MOV-UP International Conference

Policies, Practices and Qualifications in Early Childhood Education

Conference Proceedings 2019

Co-funded by the
Erasmus+ Programme
of the European Union

International Conference

Policies, Practices and Qualifications in Early Childhood Education

Conference Proceedings

2019

Co-funded by the Erasmus+ Programme of the European Union

This publication is prepared in the frames of the international project “Early Childhood Education – building sustainable motivation and value paradigm for life” (MOV-UP) with the financial support of the European Commission under Erasmus+ Program, Key Action 3: Social Inclusion through Education, Training and Youth (ref. No 580339-EPP-1-2016-1-BG-EPPKA3-IPI-SOC-IN). The content of the publication reflects the views only of its authors, and the Commission cannot be held responsible for any use, which may be made of the information contained therein.

International Conference
Policies, Practices and Qualifications in Early Childhood Education

Conference Proceedings

https://conference.movup-project.eu/

ISBN: 978-619-91278-5-8

Cover: Kristin Ozanian ©

Contents

Children's Emotional Competence, Foundation of Their Success: Skills, Outcomes, And Support

Susanne A. Denham

Emotional competence supports preschoolers' social relationships and school success. Parents' emotions and reactions to preschoolers' emotions can help them become emotionally competent, but scant research corroborates this role for preschool teachers. Expected outcomes included: teachers' emotion socialization behaviors functioning most often like parents' in contributing to emotional competence, with potential moderation by socioeconomic risk. Participants included 80 teachers and 312 preschoolers experiencing either little economic difficulty or socioeconomic risk. Children's emotionally negative/dysregulated, emotionally regulated/productive, and emotionally positive/prosocial behaviors were observed. Teachers' emotions and supportive, nonsupportive, and positively emotionally responsive reactions to children's emotions were observed during winter. Hierarchical linear models used teacher emotions or teacher reactions, risk, and their interactions as predictors, controlling for child age, gender, and premeasures. Some results resembled those parents': Lack of nonsupportive reactions facilitated positivity/prosociality. Others were unique to preschool classroom environments (e.g., teachers' anger contributed to children's emotion regulation/productive involvement; nonsupportiveness predicted less emotional negativity/dysregulation). Finally, several were specific to children experiencing socioeconomic risk: Supportive and nonsupportive reactions, as well as tender emotions, had unique, but culturally/contextually explainable, meanings in their classrooms. Applications to teacher professional development, and both limitations and suggestions for future research are considered.

We define emotional competence as the ability to purposefully and fully express a variety of emotions, regulate emotional expressiveness and experiences when necessary, and understand the emotions of self and others [17]. These emotional competence skills develop dramatically during the preschool years. Emotional competence crucially supports early school success and the growth of academic competence [21, 71]. Children who understand and regulate emotions and are more emotionally positive at school entry are more likely to develop positive and supportive relationships with peers and teachers, participate more, and achieve at higher levels throughout their early schooling. Conversely, children who enter school with fewer emotional competence skills are more often rejected by peers, develop less supportive relationships with teachers, participate in and enjoy school less, achieve at lower levels, and are at risk for later behavior problems and school difficulties [9, 22, 33, 34, 50, 51]. Thus, emotional competence greases the cogs of a successful early school experience; its effects may be long-lasting. In fact, kindergarten prosocial behavior (including understanding and regulating emotion) was associated with young adult success in domains of education, employment, mental health, and avoidance of crime and substance use, independent of important child, family, and contextual factors [55]. In this article I outline the details of preschoolers' emotional competence development, consider ways in which emotional competence is associated with social and preacademic success. I will then consider how adults, especially teachers, can contribute to such development, with the example of an empirical study my colleagues and I have conducted.

1. Preschoolers' Emotional Competence

Emotional competence helps preschoolers succeed at maintaining positive emotional and behavioral engagement in the physical and social environment; making and maintaining relationships with other children and adults; and dealing with emotions in demanding group and preacademic contexts where they are required to sit still, attend, follow directions, navigate play with peers, and learn. Next we consider development and importance of each aspect of emotional competence for preschoolers.

1.2 Emotional expressiveness

Preschoolers are learning to use emotional communication, expressing all the "basic" emotions (e.g., happiness, sadness, anger and fear). Further, they appropriately display complex social and self-conscious emotions, such as empathy, guilt, pride, shame, and contempt. Finally, they realize that people may feel a certain way "on the inside" but show a different visible demeanor. They are learning that overt expression of socially disapproved feelings may be controlled, while expressing more socially appropriate emotions [17]. Additionally, enduring patterns of preschoolers' emotional expressiveness become potent intrapersonal supports for, or roadblocks to, interacting with agemates. Young children's emotional styles contribute to their overall success in interacting with one's peers.

Positive emotion is important in the initiation and regulation of social exchanges; sharing positive affect may facilitate the formation of friendship and render one more likable. Shin and colleagues [81; see also 46] found that preschoolers' positive emotional expressiveness during play was related to indices of social competence, including peer acceptance, initiating interaction, receiving peers' visual attention, and teacher ratings. In contrast, negative affect, especially anger, can be quite problematic in social interaction. Children's observed and reported anger at age 2 ½ indirectly (via ego resiliency) *negatively* predicted social competence reported by parents and teachers at age 7 [85]. Similarly, anger at age 3½ was negatively related to social competence at age 5 [13]. Finally, context inappropriate anger was related to preschoolers' self-rejection, loneliness, and negative peer and teacher social competence nominations [60]. In short, enduring negative expressiveness can set about a cascade of negative social outcomes.

Emotional expressiveness is also related to school success. For example, positive emotions signal enjoyment and motivation to learn to self and others [20]. Kindergartners' positive emotions observed during several times during the school day were positively related to concurrent preacademic success, either directly or via relationships with teachers and peers [50]. Conversely, preschoolers' *negative* emotionality (especially when dysregulated) was associated with lower levels of teachers' later reports on positive engagement and independent motivation in learning, especially for boys [51]. Similarly, patterns of preschoolers' negative expressiveness (predominantly anger) were related to lack of both current and later school adjustment, as well as kindergarten academic success [21; see also 89]. Thus, preschoolers' emotions have important implications for learning. In summary, emotional competence in expression of emotions, especially in maintaining a positive emotional style, appears central to young children's concurrent and later positive outcomes in both social and academic realms.

1.3 Emotion regulation

When intensity, duration, or other parameters of the experience and expression of emotion are 'too much' or 'too little' to meet goals and expectations of the child and/or social partners, emotion regulation is needed [86]. During preschool, emotion regulation becomes both necessary, because preschool or childcare is a particularly important context that taxes young children's emotion regulatory skills; initiating, maintaining, and negotiating play, and earning acceptance, all require preschoolers to "keep the lid on". With "so much going on" emotionally--some organized emotional gatekeeper must be cultivated.

Negative *or* positive emotions can need regulating, when they threaten to overwhelm or need to be amplified. Early in the preschool period, much of this self-management is biobehavioral (e.g., thumbsucking), and often supported by adults. As children progress through this age period, they become able to regulate their emotions more independently. They slowly learn to use more successful strategies for emotion regulation, such as problem solving, support seeking, distancing, internalizing, externalizing, distraction, reframing or redefining the problem, cognitive "blunting," and denial [49]. Constructive strategy usage is associated with social effectiveness during the preschool years and even later [8, 26, 27, 73,84]. Despite such growth, emotion regulatory failure still occurs throughout the preschool period, and is associated with young children's aggression and compromised social competence [13, 26].

Cognitive demands of the new preschool environment also require emotion regulation; in this context, children must regulate emotion while sharing materials, taking turns, getting in line, or concentrating on pre-literacy tasks. Thus, emotion regulation is also related to classroom adjustment, academic success,

and other indices of school readiness [7, 11]. Children less able to deal with negative emotions may not have personal resources to focus on learning, whereas those who can maintain a positive emotional tone may remain positively engaged with classroom tasks [20, 48, 51, 64, 88].

1.4 Emotion knowledge

In spontaneous conversations, young children talk about and reflect upon their own and others' feelings and discuss causes and consequences of their own and others' emotional experiences and expressiveness [37]. Such emotion knowledge yields information about emotional expressions, experiences and events in the environment, conveying information that can guide interaction. Inability to interpret emotions can make classrooms confusing, overwhelming places, hindering classroom adjustment.

Most preschoolers can infer basic emotions from expressions or situations [16]. They understand happy situations better than negative ones [30], but over time gradually differentiate negative emotions. They also can also use emotion language [29]. Further, young children begin to identify other peoples' emotions even when they may differ from their own [31]. Toward school entry, they begin to comprehend complex dimensions of emotional experiences, such as the possibility of simultaneous emotions [17]. In sum, preschoolers across many cultures become able to discern their own and others' emotional states, talk about them, empathize with others' emotions, and understand dissemblance [74, 77, 90].

There also are marked individual differences: Children with more advanced emotion knowledge have concurrent and later advantages; they are more prosocial to peers and rated as more socially skilled [3, 16, 26, 32, 46, 79, 87]]. Conversely, lack of emotion knowledge puts the preschooler at risk for aggression [27, 28]. Misattributing anger is particularly related to peer rejection and boys' aggression [78].

Researchers are also confirming links between preacademic success and young children's emotion knowledge [21, 46, 47, 60]. In one study emotion knowledge—but not emotion regulation—was related to preschoolers' pre-academic achievement [60]. As well, aspects of preschool emotion knowledge predict later preschool and kindergarten school adjustment and academic success [6, 22, 71,87].

2. Socialization of Emotional Competence

How is such emotional competence fostered? The emotion socialization perspective states that a socializer's emotion-related behaviors have a significant impact on such development: Their contingent reactions to specific emotions and expressed emotions help young children acquire culturally appropriate emotional competence skills [23]. All people with whom children interact exhibit a variety of emotions, which children observe. Modeling includes specific emotions observed by children along with the overall emotional expressiveness (and its valence) to which children are exposed. In general, positive emotion in the family is associated with children's own positive emotions, with the converse true for negative emotion or lack of emotion [15, 42]. Socializers' expressiveness also facilitates preschoolers' emotion regulation [38]; parental negativity may overarouse young children who cannot yet regulate their own emotions well [62, 70, 82]. Family positive expressiveness also promotes emotion knowledge, perhaps because positive feelings render children more open to learning and problem solving [17].

Children's emotions elicit, even require, contingent reactions from social partners. Adults react to children's emotions in ways construed as "supportive" (e.g., accepting, comforting), or "nonsupportive" (e.g., minimizing, punishing). Such reactions convey crucial messages about emotions, affecting toddlers' and preschoolers' emotional competence [63]. Mother's supportive reactions contribute to preschoolers' positive expressiveness, emotion regulation, and emotion knowledge [41, 23, 83]. In contrast, unsupportive reactions are related to children's greater sadness, fearfulness, and emotion dysregulation [62].

2.1 Teachers' role

Though we know much about parent socialization, there is far less clarity on how early childhood educators promote or hinder such development [24]. Young children learn about emotions through rich daily interactions in the classroom. In addition, even when children are not directly involved in an interaction, they can acquire emotional competence, through observing teachers' and peers' social-emotional behaviors. Early childhood teachers' emotions and reactions to children's emotions are likely to send socialization messages to children, as they do at home, with similar outcomes. But contextual differences also point to potential different or unique contributions of teacher socialization of emotion—e.g., adult/child ratio in the classroom, for example, may dictate teachers' even greater need to promote emotion regulation.

The scant research on this topic corroborates the potential importance of teacher socialization of emotion behaviors. Regarding modeling, teachers' negative expressiveness was negatively related to older preschoolers' positivity [67]. Concerning contingent reactions, early childhood teachers both encourage and discourage young children's emotional expression via a variety of behaviors, such as comforting, distraction, problem-solving, punishment, or minimization [1, 2]; however, they infrequently validate children's emotions. Further, teachers' reactions to preschoolers' emotions contribute to children's emotional competence, particularly for those with certain temperaments [5]. Finally, teachers' dismissing reactions related negatively to older preschoolers' positive expressivity and emotion knowledge [67].

More research is needed in this area. By examining micro-levels of teachers' emotion socialization behaviors in the classroom (i.e., emotions and reactions to children's emotions), we further understanding of socialization of emotion in preschool classrooms. Knowing how preschool teachers' discrete emotion socialization behaviors are related to children's development of emotional competence could be very useful for detailed practice recommendations, and lead to suggestions for professional development.

3. Socioeconomic Risk

Although understanding teacher socialization of emotion is an important goal, other contextual issues can be extremely important in the development of preschoolers' emotional competence. For example, living in poverty can compromise preschoolers' emotional competence, as well as its outcomes of social competence, school adjustment, and later preacademic success [19, 25]. Four-year-olds living under poverty, household chaos, and interparental aggression had difficulties with emotion regulation, mediated by deficits in identifying emotions [75]. Such environmental adversities hampered children's ability to detect and appraise stimuli signaling safety or threat, and to regulate emotions elicited by such stimuli.

