	Total	513.043	34			
talk about play ideas	Between Groups	282.025	2	141.013	41.527	.000
	Within Groups	108.661	32	3.396		
	Total	390.686	34			
observe play for assessment	Between Groups	402.857	2	201.429	90.602	.000
	Within Groups	71.143	32	2.223		
	Total	474.000	34			
opportunities for music and dance	Between Groups	109.768	2	54.884	6.499	.004
	Within Groups	270.232	32	8.445		
	Total	380.000	34			

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
plenty of time for play	Turkey	Latvia	-5.7143*	.7898	.000	-7.655	-3.774
		Portugal	.6429	.9673	.785	-1.734	3.020
	Latvia	Turkey	5.7143*	.7898	.000	3.774	7.655
		Portugal	6.3571*	.9673	.000	3.980	8.734
	Portugal	Turkey	-.6429	.9673	.785	-3.020	1.734
		Latvia	-6.3571*	.9673	.000	-8.734	-3.980
opportunities to play with peers	Turkey	Latvia	-6.6429*	.7024	.000	-8.369	-4.917
		Portugal	-1.3571	.8602	.270	-3.471	.757
	Latvia	Turkey	6.6429*	.7024	.000	4.917	8.369
		Portugal	5.2857*	.8602	.000	3.172	7.400
	Portugal	Turkey	1.3571	.8602	.270	-.757	3.471
		Latvia	-5.2857*	.8602	.000	-7.400	-3.172
interact with children during play	Turkey	Latvia	-6.1429*	.9107	.000	-8.381	-3.905
		Portugal	.2857	1.1154	.965	-2.455	3.027
	Latvia	Turkey	6.1429*	.9107	.000	3.905	8.381
		Portugal	6.4286*	1.1154	.000	3.688	9.170
	Portugal	Turkey	-.2857	1.1154	.965	-3.027	2.455
		Latvia	-6.4286*	1.1154	.000	-9.170	-3.688
talk about play ideas	Turkey	Latvia	-6.0357*	.6965	.000	-7.747	-4.324
		Portugal	-.8214	.8530	.605	-2.918	1.275
	Latvia	Turkey	6.0357*	.6965	.000	4.324	7.747
		Portugal	5.2143*	.8530	.000	3.118	7.310
	Portugal	Turkey	.8214	.8530	.605	-1.275	2.918
		Latvia	-5.2143*	.8530	.000	-7.310	-3.118
observe play for assessment	Turkey	Latvia	-7.1429*	.5636	.000	-8.528	-5.758
		Portugal	-.7143	.6902	.561	-2.410	.982
	Latvia	Turkey	7.1429*	.5636	.000	5.758	8.528
		Portugal	6.4286*	.6902	.000	4.732	8.125
	Portugal	Turkey	.7143	.6902	.561	-.982	2.410
		Latvia	-6.4286*	.6902	.000	-8.125	-4.732
opportunities for music and dance	Turkey	Latvia	-3.8214*	1.0984	.004	-6.521	-1.122
		Portugal	-.7500	1.3452	.843	-4.056	2.556

	Latvia	Turkey	3.8214*	1.0984	.004	1.122	6.521
		Portugal	3.0714	1.3452	.073	-.234	6.377
	Portugal	Turkey	.7500	1.3452	.843	-2.556	4.056
		Latvia	-3.0714	1.3452	.073	-6.377	.234

*. The mean difference is significant at the 0.05 level.

A one-way between subjects ANOVA was conducted to compare the countries in terms of teachers' use of technology for educational purposes. There was a statistically significant difference between Latvian teachers and Turkish and Portuguese teachers in terms of this item (F (2, 34) = 3.91, p = .03). The mean score of the Latvian teachers (M=13.42) was significantly higher than that of Turkish (M= 2.39) and Portuguese teachers (M=0.57).