Socioeconomic risk also can be related to differences in socialization of emotional competence in the family. For example, mothers living in poverty tend to show more unsupportive reactions to their children's emotions [80]. Similarly, mothers living in poverty show less frequent positive emotion [15]. Further, given that over three times as many African American children live in poverty compared to European American children [65], it is important to consider issues of ethnicity and culture as they relate to socialization of emotion and its outcomes for children living in poverty. Could early experiences with teachers offset these potentially deleterious effects? These children's emotional competence may be especially sensitive to targeted environmental inputs embedded within quality programming [43, 71]. Thus, teacher socialization could be especially important for the emotional competence for children living in poverty.

4. An Exemplary Study

Building on these considerations, we focused on the contribution of teachers' emotion socialization behaviors to preschoolers' emotional competence. We expect that their positive and negative emotional expressiveness, along with supportive, unsupportive, and positively emotionally responsive reactions to children's emotions, will function in a manner like parents' in contributing to children's emotional competence. However, given the paucity of extant research and important contextual differences in classrooms versus families, we cannot rule out unique teacher contributions differing from earlier findings with parents. Further, contributions of teacher socialization may be especially important to

developing emotional competence for children living in poverty. The nature of these contributions also may be not only influenced by classroom contextual considerations, but also by racial/cultural norms and practices. Thus, our first research question is: How does observed teacher socialization of emotion behavior contribute to young children's emotional competence over the preschool year? Our second research question is: How do contributions of teacher socialization vary by classroom socioeconomic risk status?

5. Method

5.1 Participants

Participants included 80 teachers and 337 preschoolers (54% boys). Children attended private and university childcare ("low socioeconomic risk") and centers serving children living in families experiencing socioeconomic risk (high socioeconomic risk"). Given our second problem question, we examined correlates of classroom socioeconomic risk status. Teachers of high socioeconomic risk classes were: (a) more highly educated; (b) better remunerated; and (c) more likely to be African American, not Caucasian. Children in high socioeconomic risk classrooms were more likely to be African American, as well.

5.2 Procedure

Children's social-emotional behaviors were observed in the fall, after children had become acclimated to the classroom (T1), and near the end of the school year (T2). Teachers' emotions and reactions to children's emotions were observed in the classrooms in the early winter of the school year.

5.3 Predictor Measures: Observation of Teachers' and Children's Emotions and Reactions to Each Other's Emotions

Using a computerized observational system [FOCAL-T, 18, 76], we observed teachers interacting with children during regular activities, predominantly circle time, center time, and lunch. FOCAL-T is designed to capture preschool teachers' expression of discrete emotions and reactions to children's emotions. Each teacher was observed for 20 minutes, focusing both on their emotions and reactions to children's emotions.

Focal emotions included (1) happy, (2) sad, (3) angry, (4) tense, (5) tender, (6) pain, (7) other, and (8) neutral. Behavioral reactions included (1) punitive reactions (e.g., threaten child for showing emotion), (2) problem-focused reactions (e.g., help child solve an emotion eliciting problem), (3) emotion-focused reactions (e.g., comfort child), (4) validating reactions (e.g., acknowledge child's emotion), (5) minimizing reactions (e.g., tease child for expressing emotion). Emotional reactions included, (1) distress reactions (e.g., show frustration to child emotion), and (2) matching positive reactions (e.g., smile back to smiling child). Intensive training of FOCAL-T coders results in adequate to excellent inter-observer reliability.

Scores for subsequent analyses included proportions across all sessions of each observed teacher emotion and reaction. Teachers' *affective balance* score (difference between standard scores for proportion happiness and proportion anger), along with proportion of total emotions shown for sad and tender emotions, were used as indicators of emotions expressed. Reaction proportion aggregates included: (1) Nonsupportive behavioral reactions (punitive + minimizing), (2) Supportive behavioral reactions (problem-focused + emotion-focused + validating). We also created the Positive Emotional Responsiveness aggregative (positive emotional reactions – distressed). Reliability of the aggregates is acceptable.

5.4 Criterion Measure: Observation of Children's Emotional Behaviors

The Minnesota Preschool Affect Checklist-Revised/Shortened [MPAC-R/S; 21] is an 18-item observational measure assessing children's social–emotional behaviors (i.e., emotional expression, emotion regulation, and social skills) during interaction with peers. Children's behaviors are observed in differing play and interaction contexts (as opposed to teacher-led instructional time) and coded for presence ("1") or absence ("0") during two 5-minute intervals across two different days. The items in MPAC-R/S are organized into scales for positive (3 items: showing positive affect in any manner (facial, vocal, and/or behavioral) and negative affect (2 items: showing negative affect in any manner),

productive (2 items: e.g., engrossed in ongoing activity) and unproductive (2 items: e.g., being listless) involvement in age-appropriate activities, positive reactions to frustration (2 items: e.g., when facing with conflicts, verbally expressing frustration in a positive or neutral manner), prosocial behaviors (2 items: cooperating with peers, taking turns), peer skills (2 items: leading and joining), and dysregulated behaviors (3 items: venting frustration at people or objects). Scale scores represented item means summed across visits. After intensive observer training, good to excellent inter-observer reliability found. Principal component analyses yielded three aggregates: (1) emotionally negative/dysregulated (negative affect, dysregulated behaviors), (2) emotionally positive/prosocial (positive affect, prosocial behavior, peer skills), and (3) emotionally regulated/productive (positive reactions to frustration, productive involvement in play). Scores to be used in analyses were created by taking the mean of scales loading highly on each component.

5.5 Analytic Plan

We conducted Hierarchical Linear Modeling (HLM) analyses, partitioning outcomes/ variance into two components: child level (Level 1) and classroom level (Level 2). Unconditional models for each outcome were examined before full multi-level models, estimating the amount of variance at the classroom level and thus appropriateness of HLM. Next, full models were created for observed teacher emotions and observed teacher reactions to children's emotions, as predictors of T2 outcomes at Level 2 (along with classroom socioeconomic risk), controlling for age, gender, and the T1 premeasure of the outcome variable at Level 1. Moderated associations were explored between teacher emotion socialization predictors and risk.

6. Results

6.1 Unconditional multi-level models

Variance at level 1 and ICCs for each outcome's unconditional model are presented in Tables 1 and 2. Class membership (see ICCs) accounted for a significant amount of variance in children's outcomes, though still less than the amount of variance explained at the child level, suggesting that HLM is appropriate.

6.2 Full models

Tables 1 and 2 show results for full models. In Table 1, younger children and those with higher T1 emotionally negative/dysregulated scores had higher T2 scores, as did children in high risk classrooms. For emotionally regulated/productive scores, children in high risk classrooms, as well as in classes where the teachers showed lower affective balance, showed greater T2 scores. There also were interactions between classroom socioeconomic risk and teacher emotions for two of the three emotional competence behavior outcomes (Fig. 1): When teachers of high risk classrooms were more tender and more affectively balanced (i.e., happier), but those serving low risk classrooms were angrier (lower affective balance) and sadder, children showed higher T2 emotionally regulated/productive behavior. In contrast, when teachers of high risk classrooms were more tender, children also increased in emotionally negative/dysregulated behavior over time. Finally, only the T1 measure predicted T2 emotionally positive/prosocial scores in analyses involving teacher emotions. In Table 2, new findings include teachers' nonsupportive behavioral reactions (as well as the T1 measure) predicting less emotionally positive/prosocial and emotionally negative/ dysregulated behavior at T2. Further, for children in high risk classrooms, teachers' supportive reactions were related to greater emotionally negative/dysregulated scores at T2 (Fig. 2).

Table 1

HLM analyses examining the contribution of teacher emotions, socioeconomic risk, and their interactions to children's observed emotional competence

	Emotionally Negative/ Dysregulated	Emotionally Regulated/Productive	Emotionally Positive/ Prosocial
ICC/Level 1 Proportion Variance	0.19***/0.48	0.06+/0.65	0.13***/0.36
Fixed Effects, Level 2			
Intercept	0.55***	0.33**	1.38***
Risk	0.31**	0.38**	0.03
Teacher Affective Balance[a]	0.01	-0.06*	-0.02
Proportion Sadness[a]	0.03	0.02	0.04
Proportion Tenderness[a]	0.01	0.01	-0.05
Affective Balance X Risk[a]	0.06	0.09*	-0.02
Sadness X Risk [a]	-0.10	-0.16+	-0.02
Tenderness X Risk[a]	0.16+	0.28*	0.02
Fixed Effects, Level 1			
Sex (1=female)	-0.07	0.05	0.04
Age in Months[a]	-0.01*	0.00	0.00
Premeasure[a]	0.23***	0.02	0.21***
Random Effects			
Intercept	0.04***	0.01	0.02**
Level-1 Effects	0.22	0.43	0.13
% Variability between classrooms	17% Δ at classroom level***	2% Δ at classroom level	13% Δ at classroom level**

* p < .05, ** p < .01, *** p < .001. [a] variable was centered for analysis

Figure 1

Interactions of teacher emotions and socioeconomic risk contributing to children's emotional competence

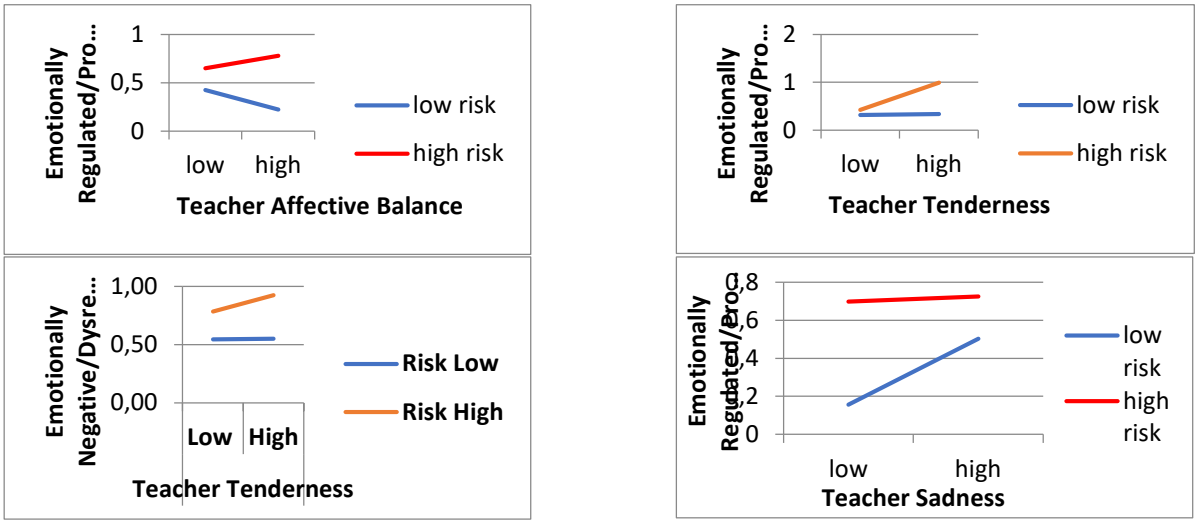


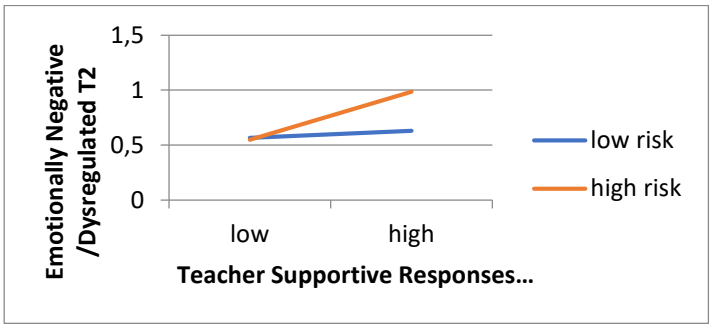
Table 2

HLM analyses examining the contribution of teacher reactions to children's emotions, socioeconomic risk, and their interactions to children's observed emotional competence

	Emotionally Negative/ Dysregulated	Emotionally Regulated/ Productive	Emotionally Positive/ Prosocial
ICC/Level 1 Proportion Variance	0.19***/0.48	0.06+/0.65	0.13***/0.36
Fixed Effects, Level 2			
Intercept	0.60***	0.40**	1.36***
Risk	0.17*	0.25*	0.08
Positive Emotional Responsiveness [a]	-0.01	-0.03	-0.02
Nonsupportive Behavioral Reactions [a]	-0.03+	-0.02	-0.04*
Supportive Behavioral Reactions[a]	0.02	-0.01	0.08
Positive Emotional X Risk [a]	-0.01	0.11	-0.04
Nonsupportive Behavioral X Risk[a]	0.00	0.15	0.00
Supportive Behavioral X Risk[a]	0.09*	0.06	-0.03
Fixed Effects, Level 1			
Sex (1=female)	-0.08	0.02	0.00
Age in Months[a]	-0.01	-0.01	0.04
Premeasure[a]	0.22***	0.02	0.22***
Random Effects			
Intercept	0.04***	0.02	0.02**
Level-1 Effects	0.22	0.43	0.13
% Variability between classrooms	15% Δ at classroom level ***	5 % Δ at classroom level	13% Δ at classroom level**

* p < .05, ** p < .01, *** p < .001. [a] variable was centered for analysis

Figure 2
Interactions of teacher reactions to children's emotions and socioeconomic risk contributing to children's observed emotional competence



7. Discussion

These findings shed light on how teacher socialization of emotion predicts preschoolers' growth in emotional competence. In fact, both child and teacher predictors (or interactions of teacher behaviors with socioeconomic risk) showed important contributions to emotional competence behaviors.