Descriptives

TechnologyUse

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	14	2.3929	3.22954	.86313	.5282	4.2575	.00	8.50
Latvia	14	13.4286	18.73998	5.00847	2.6084	24.2487	.00	40.00
Portugal	7	.5714	1.51186	.57143	-.8268	1.9697	.00	4.00
Total	35	6.4429	13.13828	2.22077	1.9297	10.9560	.00	40.00

ANOVA

TechnologyUse

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1154.154	2	577.077	3.917	.030
Within Groups	4714.732	32	147.335		
Total	5868.886	34			

Multiple Comparisons

Dependent Variable: TechnologyUse

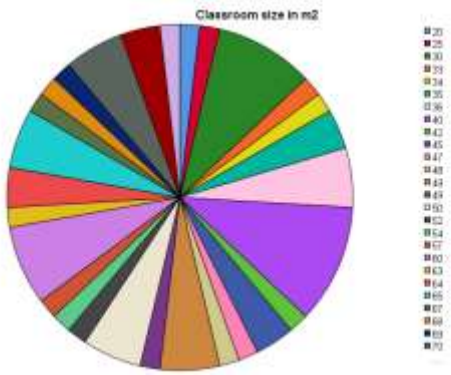
Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Turkey	Latvia	-11.03571	4.58780	.056	-22.3096	.2382
	Portugal	1.82143	5.61888	.944	-11.9863	15.6291
Latvia	Turkey	11.03571	4.58780	.056	-.2382	22.3096
	Portugal	12.85714	5.61888	.072	-.9505	26.6648
Portugal	Turkey	-1.82143	5.61888	.944	-15.6291	11.9863
	Latvia	-12.85714	5.61888	.072	-26.6648	.9505

Primary Schools

Demographics

Size of the classrooms. The size of the classrooms indicated a large variation as shown in the chart below.

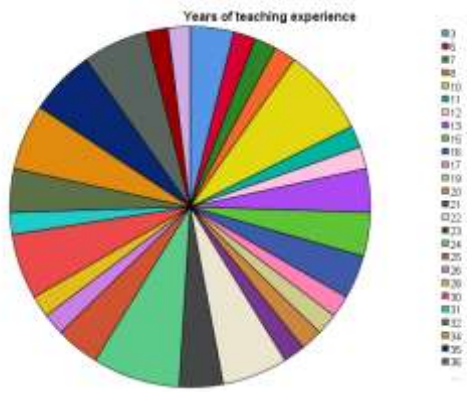


Sex of the teachers observed. The majority of the teachers observed were female.

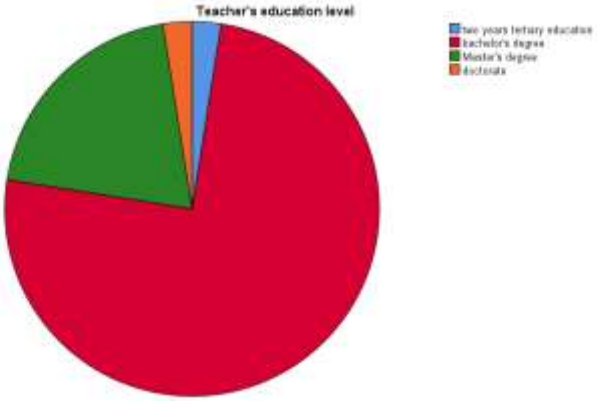
Gender of the teachers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	37	68,5	92,5	92,5
	Male	3	5,6	7,5	100,0
	Total	40	74,1	100,0	
Missing	System	14	25,9		
Total		54	100,0		

Teaching experience. Years of experience the participating teachers had varied widely as shown in the chart below.



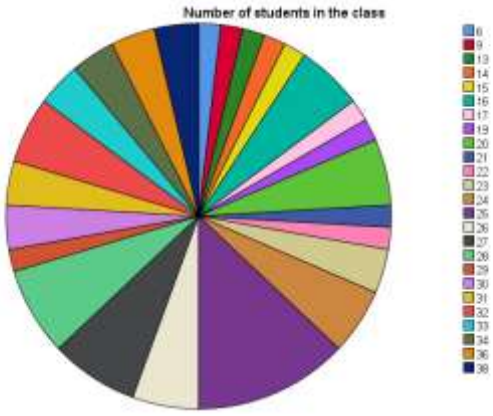
Teachers' level of education. Education levels of the teachers observed is shown in the chart below:



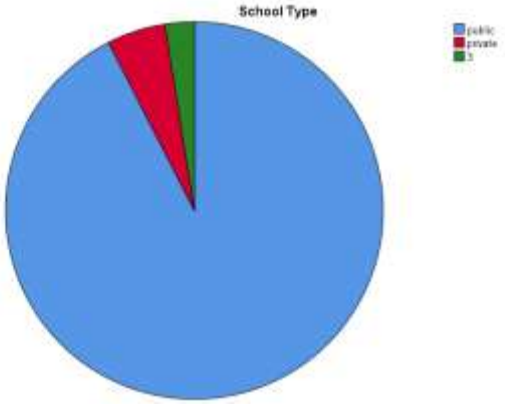
Teacher's education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	two years tertiary education	1	1,9	2,5	2,5
	bachelor's degree	30	55,6	75,0	77,5
	Master's degree	8	14,8	20,0	97,5
	doctorate	1	1,9	2,5	100,0
	Total	40	74,1	100,0	
Missing	System	14	25,9		
Total		54	100,0		

Class size. Number of students enrolled in the classrooms observed showed a great variation.



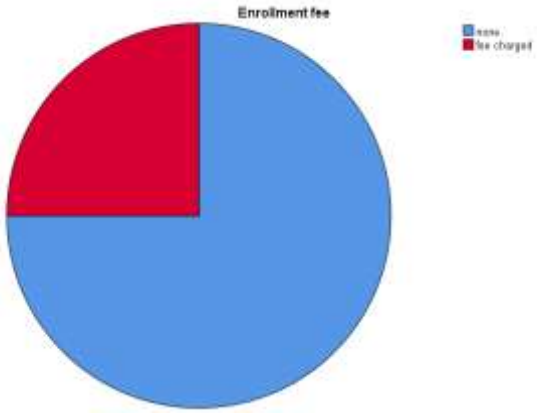
School type. The majority of the classrooms observed were operated in a public school.



School Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	public	37	68,5	92,5	92,5
	private	2	3,7	5,0	97,5
	3	1	1,9	2,5	100,0
	Total	40	74,1	100,0	
Missing	System	14	25,9		
Total		54	100,0		

Enrollment fee. One third of the schools observed charged an enrollment fee.

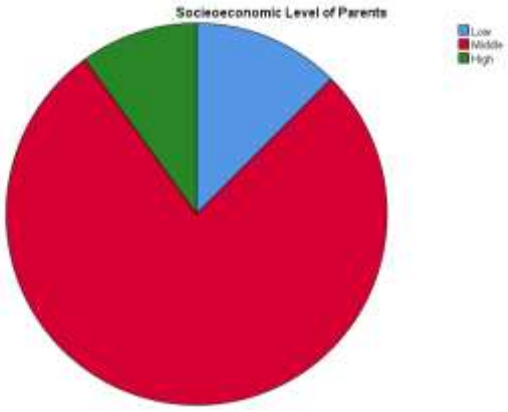


Enrollment fee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	none	30	55,6	75,0	75,0
	fee charged	10	18,5	25,0	100,0

	Total	40	74,1	100,0	
Missing	System	14	25,9		
Total		54	100,0		

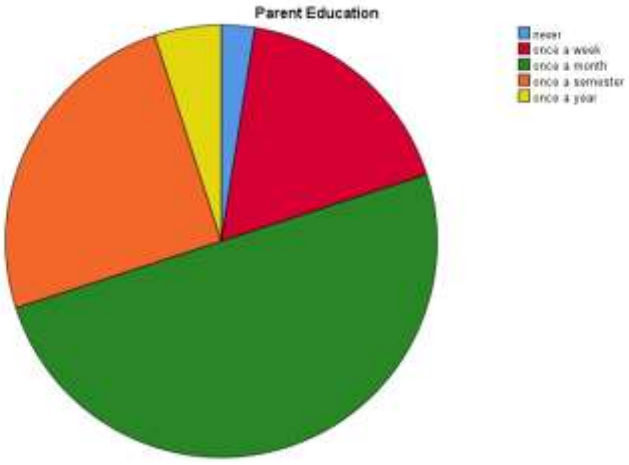
SES of the population served. The schools taken part in the study mostly served middle class families.



Socieoeconomic Level of Parents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	5	9,3	12,5	12,5
	Middle	31	57,4	77,5	90,0
	High	4	7,4	10,0	100,0
	Total	40	74,1	100,0	
Missing	System	14	25,9		
Total		54	100,0		

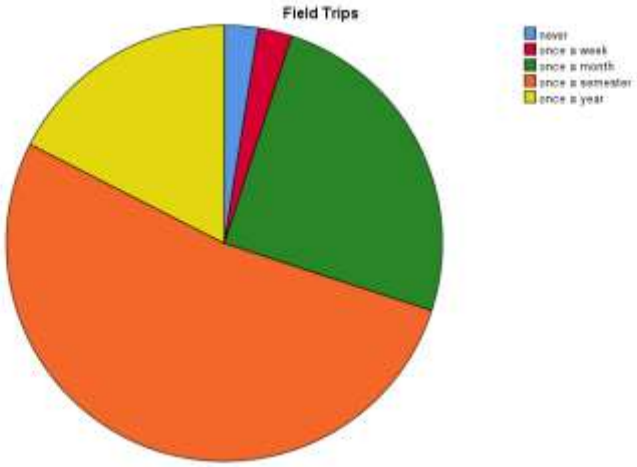
Parent education. Parent education programs mostly took place once a month.