.

7.1 Main Effect Contributions of Teacher Socialization of Emotion

Findings showed some similarities with parental socialization. First, as is true for families, a generally positive emotional environment supported children's learning about emotion, and lack of nonsupportive reactions (e.g., minimizing or punishing children's emotions) facilitated development of children's emotional positivity and prosociality [62]. However, several findings ran counter to those generally found with parents and may be unique to the classroom context. For example, children displayed increased emotion regulation and involvement in play over time when teachers were less affectively balanced (i.e., angrier and sadder, particularly in low risk classrooms); these findings contrast with those with parents, where maternal positivity is related to preschoolers' emotion regulation [4, 14]. Moreover, teachers' nonsupportive reactions to children's emotions were related to lessened children's emotionally negative/dysregulated behavior over time; in general, however, maternal nonsupportiveness has been positively related to children's negativity.

Why might these findings obtain? For both emotionally negative/dysregulated and emotionally regulated/productive factors, coding originated with a frustrated child. Teachers in classrooms where children show such negative emotional behavior may show their own negative emotion in response, and use nonsupportive reactions to quell these emotional outbursts. Dealing with multiple emotional preschoolers at any one time – over weeks – is not easy. Young children, faced with a somewhat frequently negative teacher who punishes or belittles their emotions, might feel "on their own" in emotional situations, motivated to marshal personal resources to express fewer negative emotions and use words to modulate those they do express. Evaluating contributions of these aspects of teacher socialization of emotion, so often considered nonoptimal in parent literature, requires longer-term longitudinal investigation.

7.2 Interactive Contributions of Teacher Socialization of Emotion

Teachers' emotional contributions to children's emotionally regulated/productive behavior did align well with the parenting literature. However, teachers' tender emotional expressiveness also was related to children's increased emotionally negative/dysregulated behavior in high risk classrooms. Tenderness here seemed to serve a dual function – creating a comforting milieu, but perhaps in the cultural context of high risk classrooms, *too* comforting. This view is supported by the result that, for high risk classrooms, teachers' supportive reactions to children's emotions were predictive of emotionally negative/dysregulated behavior.

Considering that children and teachers in high risk classrooms are more likely to be African American than in low risk classrooms, an examination of these findings from the perspective of ethnicity and culture is warranted. African American teachers may be more open to the world of emotions, accentuating socialization of emotions in their teaching [72]. But this focus requires a more nuanced view, in which "celebration and restriction of children's emotion coexist closely… perhaps reflecting the joint influences of traditional Afro-cultural values and the historical context of slavery and discrimination" (p. 1) [59, see also 66]. Thus, African American parents' "supportive" socialization of emotion is sometimes adaptive [10]. However, African American mothers, especially for sons, also emphasize the negative social consequences of showing negative emotions; they report more "nonsupportive" and less "supportive" attitudes toward the emotionality of their children than do European American mothers [68, 69, 72]. Their encouragement of emotions (e.g., *not* endorsing "it's OK to cry") predicted kindergarteners' academic and social competence [69]; our results echo these for teachers' contribution to emotional competence. African American mothers may be emotionally stricter to keep their children safe, reflective of care and concern that children who thrive in a discriminatory society; teachers' socialization of emotion may be similarly motivated.

Given these more fine-grained considerations, considering a unified model of ethnic and emotion socialization is warranted [35]. Given the patterns of our and others' findings, "supportiveness" and "nonsupportiveness" can be considered ethnically bound terms. Current categorizations of emotion socialization may not be applicable universally to individuals from different ethnic backgrounds. It behooves researchers of socialization of emotion to consider carefully their terminology and the logic models underlying their predictions—with concomitant changes. We, too, must become culturally competent.

7.3 Potential Applications

Even given the preliminary status of our findings, some suggestions can be made for optimizing preschool teacher training and practice. Many early childhood teachers are intuitively aware of the importance of their own as well as children's emotions to learning and wellbeing, and closely attend to these issues in the classroom, but this is not always the case, and there are, as found here, differences in teachers' enactment of adaptive practices [92]. Thus, teachers and their supportive administrators, as well as pre-service teachers, could profit from attention to and training in these issues [45, 91].

First, teachers' means of dealing with their own emotional lives undoubtedly contribute to their socialization of children's emotional competence. For example, preschool teachers' emotional competence is related to their reactions to children's emotions; lack of emotional awareness has been associated especially with nonoptimal socialization of emotion techniques [39, 40]. Ways to promote teacher emotional competence, include [53]: (a) mindfulness training to maintain positivity and calm [52, 56]; (b) reflective supervision to gain access to and understand their own emotions; (c) stress reduction to aid teachers in reacting optimally to children's emotions [12]; and (d) direct training. Regarding direct training, Kremenitzer [57, 58] gives excellent, concrete suggestions on how teachers can become aware of their own emotional competence and its effects on children, especially via "emotional intelligence journaling".

Also, preservice teachers report little training on promoting emotional competence in students or managing their own internal feelings and external displays of emotion [45]; relatively few schools of education are prepared to train teachers on these matters. However, encouraging new research, suggests that emotional competence concepts can be infused into undergraduate curriculum and instruction courses [91]. Hence, preservice training, as well as in-service professional development, is necessary.

Second, to promote children's emotional competence more specifically, teacher training could focus on helping teachers to be willing to show emotions, remain emotionally positive in the classroom despite challenges, and modulate understandable negative emotions [57, 58, 91]. Teacher training could focus on ways of assisting teachers in valuing their supportive role concerning children's emotions, and give them specific strategies to use in reacting to children's more difficult emotions (e.g., anger, fear, sadness, even over-excitement). Sensitivity to the issue that "supportive" and "nonsupportive" techniques are culturally/ethnically bound is truly necessary.

Third, from a broader perspective, it is vital that early childhood education sites include programming for children's emotional competence, that assessment tools for emotional competence are utilized, ad that standards of learning include detailed reference to emotional competence.

8. Conclusion

Our research is among the first to examine teacher socialization behaviors in their contribution to young children's emotional competence. These contributions constitute everyday strategies based on kernels of evidence, "essential ingredients" compared to the "brands" of curricula [54]. Continued pinpointing of these behaviors can benefit both teachers and children in the crucial promotion of emotional competence for both.

References

[1] Ahn, H. J. (2005). Teachers' discussions of emotion in child care centers. *Early Childhood Education Journal, 32*, 237-242.

[2] Ahn, H. J., & Stifter, C. (2006). Child care teachers' response to children's emotional expression. *Early Education and Development*, 17(2), 253-270.

[3] Alonso-Alberca, N., Vergara, A. I., Fernández-Berrocal, P., Johnson, S. R., & Izard, C. E. (2012). Thee adaptation and validation of the emotion matching task for preschool children in Spain. *International Journal of Behavioral Development, 36*, 489–494.

[4] Are, F., & Shaffer, A. (2016). Family emotion expressiveness mediates the relations between maternal emotion regulation and child emotion regulation. *Child Psychiatry & Human Development, 47*, 708-715.

[5] Bassett, H. H., Denham, S. A., Fettig, N. B., Curby, T. W., Mohtasham, M., & Austin, N. (2017). Temperament in the classroom: Children low in surgency are more sensitive to teachers' reactions to emotions. *International Journal of Behavioral Development*, *41*, 4-14.

[6] Bassett, H. H., Denham, S. A., Mincic, M. M., & Graling, K. (2012). The structure of preschoolers' emotion knowledge: Model equivalence and validity using an SEM approach. *Early Education and Development, 23,* 259-279.
[7] Bierman, K. L., Nix, R. L., Greenberg, M. T., Blair, C., & Domitrovich, C. E. (2008). Executive functions and school readiness intervention: Impact, moderation, and mediation in the Head Start REDI program. *Development and Psychopathology, 20,* 821-843.
[8] Blair, K. A., Denham, S. A., Kochanoff, A., & Whipple, B. (2004). Playing it cool: Temperament, emotion regulation, and social behavior in preschoolers. *Journal of School Psychology*, *42*, 419-443.
[9] Blankson, A. N., Weaver, J. M., Leerkes, E. M., O'Brien, M., Calkins, S. D., & Marcovitch, S. (2017). Cognitive and emotional processes as predictors of a successful transition into school. Early Education and Development, 28, 1-20.
[10] Bocknek, E. L., Brophy-Herb, H. E., & Banerjee, M. (2009). Effects of parental supportiveness on toddlers' emotion regulation over the first three years of life in a low-income African American sample. *Infant Mental Health Journal: Official Publication of The World Association for Infant Mental Health*, *30*(5), 452-476.
[11] Brophy-Herb, H. E., Zajicek-Farber, M. L., Bocknek, E. L., McKelvey, L. M., & Stansbury, K. (2013). Longitudinal connections of maternal supportiveness and early emotion regulation to children's school readiness in low-income families. *Journal of the Society for Social Work and Research*, *4*(1), 2-19.
[12] Buettner, C. K., Jeon, L., Hur, E., & Garcia, R. E. (2016). Teachers' social—emotional capacity: Factors associated with teachers' responsiveness and professional commitment. *Early Education and Development, 2*7, 1–22.
[13] Chang, H., Shelleby, E. C., Cheong, J., & Shaw, D. S. (2012). Cumulative risk, negative emotionality, and emotion regulation as predictors of social competence in transition to school: A mediated moderation model. *Social Development*, *21*, 780-800.
[14] Cho, H. J., Lee, D-g. (2015). The mediating effect of mothers' emotional expressiveness in the relationship between their beliefs about children's emotion and the children's emotional regulation as it is perceived by their mothers. *Korean Journal of Child Studies, 36(3)*, 1-18.
[15] Davis, M., Suveg, C., & Shaffer, A. (2015). Maternal positive affect mediates the link between family risk and preschoolers' positive affect. *Child Psychiatry & Human Development, 46*, 167-175.
[16] Denham, S. A. (1986). Social cognition, social behavior, and emotion in preschoolers: Contextual validation. *Child Development, 57,* 194-201.
[17] Denham, S. A. (1998). *Emotional development in young children*. New York: Guilford Press.
[18] Denham, S. A., & Bassett, H. H. (2013). *Focal-T: Focal Observations of Teachers' Emotions and Reactions to Children's Emotions.* George Mason University, Fairfax VA.
[19] Denham, S. A. Bassett, H. H., Mincic, M.M., Kalb, S. C., Way, E., Wyatt, T., & Segal, Y. (2012a). Social-emotional learning profiles of preschoolers' early school success: A person-centered approach. *Learning and Individual Differences, 22,* 178–189.
[20] Denham, S. A., Bassett, H. H., Sirotkin, Y & Zinsser, K. (2013). Head Start preschoolers' emotional positivity and emotion regulation predict their social-emotion behavior, classroom adjustment, and early school success. *National Head Start Association Dialog*, 16(2). Online only.
[21] Denham, S. A., Bassett, H. H., Thayer, S. K., Mincic, M., Sirotkin, Y.S, & Zinsser, K. (2012b). Observing preschoolers' social-emotional behavior: Structure, foundations, and prediction of early school success. *Journal of Genetic Psychology, 173,* 246-278.
[22] Denham, S. A., Bassett, H. H., Way, E., Mincic, M., Zinsser, K., & Graling, K. (2012c). Preschoolers' emotion knowledge: Self-regulatory foundations, and predictions of early school success. *Cognition and Emotion*, *26*, 667-679.
[23] Denham, S. A., Bassett, H. H., & Wyatt, T. (2014a). The socialization of emotional competence. In J. Grusec & P. Hastings (Eds.), *The handbook of socialization* (2nd edition, pp. 590-613). New York: Guilford Press.
[24] Denham, S. A., Bassett, H. H., & Zinsser, K. (2012d). Early childhood teachers as socializers of young children's emotional competence. Early Childhood Education Journal, 40, 137-143.
[25] Denham, S. A., Bassett, H. H., Zinsser, K., & Wyatt, T. M. (2014b). How preschoolers' social–emotional learning predicts their early school success: Developing theory-promoting, competency-based assessments. *Infant and Child Development, 23*, 426-454.
[26] Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K. S., Auerbach-Major, S. T., & Queenan, *P.* (2003). Preschoolers' emotional competence: Pathway to social competence? *Child Development, 74,* 238-256.
[27] Denham, S. A., Blair, K., Schmidt, M., & DeMulder, E. (2002). Compromised emotional competence: Seeds of violence sown early? *American Journal of Orthopsychiatry*, *72*, 70-82.
[28] Denham, S. A., Caverly, S., Schmidt, M., Blair, K., DeMulder, E., Caal, S. … Mason, T. (2002). Preschool understanding of emotions: Contributions to classroom anger and aggression. *Journal of Child Psychology and Psychiatry*, *43*, 901-916.
[29] Denham, S. A., Cook, M., & Zoller, D. (1992). 'Baby looks very sad': Implications of conversations about feelings between mother and preschooler. *British Journal of Developmental Psychology*, *10*, 301-315.
[30] Denham, S. A., & Couchoud, E. A. (1990). Young preschoolers' understanding of emotions. *Child Study Journal*, *20*, 171-192.
[31] Denham, S. A. & Couchoud, E. A. (1990). Young preschoolers' ability to identify emotions in equivocal situations. *Child Study Journal*, *20*, 193-202.
[32] Denham, S. A., McKinley, M., Couchoud, E. A., & Holt, R. (1990). Emotional and behavioral predictors of peer

status in young preschoolers. *Child Development, 61,* 1145-1152.
[33] Diaz, A., Eisenberg, N., Valiente, C., VanSchyndel, S., Spinrad, T. L., Berger, R., ... & Southworth, J. (2017). Relations of positive and negative expressivity and effortful control to kindergarteners' student–teacher relationship, academic engagement, and externalizing problems at school. Journal of research in personality, 67, 3-14.
[34] Di Maggio, R., Zappulla, C., & Pace, U. (2016). The relationship between emotion knowledge, emotion regulation and adjustment in preschoolers: A mediation model. Journal of Child and Family Studies, 25, 2626-2635.
[35] Dunbar, A. S., Leerkes, E. M., Coard, S. I., Supple, A. J., & Calkins, S. (2017). An integrative conceptual model of parental racial/ethnic and emotion socialization and links to children's social-emotional development among African American families. *Child Development Perspectives*, *11*(1), 16-22.
[36] Duncombe, M., Havighurst, S. S., Holland, K. A., & Frankling, E. J. (2013). Relations of emotional competence and effortful control to child disruptive behavior problems. *Early Education & Development*, *24*, 599-615.
[37] Dunn, J. (1994). Understanding others and the social world: Current issues in developmental research and their relation to preschool experiences and practice. *Journal of Applied Developmental Psychology, 15,* 571-583.
[38] Eisenberg, N., Valiente, C., Morris, A. S., Fabes, R. A., Cumberland, A., Reiser, M., et al. (2003). Longitudinal relations among parental emotional expressivity, children's regulation, and quality of socioemotional functioning. Developmental Psychology, 39, 3–19.
[39] Ersay, E. (2007). Preschool teachers' emotional experience traits, awareness of their own emotions and their emotional socialization practices. Retrieved from ProQuest Dissertations and Theses.
[40] Ersay, E. (2015). Preschool teachers' emotional awareness levels and their responses to children's negative emotions. *Procedia-S*
[41] Fabes, R. A., Poulin, R. E., Eisenberg, N., & Madden-Derdich, D. A. (2002). The Coping with Children's Negative Emotions Scale (CCNES): Psychometric properties and relations with children's emotional competence. *Marriage and Family Review*, *34*, 285–310.
[42] Fields-Olivieri, M. A., Cole, P. M., & Maggi, M. C. (2017). Toddler emotional states, temperamental traits, and their interaction: Associations with mothers' and fathers' parenting. *Journal of research in personality*, *67*, 106-119.
[43] Fishbein, D. H., Domitrovich, C., Williams, J., Gitukui, S., Guthrie, C., Shapiro, D., & Greenberg, M. (2016). Short-term intervention effects of the PATHS curriculum in young low-income children: capitalizing on plasticity. *The Journal of Primary Prevention*, *37*(6), 493-511.
[44] Garner, P. W. (2006). Prediction of prosocial and emotional competence from maternal behavior in African American preschoolers. *Cultural Diversity and Ethnic Minority Psychology*, *12*(2), 179.
[45] Garner, P. W. (2010). Emotional competence and its influences on teaching and learning. *Educational Psychology Review, 22*, 297-321.
[46] Garner, P. W., & Waajid, B. (2008). The associations of emotion knowledge and teacher-child relationships to preschool children's school-related developmental competence. *Journal of Applied Developmental Psychology*, *29*, 89-100.
[47] Garner, P. W., & Waajid, B. (2012). Emotion knowledge and self-regulation as predictors of preschoolers' cognitive ability, classroom behavior, and social competence. *Journal of Psychoeducational Assessment*, *30*(4), 330-343.
[48] Graziano, P. A., Reavis, R. D., Keane, S. P., & Calkins, S. D. (2007). The role of emotion regulation in children's early academic success. *Journal of School Psychology*, *45*, 3-19.
[49] Gust, N., Koglin, U., & Petermann, F. (2014). An understanding of emotion regulation strategies in preschool age. *Zeitschrift Fur Entwicklungspsychologie Und Padagogische Psychologie*, *46*, 191-200.
[50] Hernández, M. M., Eisenberg, N., Valiente, C., VanSchyndel, S. K., Spinrad, T. L., Silva, K. M., ... & Southworth, J. (2016). Emotional expression in school context, social relationships, and academic adjustment in kindergarten. *Emotion, 16*, 553-556.
[51] Herndon, K. J., Bailey, C. S., Shewark, E., Denham, S. A., & Bassett, H. H. (2013). Preschoolers' emotion expression and regulation: Relations with school adjustment. *Journal of Genetic Psychology, 174,* 642-663.
[52] Jennings, P. A. (2015). Early childhood teachers' well-being, mindfulness, and self-compassion in relation to classroom quality and attitudes towards challenging students. *Mindfulness*, *6*(4), 732-74.
[53] Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research, 79*, 491-525.
[54] Jones, S. M., & Bouffard, S. M. (2012). Social and emotional learning in schools: From programs to strategies. *Social Policy Report*. *26(4)*, 1-33.
[55] Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness. *American Journal of Public Health*, *105*, 2283-2290.
[56] Kemeny, M. E., Foltz, C., Cavanagh, J. F., Cullen, M., Giese-Davis, J., Jennings, P., ... & Ekman, P. (2012). Contemplative/emotion training reduces negative emotional behavior and promotes prosocial responses. *Emotion,12*, 338-350.
[57] Kremenitzer, J. P. (2005). The emotionally intelligent early childhood educator: Self reflective journaling. Early Childhood Education Journal, 33(1), 3–9. doi: 10.1007/s10643-005-0014-6
[58] Kremenitzer, J. P., & Miller, R. (2008). Are you a highly qualified, emotionally intelligent early childhood educator? *Young Children*, *63*(4), 106-112.

[59] Labella, M. H. (2018). The sociocultural context of emotion socialization in African American families. *Clinical Psychology Review, 59, 1-15*.
[60] Leerkes, E. M., Paradise, M. J., O'Brien, M., Calkins, S. D., & Lange, G. (2008). Emotion and cognition processes in preschool children. *Merrill-Palmer Quarterly, 54*, 102–124.
[61] Locke, R. L., Davidson, R. J., Kalin, N. H., & Goldsmith, H. H. (2009). Children's context inappropriate anger and salivary cortisol. *Developmental Psychology*, *45*, 1284-1297.
[62] Luebbe, A. M., Kiel, E. J., & Buss, K. A. (2011). Toddlers' context-varying emotions, maternal responses to emotions, and internalizing behaviors. *Emotion*, *11*, 697–703. http://dx.doi.org/10.1037/a0022994
[63] Meyer, S., Raikes, H. A., Virmani, E. A., Waters, S., & Thompson, R. A. (2014). Parent emotion representations and the socialization of emotion regulation in the family. *International Journal of Behavioral Development*, *38*(2), 164-173.
[64] Miller, A. L., Seifer, R., Stroud, L., Sheinkopf, S. J., & Dickstein, S. (2006). Biobehavioral indices of emotion regulation relate to school attitudes, motivation, and behavior problems in a low-income preschool sample. *Annals of the New York Academy of Sciences*, *1094*(1), 325-329.
[65] Mishel, L., Bivens, J., Gould, E., & Shierholz, H. (2012). *The state of working America*. Cornell University Press.
[66] Morelen, D., & Thomassin, K. (2013). Emotion socialization and ethnicity: An examination of practices and outcomes in African American, Asian American, and Latin American families. *The Yale Journal of Biology and Medicine*, *86*(2), 168.
[67] Morris, C. A. S., Denham, S. A., Bassett, H. H., & Curby, T. W. (2013). Relations among teachers' emotion socialization beliefs and practices, and preschoolers' emotional competence. *Early Education and Development. 24, 7,* 79-999.
[68] Nelson, J. A., Leerkes, E. M., O'Brien, M., Calkins, S. D., & Marcovitch, S. (2012). African American and European American mothers' beliefs about negative emotions and emotion socialization practices. *Parenting*, *12*(1), 22-41.
[69] Nelson, J. A., Leerkes, E. M., Perry, N. B., O'Brien, M., Calkins, S. D., & Marcovitch, S. (2013). European-American and African-American mothers' emotion socialization practices relate differently to their children's academic and social-emotional competence. *Social Development, 22*, 485-498.
[70] Newland, R. P., & Crnic, K. A. (2011). Mother–child affect and emotion socialization processes across the late preschool period: Predictions of emerging behaviour problems. Infant and child development, 20(6), 371-388.
[71] Nix, R. L., Bierman, K. L., Domitrovich, C. E., & Gill, S. (2013). Promoting children's social-emotional skills in preschool can enhance academic and behavioral functioning in kindergarten: Findings from Head Start REDI. *Early Education & Development*, *24*, 1000-1019.
[72] Parker, A. E., Halberstadt, A. G., Dunsmore, J. C., Townley, G., Bryant, A., Jr., Thompson, J. A., et al. (2012). Emotions are a window into one's heart": a qualitative analysis of parental beliefs about children's emotions across three ethnic groups. *Monographs of the Society for Research in Child Development, 77(3)*, 1–136.
[73] Penela, E. C., Walker, O. L., Degnan, K. A., Fox, N. A., & Henderson, H. A. (2015). Early behavioral inhibition and emotion regulation: pathways toward social competence in middle childhood. *Child Development*, *86*, 1227-1240.
[74] Pons, F.; Harris, P. L.; de Rosnay, M. (2004). Emotion comprehension between 3 and 11 years: Developmental periods and hierarchical organization. *European Journal of Developmental Psychology*, *1*,127-152.
[75] Raver, C. C., Blair, C., Garrett-Peters, P., & Family Life Project Key Investigators. (2015). Poverty, household chaos, and interparental aggression predict children's ability to recognize and modulate negative emotions. *Development and psychopathology*, *27*(3), 695-708.
[76] Roberts, W. L. (2011). Software for observing behavior in natural settings (Version 2.75.1). Thompson Rivers University.
[77] Sawada, T. (1997). Development of children's understanding of emotional dissemblance in another person. *Japanese Journal of Educational Psychology, 45*, 50-59.
[78] Schultz, D., Izard, C. E., Ackerman, B. P., & Youngstrom, E. A. (2001). Emotion knowledge in economically disadvantaged children: Self-regulatory antecedents and relations to social difficulties and withdrawal. *Development & Psychopathology, 13,* 53-67.
[79] Sette, S., Bassett, H. H., Baumgartner, E., & Denham, S. A. (2015). Structure and validity of affect knowledge test in a sample of Italian preschoolers. *Journal of Genetic Psychology, 176*, 330-347.
[80] Shaffer, A., Suveg, C., Thomassin, K., & Bradbury, L. L. (2012). Emotion socialization in the context of family risks: Links to child emotion regulation. *Journal of Child and Family Studies*, *21*(6), 917-924.
[81] Shin, N., Vaughn, B. E., Akers, V., Kim, M., Stevens, S., Krzysik, L., …Korth, B. (2011). Are happy children socially successful? Testing a central premise of positive psychology in a sample of preschool children. *The Journal of Positive Psychology, 6,* 355-367.
[82] Silk, J. S., Shaw, D. S., Prout, J. T., O'Rourke, F., Lane, T. J., & Kovacs, M. (2011). Socialization of emotion and offspring internalizing symptoms in mothers with childhood-onset depression. *Journal of Applied Developmental Psychology*, *32*(3), 127-136.
[83] Spinrad, T. L., Stifter, C. A., Donelan-McCall, N., & Turner, L. (2004). Mothers' regulation strategies in response to toddlers' affect: Links to later emotion self-regulation. *Social Development*, *13*, 40–55.
[84] Spritz, B. L., Sandberg, E. H., Maher, E., & Zajdel, R. T. (2010). Models of emotion skills and social competence in the Head Start classroom. *Early Education and Development*, *21*, 495-516.
[85] Taylor, Z.E., Eisenberg, N., VanSchyndel, S.K., Eggum-Wilkens, N.D., & Spinrad, T.L. (2014). Children's negative emotions and ego-resiliency: Longitudinal relations with social competence. *Emotion, 14*(2), 397-406. doi:10.1037/a0035079

[86] Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *In N. A. Fox (Ed.), The development of emotion regulation: Biological and behavioral considerations. Monographs of the Society for Research in Child Development*, Serial No. 240, 259 (242-243), 225-252.
[87] Torres, M. M., Domitrovich, C. E., & Bierman, K. L. (2015). Preschool interpersonal relationships predict kindergarten achievement: Mediated by gains in emotion knowledge. *Journal of Applied Developmental Psychology*, *39*, 44-52.
[88] Trentacosta, C. J., & Izard, C. E. (2007). Kindergarten children's emotion competence as a predictor of their academic competence in first grade. *Emotion*, *7*, 77-88. doi:10.1037/1528-3542.7.1.77
[89] Valiente, C., Lemery-Chalfant, K., & Swanson, J. (2010). Prediction of kindergartners' academic achievement from their effortful control and emotionality: Evidence for direct and moderated relations. *Journal of Educational Psychology*, *102*, 550-560.
[90] von Salisch, M., & Janke, B. (2010). Development of emotional competence in the preschool age. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, *59*(7), 509.
[91] Waajid, B., Garner, P. W., & Owen, J. E. (2013). Infusing social emotional learning into the teacher education curriculum. *The International Journal of Emotional Education, 5*, 31-48.
[92] Zinsser, K., Denham, S.A., Curby, T. W., & Shewark, E. (2015). "Practice what you preach": Teachers' perceptions of emotional competence and emotionally supportive classroom practices. *Early Education and Development, 26,* 899-919.