Parent Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	1	1,9	2,5	2,5
	once a week	7	13,0	17,5	20,0
	once a month	20	37,0	50,0	70,0
	once a semester	10	18,5	25,0	95,0
	once a year	2	3,7	5,0	100,0
	Total	40	74,1	100,0	
Missing	System	14	25,9		
Total		54	100,0		

Field trips. In half of the schools, field trips were taken place once a semester.



Field Trips

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	1	1,9	2,5	2,5
	once a week	1	1,9	2,5	5,0
	once a month	10	18,5	25,0	30,0
	once a semester	21	38,9	52,5	82,5
	once a year	7	13,0	17,5	100,0
	Total	40	74,1	100,0	
Missing	System	14	25,9		
Total		54	100,0		

Cross-country comparisons of primary school classrooms in terms of Marzano scores

I. Routine Strategies

a) **DQ1. Communicating Learning Goals and Feedback.** A one-way between subjects ANOVA was conducted to compare the countries in terms of Communicating Learning Goals and Feedback subscale. There was no significant difference among the countries.

DQ1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	14	7,8571	1,35062	,36097	7,0773	8,6370	5,00	9,00
Latvia	14	8,4286	1,39859	,37379	7,6211	9,2361	7,00	11,00
Romania	19	9,1053	1,99707	,45816	8,1427	10,0678	5,00	12,00
Portugal	7	8,8571	1,77281	,67006	7,2176	10,4967	6,00	12,00
Total	54	8,5741	1,70019	,23137	8,1100	9,0381	5,00	12,00

b) **DQ6. Establishing and Maintaining Rules and Procedures**

A one-way between subjects ANOVA was conducted to compare the countries in terms of Establishing and Maintaining Rules and Procedures. There was a significant difference between Turkey and Latvia and Turkey and Romania (F (3, 50) = 5.90, p = .002). Post hoc analyses indicated that the mean scores of Turkish teachers (4.78) was significantly lower than that of Latvian (M=6.50) and Romanian teachers (M=6.10).

Descriptives

DQ6

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	14	4,7857	,89258	,23855	4,2704	5,3011	3,00	6,00
Latvia	14	6,5000	1,09193	,29183	5,8695	7,1305	5,00	8,00
Romania	19	6,1053	1,24252	,28505	5,5064	6,7041	3,00	8,00
Portugal	7	5,7143	1,38013	,52164	4,4379	6,9907	4,00	8,00
Total	54	5,8148	1,28964	,17550	5,4628	6,1668	3,00	8,00

ANOVA

DQ6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23,073	3	7,691	5,909	,002
Within Groups	65,075	50	1,302		
Total	88,148	53			

Multiple Comparisons

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Turkey	Latvia	-1,71429*	,43119	,001	-2,8602	-,5683
	Romania	-1,31955*	,40183	,010	-2,3874	-,2517
	Portugal	-,92857	,52810	,305	-2,3321	,4749
Latvia	Turkey	1,71429*	,43119	,001	,5683	2,8602
	Romania	,39474	,40183	,760	-,6732	1,4626
	Portugal	,78571	,52810	,452	-,6178	2,1892
Romania	Turkey	1,31955*	,40183	,010	,2517	2,3874
	Latvia	-,39474	,40183	,760	-1,4626	,6732
	Portugal	,39098	,50441	,865	-,9495	1,7315
Portugal	Turkey	,92857	,52810	,305	-,4749	2,3321
	Latvia	-,78571	,52810	,452	-2,1892	,6178
	Romania	-,39098	,50441	,865	-1,7315	,9495

*. The mean difference is significant at the 0.05 level.

II. Content Strategies

c) DQ2. Helping Students Interact with New Knowledge.

A one-way between subjects ANOVA was conducted to compare the countries in terms of Helping Students Interact with New Knowledge. There was a significant difference between Turkish and Romanian classrooms (F (3, 50) = 4.27, p = .009). Post hoc analyses indicated that the mean scores of Romanian teachers (24.73) were significantly higher than Turkish teachers (M=19.50).

DQ2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Turkey	14	19,5000	4,18330	1,11803	17,0846	21,9154	11,00	24,00
Latvia	14	23,5714	4,56937	1,22121	20,9332	26,2097	14,00	30,00
Romania	19	24,7368	3,50939	,80511	23,0454	26,4283	18,00	30,00
Portugal	7	22,0000	5,77350	2,18218	16,6604	27,3396	16,00	32,00
Total	54	22,7222	4,67194	,63577	21,4470	23,9974	11,00	32,00

ANOVA

DQ2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	236,221	3	78,740	4,277	,009

Within Groups	920,613	50	18,412		
Total	1156,833	53			

Multiple Comparisons

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Turkey	Latvia	-4,07143	1,62183	,070	-8,3816	,2387
	Romania	-5,23684*	1,51137	,006	-9,2534	-1,2203
	Portugal	-2,50000	1,98632	,593	-7,7788	2,7788
Latvia	Turkey	4,07143	1,62183	,070	-,2387	8,3816
	Romania	-1,16541	1,51137	,867	-5,1820	2,8512
	Portugal	1,57143	1,98632	,858	-3,7074	6,8503
Romania	Turkey	5,23684*	1,51137	,006	1,2203	9,2534
	Latvia	1,16541	1,51137	,867	-2,8512	5,1820
	Portugal	2,73684	1,89721	,479	-2,3051	7,7788
Portugal	Turkey	2,50000	1,98632	,593	-2,7788	7,7788
	Latvia	-1,57143	1,98632	,858	-6,8503	3,7074
	Romania	-2,73684	1,89721	,479	-7,7788	2,3051

*. The mean difference is significant at the 0.05 level.

d) DQ3: Helping Students Practice and Deepen New Knowledge.

A one-way between subjects ANOVA was conducted to compare the countries in terms of Helping Students Practice and Deepen New Knowledge. There was a significant difference between Turkish and Romanian classrooms (F (3, 50) = 5.37, p = .003). Post hoc analyses indicated that the mean scores of Romanian teachers (18.94) were significantly higher than Turkish teachers (M=14.42).

Descriptives

DQ3

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Turkey	14	14,4286	2,50275	,66889	12,9835	15,8736	11,00	18,00
Latvia	14	16,3571	3,85521	1,03035	14,1312	18,5831	11,00	22,00
Romania	19	18,9474	2,85723	,65549	17,5702	20,3245	14,00	24,00
Portugal	7	16,8571	4,14039	1,56492	13,0279	20,6864	12,00	24,00
Total	54	16,8333	3,61731	,49225	15,8460	17,8207	11,00	24,00

ANOVA

DQ3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	169,053	3	56,351	5,372	,003
Within Groups	524,447	50	10,489		
Total	693,500	53			

Multiple Comparisons

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Turkey	Latvia	-1,92857	1,22410	,402	-5,1817	1,3246
	Romania	-4,51880*	1,14073	,001	-7,5504	-1,4872
	Portugal	-2,42857	1,49921	,377	-6,4129	1,5557
Latvia	Turkey	1,92857	1,22410	,402	-1,3246	5,1817
	Romania	-2,59023	1,14073	,119	-5,6218	,4414
	Portugal	-,50000	1,49921	,987	-4,4843	3,4843
Romania	Turkey	4,51880*	1,14073	,001	1,4872	7,5504
	Latvia	2,59023	1,14073	,119	-,4414	5,6218
	Portugal	2,09023	1,43195	,469	-1,7153	5,8957
Portugal	Turkey	2,42857	1,49921	,377	-1,5557	6,4129
	Latvia	,50000	1,49921	,987	-3,4843	4,4843
	Romania	-2,09023	1,43195	,469	-5,8957	1,7153

*. The mean difference is significant at the 0.05 level.

e) DQ4: Helping Students Generate and Test Hypotheses

A one-way between subjects ANOVA was conducted to compare the countries in terms of Helping Students Generate and Test Hypotheses subscale scores. There was a significant difference between Turkish and Romanian teachers (F (3, 50) = 3.70, p = .017). Post hoc analyses indicated that the mean scores of Romanian teachers (8.10) were significantly higher than Turkish teachers (M=5.92).