Dr. Susanne Denham *is an applied developmental psychologist focusing on emotional competence influencing children's social and academic functioning, its assessment, and how parents and teachers foster it. She was professor at George Mason University. She received her PhD from University of Maryland Baltimore County, and instructed at University of Maryland and was Guest Scientist at the National Institute of Health (NIH). She used experience as school psychologist in her research, funded by Institute for Education Sciences, NIH, W.T. Grant Foundation, John Templeton Foundation, and National Science Foundation. Past co-editor of the journal Social Development, current editor of Early Education and Development, she also served on many editorial boards.*

Art in science Education: Building sustainable motivation and value paradigm for life through MOV-UP

Maria Ampartzaki
University of Crete
Greece

Anna Stavroulaki
Primary Teacher
Greece

Michail Kalogiannakis
University of Crete
Greece

Vasiliki Giannakou
University of Crete
Greece

Nikolaos Gerakianakis
University of Crete
Greece

In this presentation we deliver the results of implementing the MOV-UP principles in the science lesson of Y5. It is a case study of the outcomes which resulted during the MOV-UP implementation in a Year 5 (primary) classroom in Greece. The teachers followed the guidelines of MOV-UP developing a focus on inquiry-based learning. Each thematic unit culminated with art-based sessions focusing on the presentation of learning results. Content and thematic analysis of children's work and interactions show how inquiry-based learning enriched by art activities contributes to the cultivation of 21st century skills (learning, literacy and life skills), and supports the development of sustained motivation for learning and creativity. It also supports the development of democratic values through collaborative work and the inclusion of vulnerable children.

1. Teaching science in the MOV-UP context

The program titled Early Childhood Education – Building sustainable motivation and value paradigm for life (MOV-UP) started at the end of 2016 and lasted for three years. It was funded by the European Union as an Erasmus+ Programme. The general aim of the programme was to build a set of training units and help educators of pre-school and primary level develop children's motivation for learning. It also aimed at helping educators to create activities that would promote the development of democratic values adopted throughout by the European communities such as democracy, acceptance, inclusion, equity, justice and others (MOV-UP, n.d.). A special interest was to be paid to the cases of immigrant children, children with disabilities, or disadvantaged children who experience several forms of social marginalisation.

Our team focused on the teaching methodology that would enable educators develop learning situations that would promote learning motivation and enable all children to participate regardless of the issues they faced in their everyday reality. We wanted an all-inclusive teaching and learning strategy that would

increase participation and achievement levels in the classrooms. We also took good care of the values promoted through this type of methodology, the big ideas and the messages cultivated in the classes along with and through the activities. We adopted an open-ended constructivist methodology of learning, in which we encouraged children's full participation and collaborative work (Colburn, 2000; National Research Council, 2012). We also wanted to encourage children's independent work and the development of their self-esteem (Bertucci, Conte, Johnson, & Johnson, 2010; Slavin, 1990). It was finally important to us to enable children to express their knowledge, understanding and ideas through a variety of symbolic-semiotic ways, which would enable each child to find and develop his/her own and the group's way of communication and get his/her message across (NGSS Lead States, 2013; Opfermann, Schmeck, & Fischer, 2017; Wickman, 2008).

2. The principles of teaching science in the MOV-UP context

Science education took a new turn in recent years, as researchers and educators recognized the need to encourage children's creative explorations and the need to draw children's attention to the social dimension of knowledge (Yoon & Onchwari, 2006). Learning methodologies were also affected by the realization that there are different perceptions and interpretations of reality and that our understanding of the phenomena might shift and change in the light of new discoveries (NGSS Lead States, 2013). The constructivist perception of learning was widely adopted (Harlen, Macro, Reed, & Schilling, 2003) and children are now being encouraged to embark on hands-on explorations and cognitive activities of scientific thinking collaboratively (Clough, 2002; Iman & Iman, 2015).

In the light of the above developments MOV-UP adopted a series of principles which it promoted for implementation. These were as follows:

- Learning is a social activity so children work in groups which might change in the course of the time. They work as a group to execute an activity, make observations, discuss results and draw conclusions.
- Autonomous learning is desirable; thus, children are encouraged to search for the materials needed for the experiments or bring them from home.
- Experience is of pivotal importance, so children execute a variety of experiments or observations and make several sorts of recordings (handwriting, typed notes, recordings, drawing, etc).
- Knowledge and understanding are considered to take place at a highly symbolic level. To strengthen and support abstract thought we encourage children to use all kinds of symbolic thinking and expression: e.g. language, drawing, painting, sculpture, multimedia art, music, etc. Thus, each thematic unit culminates in a multimodal presentation of what the children have learnt or what they might want to highlight to the others.

3. Researching into artful science teaching

Teaching science through art and implementing the principles of collaborative learning in order not only to help children's performance but also to cultivate democratic values was a challenge for the teacher who decided to participate in the MOV-UP project. This led us to create a support group in MOV-UP who retained regular contact with the teachers and took them through the implementation process. Soon, this frequent contact turned into action research. The teachers had extended collaborative sessions with the MOV-UP organizers in Greece in which: a) they did the planning and preparation of the program activities, b) discussed about how to go about finding the most suitable educational resources, c) reflected on the classroom implementation to identify the good practices, strengths and weakness, d) assessed the learning results, e) set goals of improvement, and f) started compiling data for further analysis.

In this case study we are going to focus on the work of one Year 5 teacher, who used the MOV-UP principles and guidelines to plan and deliver three science units on light, temperature and electricity. As described above, the MOV-UP team maintained regular contact and supported the teacher not only in her teaching (planning, reflection and assessment of the results) but also in data collection. In this way, five main categories of data were collected: Records in the teachers' diaries, records of the teacher's planning, children's workbooks and samples of work, recordings of children's interactions and/or presentations and photographs from the classroom implementation. The team then collaborated with the teacher to analyze the data further and prepare reports for publication.

3.1 Data analysis

The categories of data mentioned above were then analyzed in multiple ways. The teacher's diary was subjected to a thematic analysis. From the results we isolated the records in which the teacher showed difficulty to implement something, expressed anxiety as to how successful implementation was going to be, enthusiasm, surprise and other feelings about the results. Children's work was subjected to content and thematic analysis (through open, axial and selective coding (Strauss & Corbin, 1998)) and it was primarily scanned for evidence of learning and understanding of the basic concepts and phenomena that were the subject of the lessons. Children's work, recordings and photographs were also analyzed and grouped as to the degree up to which children used a variety of semiotic modes of meaning to express their ideas and understanding (gestural, spatial, visual, tactile, audio, language) (see also The New London Group, 2000). Following coding we also carried out a process of triangulation (Denzin & Lincoln, 2005) in which we compared data coming from different categories.

3.2 Results

Following the three types of open, axial and selective coding the following categories of evidence were formed:

a. Evidence of good understanding of the phenomena and the natural laws students studied

Children's artwork, writings and worksheets, as well as a variety of written tests, showed that children developed very good knowledge and understanding of the three thematic units they studied in the context of MOV-UP. The class teacher also recorded another surprising effect into her diary: At the end of the year children could enthusiastically talk only about these three thematic units (temperature, electricity and light). They did not seem to be excited neither they were able to recall knowledge or favorite moments from the other units they studied in the science lesson earlier in the year (e.g. matter, energy, or the digestive system. Children seemed to remember a lot more from the three thematic units, which they studied using the principles of MOV-UP.

b. Evidence on the development of 21st century skills

Science education has already been linked to the prerequisites of the 21st century (Ampartzaki & Kalogiannakis, 2016; Sgouros & Stavrou, 2019; Stavrou, Michailidi, & Sgouros, 2018). In this case study we found evidence that children cultivated all the three groups of 21st century skills (learning, literacy, and life skills). In the data there was plenty of evidence that, through the activities, children developed skills and knowledge classified in a variety of literacies, which included the so-called "foundational literacies" (literacy, numeracy, scientific literacy, ICT literacy). First and foremost, children exercised and developed skills and knowledge in reading and writing. Recordings capture children's interactions in which they try, through group discussion to read instructions, theoretical explanations, or formulate and write down their conclusions. All groups are caught to work hard, trying to phrase and rephrase their results and work their conclusions out. There is also evidence that groups compared their answers and reviewed them for improvements after comparison. Children were also going into a process of comparing their answers to the initial questions so that they become aware of what they learnt and how. Moreover, students carried out analysis on the etymology and the linguistic meaning of words, which enriched and extended their vocabulary.

With regards to the scientific literacy, data reveal consistent use and good understanding of concepts such as "experiment, observation, hypotheses, verification, rejection, theory, checking, control, concluding, generalizing" etc. Children also seem to understand concepts such as "temperature, molecules, particles, electrons, protons, current, circuit", etc.
Moreover, there is extended work on numeracy when children carry out measurements of temperature and discuss about numbers above and below zero. There is a lot of work on space representation since children tried to draw objects with their shadows in which depictions, they had to solve problems regarding the perspective and orientation in shadows. Space and measurements were into focus again when children discussed the phenomenon of expansion caused by temperature and realized that objects expand or contract accordingly.

Children's artwork included a variety of genres which children created with minimum or no support: for example, they wrote stories and poetry about the temperature or, about light. They wrote the instructions to science games they invented. They also created mind maps, captions and titles for tables, graphics and designs. They prepared speeches for their presentations to a wider audience, and posters, invitations and certification to complement these presentations.

Finally, students developed further and made use of their existing capacity in digital or ICT literacy as they created circuit simulations, and shadow games using suitable equipment. They also used Microsoft Office products to create a questionnaire for their families and then to collect, analyze and compare results, creating graphics to present descriptive statistics (using Word and Excel).

In all the above examples, students acted as transformers of knowledge, meanings and messages (Hill, 2004).

c. Evidence of skillful use of multimodal ways of expression that included audio, gestural, spatial, visual, tactile, and language meanings

Creativity, critical thinking and problem-solving, together with communication skills are considered to be vital competences in 21st century skills. As mentioned above, students were encouraged to creatively develop alternative and artful ways to present the results of their research and experimentation to the others, or knowledge and theory they claimed. Students then created the following examples of artwork:

- An installation blending shadows, light, and reflection
- Artistic drawings (e.g. objects with their shadows, life before and after the invention of electricity, posters, science board games, etc.).
- Crosswords, in which words were put artistically into horizontal and vertical connections and crossings, and questions were skillfully crafted to make crosswords more difficult.
- 3-D collage mind maps, which incorporated small objects such as leads, batteries, pieces of aluminum foil, wood, iron, fabric, etc.
- A fairy tale about the creation of static electricity
- Seven songs about temperature and heat
- A dance about temperature, expansion and contraction
- Two poems about the light
- Shadow theater enriched by popular music
- Black theater which depicted an electric circuit (it presented the flow of electrons with fluorescent objects)

d. Evidence that children's learning motivation remained at high levels throughout the activities of these thematic units

The teacher's diary, photographs and recordings capture a very lively environment in the classroom during the learning activities. Children can be heard discussing vividly about what they need to do, what is going to happen, trying different solutions out, and exchanging materials and advice between groups. They can be heard expressing their disappointment, when things go wrong, and their enthusiasm and joy when experiments are successful. We can hear and see children laugh, exchange smiles, kiss and hug each other, applause and cheer for their groups.

e. Evidence on the development of democratic values such as equity, participation, acceptance, tolerance, inclusion, etc.

The class teacher's diary entries reveal that working collaboratively was not a straightforward task for the students at the beginning. With time and through discussion and task allotment children became more able to work for the sake of the group, wait for their turn, listen to each other's voice and opinion and discuss. All students became capable in this. They also had to learn a new type of discipline, and loyalty to the group. So, a point system was used at the beginning to support children in their effort to understand what and how should work differently. Through this strategy the members of the group learnt to hold each other accountable and share the responsibility for a well-organized and disciplined work. The class included several immigrant students of ethnic minority, who were accepted and worked as equals in the groups. There were also two other children with special needs who participated in the activities with enthusiasm and interest. One of them started interacting with her classmates more vividly

for the first time. There was evidence that the class could deal with and solve collaboration problems harmoniously and developed tolerance, empathy and acceptance to the difference as a group.

4. Conclusions

In total, implementing the MOV-UP principles in the teaching of science transform teaching and learning in the classroom of this teacher. She explains that children transferred the skills they learned in other subjects too: the children themselves asked to work in groups in math and they came up with the idea each group to create mathematical problems for the others. The also worked collaboratively in literacy and frequently arranged to prepare collaborative work in after school hours, visiting each other's home. Searching for information to answer critical questions was a favorite type of activity and the collaborative writing of stories was children's suggestion.