Descriptives

DQ4

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Turkey	14	5,9286	1,68543	,45045	4,9554	6,9017	3,00	9,00
Latvia	14	7,3571	2,59013	,69224	5,8616	8,8526	4,00	11,00
Romania	19	8,1053	2,05196	,47075	7,1163	9,0943	4,00	11,00
Portugal	7	8,2857	,75593	,28571	7,5866	8,9848	8,00	10,00

Total	54	7,3704	2,16574	,29472	6,7792	7,9615	3,00	11,00

ANOVA

DQ4

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	45,232	3	15,077	3,707	,017
Within Groups	203,361	50	4,067		
Total	248,593	53			

Multiple Comparisons

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Turkey	Latvia	-1,42857	,76225	,252	-3,4543	,5972
	Romania	-2,17669*	,71034	,018	-4,0645	-,2889
	Portugal	-2,35714	,93357	,068	-4,8382	,1239
Latvia	Turkey	1,42857	,76225	,252	-,5972	3,4543
	Romania	-,74812	,71034	,719	-2,6359	1,1397
	Portugal	-,92857	,93357	,753	-3,4096	1,5525
Romania	Turkey	2,17669*	,71034	,018	,2889	4,0645
	Latvia	,74812	,71034	,719	-1,1397	2,6359
	Portugal	-,18045	,89168	,997	-2,5502	2,1893
Portugal	Turkey	2,35714	,93357	,068	-,1239	4,8382
	Latvia	,92857	,93357	,753	-1,5525	3,4096
	Romania	,18045	,89168	,997	-2,1893	2,5502

*. The mean difference is significant at the 0.05 level.

III. Strategies Enacted on the Spot

f) DQ5: Engaging Students

A one-way between subjects ANOVA was conducted to compare the countries in terms of Engaging Students subscale scores. There was a significant difference between Turkish and Romanian teachers and Turkish and Latvian teachers (F (2, 44) = 33.72, p = .000). Post hoc analyses indicated that the mean scores of Romanian teachers (26.52) and that of Latvian teachers (M=28.42) were significantly higher than Turkish teachers (M=15.07).

Descriptives

DQ5

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Turkey	14	15,0714	4,41090	1,17886	12,5247	17,6182	9,00	24,00

Latvia	14	28,4286	4,55250	1,21671	25,8000	31,0571	19,00	34,00
Romania	19	26,5263	5,05930	1,16068	24,0878	28,9648	16,00	35,00
Total	47	23,6809	7,35765	1,07322	21,5206	25,8411	9,00	35,00

ANOVA

DQ5

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1507,119	2	753,559	33,727	,000
Within Groups	983,094	44	22,343		
Total	2490,213	46			

Multiple Comparisons

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) Country	(J) Country	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Turkey	Latvia	-13,35714*	1,78658	,000	-17,6905	-9,0238
	Romania	-11,45489*	1,66490	,000	-15,4931	-7,4167
Latvia	Turkey	13,35714*	1,78658	,000	9,0238	17,6905
	Romania	1,90226	1,66490	,493	-2,1359	5,9404
Romania	Turkey	11,45489*	1,66490	,000	7,4167	15,4931
	Latvia	-1,90226	1,66490	,493	-5,9404	2,1359

*. The mean difference is significant at the 0.05 level.

g) DQ7: Recognizing Adherence to Rules and Procedures

A one-way between subjects ANOVA was conducted to compare the countries in terms of Recognizing Adherence to Rules and Procedures subscale scores. There was no significant difference among the countries. But Latvian teachers scored the highest in terms of this subscale.

Descriptives

DQ7

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Turkey	14	7,7143	1,32599	,35438	6,9487	8,4799	5,00	9,00
Latvia	14	9,5000	2,02864	,54218	8,3287	10,6713	4,00	12,00
Romania	19	7,9474	2,59216	,59468	6,6980	9,1967	3,00	12,00
Total	47	8,3404	2,20943	,32228	7,6917	8,9891	3,00	12,00

ANOVA

DQ7

	Sum of Squares	df	Mean Square	F	Sig.

Between Groups	27,249	2	13,624	3,038	,058
Within Groups	197,305	44	4,484		
Total	224,553	46			

Multiple Comparisons

Tukey HSD

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Turkey	Latvia	-1,78571	,80037	,077	-3,7270	,1556
	Romania	-,23308	,74586	,948	-2,0422	1,5760
Latvia	Turkey	1,78571	,80037	,077	-,1556	3,7270
	Romania	1,55263	,74586	,105	-,2564	3,3617
Romania	Turkey	,23308	,74586	,948	-1,5760	2,0422
	Latvia	-1,55263	,74586	,105	-3,3617	,2564

h) DQ8: Establishing and Maintaining Effective Relationships with Students

A one-way between subjects ANOVA was conducted to compare the countries in terms of Establishing and Maintaining Effective Relationships with Students subscale scores. There was a significant difference between Turkish and Latvian teachers (F (2, 44) = 4.30, p = .02). Post hoc analyses indicated that the mean scores of Latvian teachers (9.21) was significantly higher than Turkish teachers (M=7.00).

Descriptives

DQ8

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Turkey	14	7,0000	1,66410	,44475	6,0392	7,9608	4,00	9,00
Latvia	14	9,2143	2,35922	,63053	7,8521	10,5765	4,00	12,00
Romania	19	8,4737	2,03766	,46747	7,4916	9,4558	5,00	12,00
Total	47	8,2553	2,18162	,31822	7,6148	8,8959	4,00	12,00

ANOVA

DQ8

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	35,842	2	17,921	4,307	,020
Within Groups	183,094	44	4,161		
Total	218,936	46			

Multiple Comparisons

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) Country	(J) Country	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Turkey	Latvia	-2,21429*	,77101	,017	-4,0844	-,3442
	Romania	-1,47368	,71850	,112	-3,2164	,2690
Latvia	Turkey	2,21429*	,77101	,017	,3442	4,0844
	Romania	,74060	,71850	,562	-1,0021	2,4833
Romania	Turkey	1,47368	,71850	,112	-,2690	3,2164
	Latvia	-,74060	,71850	,562	-2,4833	1,0021

*. The mean difference is significant at the 0.05 level.

i) DQ9: Communicating High Expectations for All Students

A one-way between subjects ANOVA was conducted to compare the countries in terms of Communicating High Expectations for All Students subscale scores. There was a significant difference between Turkish and Latvian teachers (F (2, 44) = 5.59, p = .07). Post hoc analyses indicated that the mean scores of Latvian teachers (9.57) was significantly higher than Turkish teachers (M=6.92).

Descriptives

DQ9

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Turkey	14	6,9286	1,54244	,41223	6,0380	7,8191	4,00	9,00
Latvia	14	9,5714	1,86936	,49961	8,4921	10,6508	6,00	12,00
Romania	19	8,3684	2,54319	,58345	7,1426	9,5942	4,00	12,00
Total	47	8,2979	2,29285	,33445	7,6247	8,9711	4,00	12,00

ANOVA

DQ9

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49,052	2	24,526	5,598	,007
Within Groups	192,778	44	4,381		
Total	241,830	46			

Multiple Comparisons

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) Country	(J) Country	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Turkey	Latvia	-2,64286*	,79114	,005	-4,5618	-,7240
	Romania	-1,43985	,73726	,136	-3,2281	,3484
Latvia	Turkey	2,64286*	,79114	,005	,7240	4,5618

	Romania	1,20301	,73726	,243	-,5852	2,9912
Romania	Turkey	1,43985	,73726	,136	-,3484	3,2281
	Latvia	-1,20301	,73726	,243	-2,9912	,5852

*. The mean difference is significant at the 0.05 level.

Discussion

The aim of this research was to explore what teaching and learning strategies used in their practices by the early childhood and primary school teachers from involved countries and how they organize the learning environments to facilitate the learning experiences for children. 39 daycare teachers, 52 preschool teachers, and 54 primary school teachers participated in the study and observations were conducted in their classrooms. Analyses of the data obtained using the instrument Caregiver Interaction Scale showed that Portuguese and Latvian teachers were more sensitive towards children in their care than Turkish teachers. Although there were no significant difference among study countries in terms of harshness towards children, Turkish daycare teachers scored the highest compared to the teachers from other countries. Turkish teachers also were more detached from children in their care.