4.1 How art supported learning in science

Today's science world demands the use of multiple conceptualizations and the use of multiple codes of communication (National Research Council, 2012). The explosion of technology requires that people are ready to develop new handling skills and understanding through self-study and exploration. At this level, symbolic thinking is vital. Art is primarily the use of symbols for the representation on information and ideas (Morrell, 2011). Learning to operate at an artistic level, can be beneficial for abstract thinking and helps human brain to develop connections between elements in new and unusual ways. It comes to none's surprise that children remembered easier information related to artistic activities than information that was just read, recited and learnt by a book. Research confirms this beneficial dimension of art and it is the main reason that STEM has eventually evolved in STEAM, putting art in the basic learning subjects for a balanced education (Pomeroy, 2012). It is for these very reasons that MOV-UP gave special attention to the principles described above and supported teachers who decided to put them into practice in their classes.

4.2 How art and collaborative learning in science supported the development of sustainable motivation and value paradigm

Participation in the aforementioned lessons was enthusiastic and inclusive. Children formed mixed-ability and mixed-ethnicity groups and supported those who needed help to catch up with the demands of collaborative work. Friendships strengthened and students forgot their differences. Although children cultivated their academic skills, they had done so without feeling the stress or the strain, and art offered them alternative ways of communication which made children feel fully functional, integrated and competent. Self-esteem rose even in the case of students with special educational needs who also felt involved and participated in every possible way. Communication through alternative ways was beneficial for non-native speakers as well, who seemed to be well acquainted in the learning process and worked to enrich their vocabulary (see Cutcher, 2018).

So, interest and motivation for learning remained high throughout the process and a democratic way of work and being was well-accepted and reinforced through group work and the continuous collaboration. "Promoting scientific literacy among all of the nation's people is a democratic ideal worthy of focused attention, significant resources, and continuing effort" anyway, as the national Research Council states (2012, p. 277). Moreover, classrooms who develop the characteristics of learning communities utilizing collaborative methods of learning reflect the values of democratic communities (National Research Council, 2012). Broadhead and Gregson (2018) argue that "a democratic education that enables a participative and deliberative pedagogy could potentially resist the 'othering' of non-traditional students, through the encouragement of the virtues of friendship, mutual support, courage and generosity within a cohort" (p. 7). The results of the present case study support the above arguments and highlight the valuable contribution of social constructivism to the development of democratic values.

References

[1] Ampartzaki, M., & Kalogiannakis, M. (2016). Astronomy in Early Childhood Education: A Concept-Based Approach. *Early Childhood Education Journal*, *44*(2), 169-179.

[2] Bertucci A., Conte S., Johnson, D. W. & T. Johnson, R. T. (2010). The Impact of Size of Cooperative Group on Achievement, Social Support, and Self-Esteem, *The Journal of General Psychology: Experimental, Psychological, and Comparative Psychology*, 137:3, 256-272, DOI: 10.1080/00221309.2010.484448

[3] Broadhead, S., & Gregson, M. (2018). *Practical wisdom and democratic education: Phronesis, art and non-traditional students*. Palgrave Macmillan.

[4] Clough, M. P. (2002). Using the laboratory to enhance student learning. In R. W. Bybee (Ed.), *Learning science and the science of learning*, (pp. 85-94). Airlinghton: NSTApress.

[5] Colburn, A. (2000). Constructivism: Science Education's "Grand Unifying Theory", *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 74:1, 9-12, DOI: 10.1080/00098655.2000.11478630

[6] Cutcher, A. L. (2018). Pentimento: An Ethnic Identity Revealed, Concealed, Revealed. In L. Knight & A. L. Curtcher (Eds.), *Arts-Research-Education* (pp. 87-100). Cham: Springer.

[7] Denzin, N. K., & Lincoln, Y. S. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds), The Sage handbook of qualitative research (3rd ed) (pp. 1-32). Thousand Oaks, CA: Sage.

[8] Harlen, W., Macro, C., Reed, K., & Schilling, M. (2003). *Making Progress in Primary Science: A study book for teachers and student teachers*. London: RoutledgeFalmer.

[9] Hill, S. (2004). *Mapping multiliteracies: Children of the new millennium. Report of the research project, 2002-2004*. University of South Australia & South Australian Department of Education and Children's Services.

[10] Inan, H. Z. Inan, T. (2015) 3*H*s Education: Examining handson, heads-on and hearts-on early childhood science education, *International Journal of Science Education*, 37:12, 1974-1991, DOI: 10.1080/09500693.2015.1060369

[11] Jenkins, J. R., Antil, L. R., Wayne, S. K., & Vadasy, P. F. (2003). How cooperative learning works for special education and remedial students. *Exceptional children*, *69*(3), 279-292.

[12] Johnson, D. W., & Johnson, R. T. (1983). The socialization and achievement crisis: Are cooperative learning experiences the solution? **Applied Social Psychology Annual, 4,** 119–164.

[13] Morrell, M. (2011). Signs and Symbols: Art and Language in Art Therapy. *Journal of Clinical Art Therapy,* 1(1), 25-32, Retrieved December 16, 2019, from: http://digitalcommons.lmu.edu/jcat/vol1/iss1/8

[14] MOV-UP (n.d.). About the MOV-UP project. Retrieved December 16, 2019, from: http://movup-project.eu/about-mov-up/

[15] National Research Council (2012). A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas. Committee on a Conceptual Framework for New K-12 Science Education Standards. Board on Science Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

[16] NGSS Lead States (2013). *Next Generation Science Standards: For States, By States.* Washington, DC: The National Academies Press.

[17] Opfermann, M., Schmeck, A., & Fischer, H. E. (2017). Multiple Representations in Physics and Science Education–Why Should We Use Them? In D. F. Tragust, R. Duit, H. E., & Fischer (Eds.), *Multiple representations in physics education* (pp. 1-22). Cham: Springer.

[18] Pomeroy, S. R. (2012, August). From STEM to STEAM: Science and art go hand-in-hand. Scientific American. Retrieved December 16, 2019, from http://blogs.scientificamerican.com/guestblog/ 2012/08/22/from-stem-to-steam-scienceand-the-arts-go-hand-in-hand/

[19] Sgouros, G., & Stavrou, D. (2019). Teachers' professional development in Nanoscience and nanotechnology in the context of a Community of Learners. *International Journal of Science Education, 41*(15), 2070–2093

[20] Slavin, R. E. (1990). Research on cooperative learning: Consensus and controversy. *Educational leadership*, *47*(4), 52-54.

[21] Stavrou, D., Michailidi, E., & Sgouros, G. (2018). Development and dissemination of a teaching learning sequence on nanoscience and nanotechnology in a context of communities of learners. *Chemistry Education Research and Practice, 19*(4), 1065-1080.

[22] Strauss, A., & Corbin, J. (1998). *Basics of qualitative research techniques*. Thousand Oaks, CA: Sage.

[23] The New London Group (2000). A pedagogy of Multiliteracies designing social futures. In B. Cope, & M. Kalantzis (Eds), *Multiliteracies. Literacy learning and the design of social futures* (pp. 9-36). London: Routledge.
[24] Wickman, P.-O. (2008). *Aesthetic experience in science education: Learning and meaning-making as situated talk and action*. Taylor & Francis e-Library.

Maria Ampartzaki *is a Permanent Assistant Professor of Early Childhood Education at the Department of Preschool Education at the University of Crete. Her research interests include action research, science education, art-based and inquiry-based education, and ICT in education among others.*

Anna Stavroulaki *is a Primary Teacher and her research interests relate to the teaching of early reading and writing, local history, theater games and science education.*

Michail Kalogiannakis *is an Associate Professor of Early Years Science Education at the Department of Preschool Education at the University of Crete. His research interests include science teaching and learning, the use of ICT in science education and mobile learning.*

Vasiliki Giannakou *is a Preschool Teacher. She holds an MA in Early Childhood Education. She is currently undertaking doctoral work on the development, evaluation and assessment of educational programs about history in early years.*

Nikolaos Gerakianakis *is a post-graduate student at the Department of Pre-School Education at The University of Crete. He is also a music expert and his research interests include art-based and music education and applications of ICT in Pre-School Education.*

University Lead Collaborative Interventions in a School With High School Dropouts: School Based Community Work

H. Özden Bademci
Maltepe University Research and Application Centre for Street Children
Turkey

Increasing number of practitioners recognize the importance of viewing families and schools as open systems in constant interrelationship with each other. Family and school are the most influential systems affecting an individual's development. While securely attached children are able to explore the world more freely and feel the constant support of their parents when they need it, insecure children are less autonomous and more likely to have problems at school. Whether the school and the family agree on what causes the problem, they tend to be united in recognizing the problem of the child. The project presented in this paper is led by Maltepe University Research and Application Centre for Street Involved Children (SOYAÇ) in partnership with the district education directorate, the district health directorate and the district social services directorate. The project aims to facilitate communication and ensure collaboration between school, staff and family members for the development of trust between them that is essential for the child to feel safe. The project has been carried out in a school with high school dropouts in one of the most deprived neighbourhood of Istanbul where the parents expect the children to work on the streets. Our intervention aims to bring the family and school systems together as part of a therapeutic strategy to support children in school. An ongoing school-based intervention has helped school staff develop skills to contain the problem in the school. The relationship between family and school systems and the implications for therapeutic interventions will be discussed in the framework of socioemotional learning with a systemic perspective.

1. Introduction

SOYAÇ work, continued since 2006 with children in the marginalised high risk group and their families has demonstrated the lack of effective protective/preventive mechanisms to identify and support the social, emotional and physical development of the children exposed to neglect and abuse in the home, and that some of the currently implemented measures are capable of further disadvantaging these children [1].

Since the family medicine in Turkey focuses primarily on the physical health of infants/children, those children neglected and abused in the family generally come to the attention of the school teachers as ''problem children'' through behavioural problems and poor academic performance. The current examination- indexed system of education in Turkey causes the predominance of fear and competition in the children by not sufficiently prioritising their social and emotional needs. Children exposed to maltreatment in the family, unlike those given support for self-esteem, respect and confidence in safe families, experience suppressive effects on their feelings of curiosity and excitement for learning, and get pushed out of the education system by finding school life difficult [2]. Not being able to focus on lessons and displaying behaviours that disturb their teachers and peers is expected from restless and unhappy children who unconsciously draw the attention of 'grown up' individuals to the risky condition they exist in**.** Such behaviours are the outcomes of developmental traumas. Not being familiar with safety, kindness and inclusiveness in the family, their manner of 'asking for help' further hurts them [3]. Trauma informed education is recommended by educational experts by being, aware of the relationship between developmental trauma and learning abilities and the necessity of educational programs that ensure feeling safe in school that supports social and emotional development [4].

The functions of schools and their contribution to the lives of the children brought up in safe families that support sportive and artistic activities have been the subject of discussion. It will not be claiming much to argue that schools have a very important function in the lives of the socially disadvantaged children facing the risks of neglect and abuse. Not seeing the social and emotional development of children within the scope of the teacher's responsibilities [3] and being indexed on academic success distances these disadvantaged children from the school where, ironically, their problems are first discovered [2].
Starting school by the disadvantaged children does not mean that they have reached complete education and that their educational rights are safeguarded [2]. To ensure the continuity of their education they need to be supported in school by the collaboration of the teachers with their families [3]. On the contrary, after having started primary education at a rear position by not having received preschool education on account of mainly poverty, the disadvantages of not getting the needed teacher-family support is seen to turn in time to an ever widening difference from the others that is difficult to reverse.

The significant effect of preschool education in the academic and psychosocial development of children is even more apparent in the case of the disadvantaged children. Having economical restraints, working mothers, lack of knowledge of the nursery education system and role models by family members continuing with education, maltreatment of elder siblings in primary school are examples to only some of the impediments to preschool education of the disadvantaged children. Also, it has been witnessed during SOYAÇ work that demanding school and stationary fees from parents for the state provided pre-school nursery education is a definite deterrent for many families as well as contributing to the marginalisation of these children by teachers and other children, and that some families are not even given information on registering children in nursery schools. Home visits have shown how eager the families are for nursery education.

Turkey has accepted to educate every individual up to the age of 18 by signing the Convention on the Rights of the Child. However, it is not possible to make a clear cut evaluation of the real situation of the child in Turkey on the basis of any signed documents by Turkey. Looking at the prevailing applications, it can be seen that the child rights to education can be easily lost [2]. Any dismissal of children from school is not overseen and evaluated by any upper authority and not queried appropriately by the families at borderline of poverty which demonstrates the social class role in the denial of education and leaving the children alone to face the risks and dangers, such as being pushed to crime, by the existing system and their families [2]. It is possible to see school children working in the streets or incarcerated in prisons. The next meeting of these children with the system is when getting punished for a conflict with the law. Therefore, school based community work for the benefit of the children in these risk groups is very important.