Analyses of the ITERS-3 data indicated that Portuguese and Latvian daycares were in better condition than Turkish and Romanian daycares in terms of space and furnishings. In terms of personal care routines, Portuguese and Latvian daycares were higher in quality than Turkish and Romanian daycare centers. Similar difference was found for use of language and books. Again, Portuguese and Latvian daycares were better than Turkish and Romanian daycares in their support for language and literacy development. Quality of interaction, educational activities, and program are another dimensions Portuguese and Latvian daycares fared better than Turkish and Romanian daycares. In fact, educational activities that would support development infants and toddlers were at inadequate level in Romanian and Turkish daycares, and at almost good for the Latvians. Only in Portuguese daycares a good level of educational activities were being carried on. This lack of disregard for very young children's educational needs is actually reflected in common government policies that run an age based dual system with an assumption that what very young children need is just quality care (preferably in the hands of the mother). Drawing from this understanding a separate government agency governs and regulates childcare services without much collaboration with the ministry of education. This is the case for Turkey where the Ministry of Family Labor and Social Services is responsible for regulation of daycares where no bachelor's degree in ECEC is required from the teachers. The end result is that without any accountability measure or even expectancy for educational provisions daycare teachers only focus on care aspects of their jobs. On the other hand, in Portugal, even though the dual system runs there as well, the requirement for all teachers in all levels to have an advanced degree in education might compensate for the systemic challenges (EURODICE, 2019). In Latvia, there is a somewhat integrated system of ECEC but there is no requirement for high level qualifications for teachers. These findings pinpoint the importance of advanced level teacher education as well as uniting ECEC agencies under the ministry of education. Integration of care and education in ECEC practice with equal importance given in each dimension should be the running thread of the system.

As far as quality in preschools, Turkish preschools scored behind those from the other countries. In six dimensions of quality, Turkish preschools were found to be in a minimally acceptable condition. Only interaction subscale scores average was close to being good. None of the countries obtained an average score indicating good quality in terms of space and furnishings. Latvian, Romanian, and Portuguese preschools showed good quality in regards to personal care routines and as well as interaction subscale. In fact, Portuguese preschools received almost excellent scores for the interaction subscale. Portuguese preschools were the only ones that averaged a score close to being good in terms of educational activities. This lack of quality in Turkish preschools was congruent with the other studies conducted in the country (Canbeldek, 2015; Feyman (2006). These findings seems to be a reflection of countries ranking according to the public spending on early childhood

education and care, which goes from Latvia (0.8% of GDP), Portugal (0.5% of GDP), Romania (0.3% of its GDP) and Turkey (0.1% of its GDP), from the highest spending to the lowest. Despite the decrease in enrollments, parallel to its low birth rate Latvia has significantly increased educational expenditure 30% between 2010 and 2015 (OECD, 2018). In 2017, in Romania, general government spending on education was equivalent to only 2.8% of GDP, significantly below the EU average of 4.6% and the lowest percentage in the EU.Countries public spending on early childhood education and care per child is as followed: Latvia 3000$, Portugal 2100$, Turkey 400$, all below the OECD average of 4600$.

The Marzano Teacher Evaluation Model was used to evaluate educational quality in primary classrooms. Cross-country comparisons revealed that Turkish primary school teachers faired well behind their colleagues from the other countries. In terms of Establishing and Maintaining Rules and Procedures, Engaging Students the mean scores of Turkish teachers was significantly lower than that of Latvian and Romanian teachers. There was a significant difference between Turkish and Romanian teachers in terms of Helping Students Interact with New Knowledge, Helping Students Practice and Deepen New Knowledge, Helping Students Generate and Test Hypotheses. There was also a significant difference between Turkish and Latvian teachers in terms of Communicating High Expectations for All Students subscale scores. Latvian teachers scored the highest in Recognizing Adherence to Rules and Procedures subscale.

Overall, this research points out the struggles countries face when there is overpopulation with a high percentage of children and youth. As the table below shows, Turkey has the largest population of school age children while Latvia has a decrease in population. The larger the younger population is the more the state has to invest in education. But, as mentioned above, the budget expenditures for education in Turkey is the lowest among the countries participated in this study.

	Population	age structure 0-14 years		Population growth rate
		Male	Female	
Latvia	1,923,559	150,514	142,580	-1.1%
Portugal	10,355,493	743,277	707,437	-0.27%
Romania	21,457,116	1,576,621	1,493,082	-0.35%
Turkey	81,257,239	10,085,558	9,627,967	0.49%

Source: CIA World Factbook (2019).

But this argument does not have to entirely mean that structural frames like large population all that matters determining the success of education. As in the case of Romanian primary school teachers with their imaging a better profile than Turkish colleagues in this study, population does not necessarily mean the destiny. Teacher education and accountability seem to be the issues that have to be effectively dealt with in parallel with strategies to increase motivation of teachers and to decrease burnout.

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