1.1. School Based Community Work

Work at SOYAÇ has been continuing as school based community work since 2015. SOYAÇ has adopted the principles of university-community collaboration for the development of the community. The work carried out in collaboration with the civil authorities appointed by the state and public organisations is based on trauma informed education involving the whole school approach for learning.
These works are conducted in a school with the highest incidence of dropping out, with children vacillating between school and the street, in a district known for childhood marriage. SOYAÇ aims to support the psychological, social, physiological, and academic development of the children by including the families in the program. The school focused work is not solely limited to the school in that, while, on the one hand, the school is fortified to include the children , those school registered absentee children are reached by the help of the school and state institutions
The principal SOYAÇ team comprises the teaching staff and the students of the university psychology department. Teachers and students from other departments such as social services, nursing, nutrition and child development also take on duties in the programmed work. SOYAÇ works, combining theory and practice and included in the university curricula to ensure a scientific and ethical basis are carried out without fiscal aiding.
The biopsychosocial approach of SOYAÇ works are carried out with an understanding of the system and sensitivity to the sociocultural makeup of the children and the families. It is indicated that school teachers should not be left alone to manage the children burdened with strong social and emotional needs and displaying difficulty to comply with school life. The teams formed from diverse disciplines have to work with an understanding of team based learning and an interdisciplinary approach of close mingling as against being side by side.

The planned support given to all families and children comprises functions such as psychosocial group support and education on healthy nutrition. The school social program coordinates the interrelationship between families and the collaborating institutions. House visits are made to the families with children not attending school. Attempts are made to establish ties with the district social services and health directorates. The Area Women's Project Coordination Committee has been founded encouraging the women to take active roles in the planning and continuation of the activities. Psychosocial group support is given specifically to those children under high risk and their families. These activities include:

- Peer based therapeutic group support by establishing attachment relationship
- Psychosocial support to the families
- Psychosocial support given at school to the siblings at nursery
- Social activities

It is aimed to ensure the school environment is safe and inclusive for the social and emotional development of the children. There are separate studies to achieve a unison between the school staff and the large group of diploma and postgraduate university students to work with a team spirit. The students, forming the largest group in the team, are volunteers working within the scope of their syllabuses and theses. All activities included in the project have a therapeutic aim. For example when working on the subject of hand hygiene, the students know this topic to be a means to establish a relationship with the children. It is desired to exceed mere informing and cognition in all activities. Having understanding and attentive individuals around them as friends and role models enables the children to form healthy relationships and relinquish antisocial attitudes and behaviours, developed mainly for self defense and coping with maltreatment, and in time to internalise new attitudes and behaviours.

The very important roles and responsibilities of the students at this point can be summarised as follows:

- Forming secure relationships with defined borders with the children
- Forming all inclusive relationships and not allowing any child in the group to be ignored or forgotten,
- To be role models for the children
- To be attuned to the clues given by the children when in contact and to act in rhythm with their emotions
- Instead of expecting the children to conform to one's own plans and habits, to interact with the principle of preparedness (‘’ here and now’’)
- Displaying to the children a decided and valid attitude that they are willing to work and decided in not changing their minds,
- Acting as a team to form a safe social environment assuring the children of being included, remembered and experienced.
- To be aware that the children with past and current experiences of being rough handled can display evasive or aggressive behaviours
- To approach with a kind inquisitive attitude without judging
- To display a very good self care
- Not to share social media coordinates or telephone numbers, not to exchange gifts with the children.
- To share the SOYAÇ Volunteer Contract with the children when starting to work with them

Activities have been planned to support the students throughout the working programs:

- Always being accompanied by the teaching staff of the school the team is working at.
- Receiving supervision support before and after the activities
- Receiving supervision from teaching staff of the different disciplines they come from.
- Presence of a student's committee
- Regularly getting together as a group and organising group work to strengthen interrelationships
- Inclusion of a drama creator during these group works

1.2. The Whole School Approach -Team Based Collaborative Learning

SOYAÇ teams and all school staff headed by the teachers work in full collaboration on the basis of principles and regulations summarised below:

- The ‘whole school approach’’ is achieved by inclusion of all school staff members İncluding the security officers and the canteen operator
- Project activities are run totally by the active participation of the school directorate, the school psychologist and teachers
- Contents of the project activities are shaped according to the needs of the children, their families and teachers.
- Teacher representation is organised enabling the representatives to integrate with the teachers and students of the university departments involved in each project.
- Project teams are engaged in various social activities and group studies to strengthen intercommunication with each other. For example the ‘’group accord’’ study was one of the group activities prepared by the dance and movement therapist for the attendance of the entire team.
- A common time for meeting each week on Fridays outside the school hours has been nominated when a specialist psychologist and two other psychologists give psychosocial group support to the school teachers. In order to create a safe area in the school, these weekly get together are started with exercises of somatic mindfulness. In these meetings, topics on the coordination and evaluation of the works are discussed and the recommendations and comments of the teachers are heard by the group. Also, case discussions are made and specialists are invited to the group to meet the needs of the teachers. In meetings not requiring privacy in sharing information, ancillary teaching and management staff are also invited to the meetings.
- Each school teacher is coupled with a psychologist training for a postgraduate degree in clinical psychology, and each teacher’s team also includes trainee students in school nursing, social services and nutrition.
- Team members from different disciplines working with the teachers determine specific learning targets for each child. Final year psychology students who give peer support to the child they follow also join the team of the class teacher.
- The RESCUR Program [5] has been developed, adapted to the Turkish language and integrated into the work to enable the teachers support the social and emotional development of the children by strengthening the psychological resilience of the children. The program consists of various activities performed twice per week to help develop the psychosocial skills such as empathy, listening and positive thinking. Each activity also includes a home study. Each teacher is supported in this program by his/her psychologist and the trainee students from different disciplines.
- Teachers are regularly joined by a specialist with previous experience of teaching once every two weeks to experience and internalise mindfullness exerciseS and to start lessons with this exercise to adapt it to the running of their own class system.

2. Discussion And Conclusion

SOYAÇ Projects are successful examples of university-community collaboration. Serving the community is among the responsibilities of the universities. Collaborative implementation of SOYAÇ projects enables the development of research and application activities to form the basis of interdisciplinary and holistic interventions and services for the high-risk children and their families implemented in compliance with ethical and scientific methods. At the same time, the volunteering university students gain international, intercultural, intersectoral and interdisciplinary field experience. The projects facilitate preparation of the students for real life by facilitating their development in accord with the realities and needs of the community**.** Information and experience sharing by national and international collaborations is done at the highest level within the scope of the works, strengthening the students with respect to professional acumen, adequacy and enterprising.
In socially marginalised and very poor areas, teachers are trying to educate children with extreme needs and the least family support, many of whom are even then expected to contribute to the family economy. This degree of poverty and exclusion increases the existing risks of abuse directed to the children. The

teachers are helpless and some experience burn out by having to face the living conditions in the area and to cope with the adaptation problems of the children to school life. The existing conditions therefore only contribute to the vicious circle of neglect and abuse in the lives of these children.

SOYAÇ projects face the problems of the children in a similarly marginalised area with the ‘’whole school approach’’, to help realise education with trauma awareness and knowledge. The ‘school based’ systematic interdisciplinary programs are implemented by allocating responsibilities to all school staff headed by the teachers without interfering with the running of the school and the families of the children are also integrated with home visits. During the running and at the completion of each program, studies are undertaken with the teachers, the children and the university students participating in the program for qualitative assessment of in depth interviews, observations and reports on individuals evaluated by using quantitative research methods, the results of which demonstrate positive developments for all the participants[3] [6].

It has been aimed to create a school environment where all staff members and the children feel secure and contained. The SOYAÇ programs attempt to meet the psychological, social and physical needs of the children , their families and of the school staff . The teachers are given support for the enablement of forming secure relationships with the children based on understanding and helping them develop socially and emotionally. The teachers, when approached with empathy, respect and attention to their thoughts, become motivated to approach the children with attention, affection and interest in their needs. Evaluation of the outcomes of the whole school approach has shown that the teachers have come to understand the attitudes and behaviours of the children without blaming or treating them as medical problems, with an awareness of the children’s reactions as well as their own and by discovering the relational dimension of interaction. They are aware that the maladapted and restless behaviour of the children is an attempt to draw attention to their emotional and social needs. Thus, forming trust-based relationships has replaced the hard class management approach. The teachers now know that academic success is only a result while the important contribution is that made to the proper psychosocial development of the children through trust-based relationships. They have begun to recognise their responsibilities in being important actors in the lives of these children.

The success of the teacher support has been in appointing a team including a psychologist, and professional trainees in social services, nursing and nutrition to each teacher for active collaboration. Now, the teachers with their teams go to the homes of children avoiding school or creating problems in school; they seek help for reaching the children by active cooperation wish the project team; they regularly join the case discussions in school and share all emotions and thoughts in groups. As it can be seen, transforming the school environment for all its attendants to feel secure and contained cannot be left to the teachers alone and requires a comprehensive interdisciplinary collaboration to be able to prevent the vicious circle of neglect and abuse.

The benefits of SOYAÇ programs are shared by the participating university students as well as the local community. Including in the university curriculum the combination of theory and practice in social responsibility has contributed not only academic gains but also to the individual and social development of the students by getting to know and understand the marginalised young population and their families within the critical sociocultural environment they survive in [7]. The experience of planned and supervised work in the community with a multidiscplinary team, familiarity with alternative fields of work through the regular relationships with institutions, managers, teachers, children and fellow students as well as the supervised education prepares them to professional life with gains that again can be summarised here as development of skills in empathy, comprehension, observation, interpersonal communication, therapeutic approaches, putting theory to practice, overcoming difficulty, modifying points of view, team work, as well as self and professional confidence in postgraduate life.

References

[1] Bademci, H. Ö. (2012). ‘Working with vulnerable children’: Listening to the views of the service providers working with Street children in Istanbul. Children and youth services review, 34(4), 725-734.
[2] Bademci, H. Ö., Karadayı, E. F., & Vural, N. B. (2016). Exploring school exclusion through the perspective of child labourers living in Sultanbeyli, on the periphery of Istanbul, Turkey. International Journal of Educational Development, 50, 51-58.
[3] Bademci, H. Ö., Warfa, N., Bağdatlı Vural, N., Karadayı, E. F., Yurt S., Karasar Ş.,(2019).

Teachers' perceptions of an attachment-informed psychosocial programme for school children with social and emotional problems in Istanbul, Turkey, *Journal of Social Work Practice: Psychotherapeutic Approaches in Health, Welfare and the Community*, 1-13
[4] Brunzell, T., Stokes, H., & Waters, L. (2016). Trauma-informed positive education: Using positive psychology to strengthen vulnerable students. *Contemporary School Psychology*, 20(1), 63–83.
[5] Cefai, C., Cavioni, V., Bartolo, P., Simoes, C., Miljevic-Ridicki, R., Bouilet, D. et al. (2015). Social inclusion and social justice: A resilience curriculum for early years and elementary schools in Europe. *Journal for Multicultural Education*, 9(3), 122-139.
[6] Bademci, H. Ö., Karadayı, E. F., Pur Karabulut, İ. G., Bağdatlı Vural, N. (2018) "The Prevention of Early School Leaving by Increasing Students' Self-Esteem", *Turkish Psychological Articles,* 21(41), 60-73
[7] Gokler Danışman, I. & H. Ö. Bademci, (2013) Enabling Responsible Living by Increasing Social Awareness: Integrating Social Responsibility Projects Into Undergraduate Curriculum, (Eds: U. Schrader, V. Fricke, D. Doyle, V. W. Thoresen), In Enabling Responsible Living 129-143 pp., Berlin/Heidelberg, Springer,

H. Özden Bademci *– Assoc. Prof. in Clinical Psychology at Maltepe University, founding Director SOYAC. She obtained BSc degree in Psychology from Ege University(Turley). MA in Psychoanalytic Observational Studies from Tavistock Clinic and PhD from the University of Kent (UK). Following her PhD research on the phenomena of street children, Özden has played a leading role in the establishment of the first University Centre in Turkey that is dedicated to address the rehabilitation and protection needs of vulnerable children. Dr. Bademci carries out national and international research studies, consultancy work, teaching activities and practical projects which are intended to build on the resilience of vulnerable children and young people.*

SAFER: Demystifying gender stereotypes through Gender Sensitive Pedagogy

Cloé Saint-Nom
CESIE
Italy

"Boys have to be strong and love playing soccer while girls should be kind and look after their babies"

Within our societies, gender norms are passed on to children through media, advertisements, toys and even by their parents. From an early age, both boys and girls are encouraged to behave, play and look according to a rigid code of conduct that reduce the opportunities to express themselves. Furthermore, different cultures have different conceptions about gender roles, gender stereotypes.
But the detrimental effect and influence such expectations, preconceptions, exclusion, discrimination, gender-based violence have on children is the same worldwide. As so is the importance of eradicating such statements and promoting tolerance, self-awareness and gender equality all around the globe.

This is the aim of SAFER- Systematic Approaches for Equality of gender project which aims at preventing, encouraging reporting and combating gender-based violence (GBV) against children fostering a systematic approach in cultivating life skills, building healthy relationships, adopting and maintaining values, and increasing resilience and personal strength. SAFER's approach is based on Gender Sensitive Pedagogy (GSP) understood as the pedagogical measure deployed to reach gender and equity goals, an approach that promotes a learning process that pays close attention to identification and critique of gender stereotypical behaviours. It focuses on key areas such as classroom set-up, lesson planning, teacher-learner interaction, delivery methodology, language use, resources for teaching and assessment, and school or institutional management (Njambi et al. 2016). Gender Sensitive Pedagogy positions teachers at the centre of the learning process where they act as a 'gender-conscious critical friend' to students, gaining self-awareness of their gender roles which enables students to examine their own gender positioning.

With this in mind, CESIE participated to the International conference "Policies, Practices and Qualifications in Early Childhood Education" in Istanbul on the 19th October 2019 to moderate a session related to gender education in early childhood from a Gender Sensitive Pedagogy perspective. The topic in question was 'Encouraging reflection of primary school students on attitudes towards gender and gender-based violence', based on the methods and resources developed by the SAFER project. The activity proposed was based on the decentration method by Margalit Cohen Emerique (2016). Decentering is based on the idea that individuals look at the world and understand everything and everyone around them from the point of view of their own "cultural framework". The cultural framework is the set of beliefs, norms, values, preconceptions, models and practices that we acquire throughout our life, and that become the metaphorical glasses through which we conceive the world and behave in it. (SAFER Manual, 2019) During the activity, participants identified and discussed their own values, beliefs and preconceptions about gender and gender stereotypes, and how gender stereotypes can be detrimental to the point of being connected to gender-based violence.

The importance lays on the need to demystify false-myths and prejudices and discovered how our social and cultural set of beliefs and norms pose limits and affect our behavior, shaping and defining our gender identity and those of students by extension. (CESIE, 2019)Therefore, teaching gender equality to teachers and the youngest learners could be a way to debunk gender stereotype diversity, tackle GBV and instead, building healthy relationships, increasing resilience and personal strength. (ibid)

References

[1] Njambi et al. (2016). Documentation of Gender Responsive as a Best Practice by the Forum for AfricanWomen, Forum for African Women Educationalists Educationalists (FAWE)
[2] Margalit Cohen Emerique (2016). Il metodo degli shock culturali. Manuale di formazione per il lavoro sociale e umanitario, Ed. F. Angeli
[3] SAFER Manual (2019). D3.2 Activities Handbook, Activities designed to Prevent and Combat Gender-based Violence through the use of Positive Psychology Principles. SAFER - Systematic Approaches for Gender Equality, Co-funded by the Rights, Equality and Justice (REC) Programme of the European Union.
[4] CESIE (2019). SAFER Final conference – Preventing gender-based violence from a young age, 6 December 2019. Available at: https://cesie.org/en/news/safer-final-conference/

Cloé Saint-Nom *is project manager in the Youth and Rights & Justice Units at CESIE. She holds a MSc in Global Development from University of Copenhagen, Denmark and a Bachelor's Degree in International Relations from Universidad del Salvador, Argentina.*
Sheis an experienced mixed-methods researcher with a focus on ethnographic methods. She has been working in the fields of intercultural education, human rights, development and minor and adult mobility for years.In 2015 she entered the field of citizenship education and started working with minors with disadvantaged backgrounds regarding environmental issues, human rights and entrepreneurism. Her work experience doted her of competences in use of formal and non-formal methods in youth and adult education.
For the past year Cloé has managed Erasmus + and REC programme cooperation projects in the fields of youth, migration, school and rights and justice. Her expertise spans from gender-based and sexual violence issues, innovative learning methods for engagement of young offenders, adult migrants' education, mentoring, sports and violence prevention.

Discussing in front borders and crossroads seeking for awareness and inclusion

Dr Sofia Trouli
Museum of Contemporary Art of Crete
Greece

In this paper we discuss how we can introduce observing a work of art in the classroom and have the benefits of museum learning experiences even if we cannot visit a museum. The selected artwork belongs to the Turkish artist Volkan Aslan and its title is "Home Sweet Home" and was presented in the 15th Biennale of Istanbul. The objective of the workshop is to show how we can approach and experience difficult issues such as the notions of neighbor, home and displacement. We focus more on developing self-reflection and dialogue, fostering critical thinking through artful thinking and eliciting new questions on the issues being discussed. The cultivated competencies, during the workshop, are the self-awareness, self-management, social awareness, relationship skills, responsible decision making but also the raise of inclusiveness within the school communities and the understanding of the reality of being a newcomer, a new neighbor even in the classroom, We present strategies how we can approach societal issues such as the question of the complexity of the neighbor in our classroom using artworks of contemporary art. The followed methodologies were the learning by doing, the Socratic method of questioning and inquiry learning and the artful thinking. We believe that art can be a useful tool for discussing such subjects, because art offers us the opportunity to reflect on the different point of views and share our own thoughts and emotions. The expected outcome of the workshop ise to increase understanding of strategies that may help teachers introduce museum learning experiences in their classrooms and more specific artworks.

1. Introduction

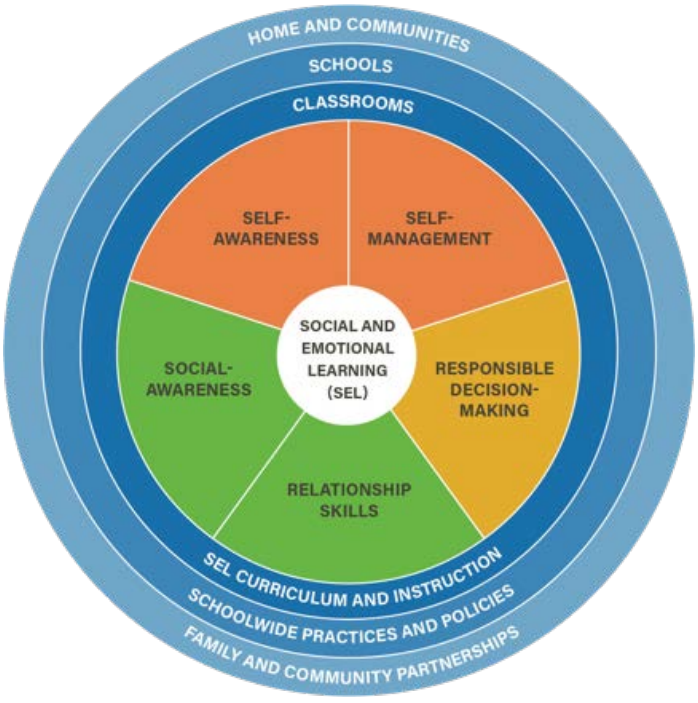
The museums are environments of learning as reported by the typical definition of the ICOM (International Council of Museum), adopted in 2007, but also by the definitions of many others international or national associations [1]. According to the preschool education program In Turkey, teaching should be offered not only in classrooms but also in places outside classrooms likely to boost learning [2]. No doubt learning is a process based on multiple experiences and it is not only confined to classrooms, books and texts, but also in museums, libraries, gardens, planetaria etc,. But what will happen if a school trip cannot be organised? This paper discusses the possibility of organising a museum experience workshop in the classroom to facilitate active and effective learning through multimodal interaction with artworks (photos of them, copies or even but more rare authentic ones).

At the same time, nowadays the museums become more and more conscious of their social role they play and there is a vibrant discussion about the broaden of the museum definition empowering communities through arts and education [3]. The under-discussion definition suggests that museums are democratising, inclusive and polyphonic spaces for critical dialogue about the past and the future. Acknowledging and addressing the conflicts and challenges of the present, they hold artefacts and specimens in trust for society safeguard diverse memories for future generations and guarantee equal rights and equal access to heritage for all people [4]. For all these reasons museums are very interesting in elaborating new synergies and especially with schools, training the teachers to organise themselves on museums but also in their classrooms artful thinking experiences. In this paper, we present certain methodologies of introducing art in the classroom in order to discuss the issue of the newcomers and of new neighbours, but also in a general context the notions of borders and crossroads, not only among countries, our continents, but even among people, even in our own neighbourhood or in our own school. Naturally these issues are very difficult and complicated to be discussed and analysed but art may help as to reflect on them and discuss the different point of views.

2. The methodology

Nowadays our brains are being bombarded with images. We do not have time to reflect on them and form our own thoughts. We have never time to slow down and this situation is the same everywhere. In schools for example the teachers often complaint that they don't have time, that they have to run in order to follow the curriculum. In the museums in 2016, researchers who studied a group of visitors at New York's Metropolitan Museum of Art found that the mean time spent looking at a work was only 28.63 seconds [5]. For that reason, many museums follow the *slow art day project*, which is a global event with a simple mission: help people discover for themselves the joy of looking at and loving art [6]. When people spare time to look slowly art, the most important discovery they make is that they can see, experience art and discuss about art, without an expert or expertise. And this discovery unlocks emotions, experiences, creativity, but also critical thinking and dialogue. However**,** there are methodologies that can be followed. The Weisman Art Museum, for example, teaches a year-round method called "perceive" to aid in the process of approaching, seeing, and understanding art in four steps: Step 1 engage your senses, step 2 reflect, step 3 get emotional step 4 question everything [7]. The Manchester Art Gallery has hosted a whole exhibition based on slow looking and mindfulness in museum [8]. It is an exhibition that invites us to slow down and nurture our mental and emotional well-being through interacting with art.

In addition, in the context of social and emotional learning for young learners art opens up opportunities for deeper discussions and especially through inquiry based learning through art [9]. We can be intentional in creating these kinds of experiences in schools by integrating the arts with social and emotional learning (SEL), which is all about knowing and managing yourself and being able to empathize and interact well with others. The arts are highly engaging and can be naturally embedded in SEL. Integrating the arts to foster SEL strategies into your elementary classroom will create a safe and supportive environment that encourages individuality, a growth mindset, and collaboration [10][11].



Fig, 1 **Collaborative for Academic, Social, and Emotional Learning** (**CASEL**), Core Competencies

The methodologies of artful thinking and the visible thinking routines that booster the Socratic method of questioning and the artful inquiry offer to us multiple tools to adopt in order to use works of art in classroom. Artful thinking helps students and teachers to experience and appreciate art as a method that help them develop multiple ways of thinking and support thoughtful learning [12].

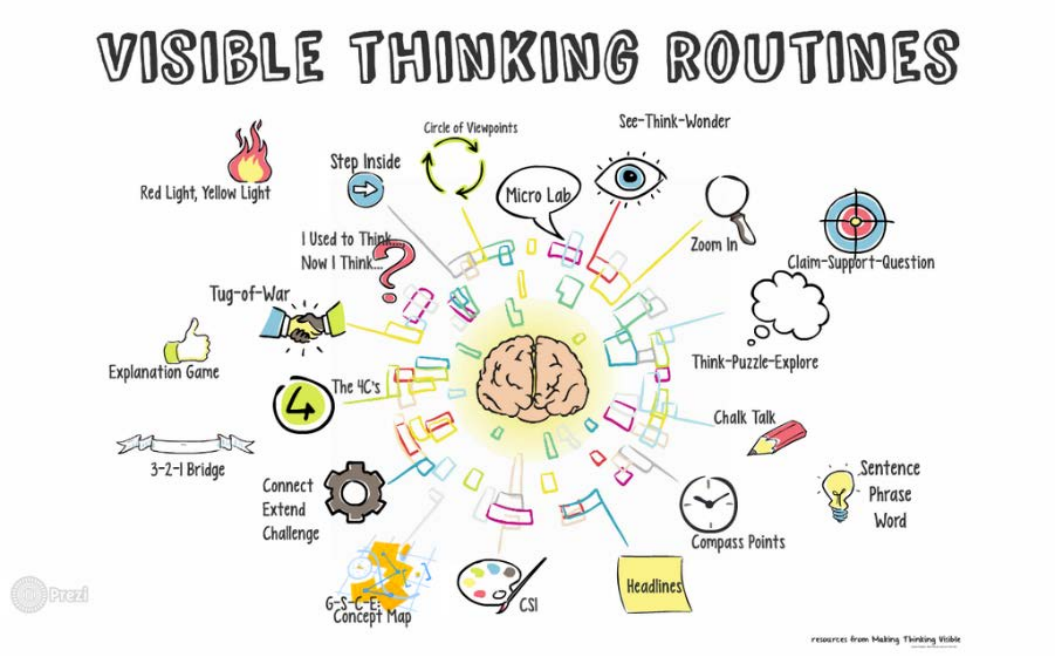


Fig. 2 Graphic of the visible thinking routines [13]

3. The selection of the artwork

The first step of organising a workshop based on artful thinking and art inquiry is the selection of the artworks. If we are in museum, we select 5 to 8 artworks that may support the discussion to evoke questions, awaken creative thinking and promote dialogue. Due to short time of our workshop we have decided to approach only one artwork exhibited in the 15th Biennale of Istanbul.

The 15th edition of Turkey's most important contemporary art event was curated by the Scandinavian Michael Elmgreen & Ingar Dragset, and takes as its theme "what makes a good neighbor". They curators explained that the notion of "'a good neighbor' deal with multiple notions of home and neighborhoods, exploring how living modes in our private spheres have changed throughout the past decades. Home is approached as an indicator of diverse identities and a vehicle for self-expression, and neighborhood as a micro-universe exemplifying some of the challenges, we face in terms of co-existence today [14][15].

Volkan Aslan's three-channel video *Home Sweet Home* (2017) was shown at 15th Istanbul Biennial. With his three-channel video installation, Volkan Aslan questions the boundaries between the sedentary and the nomadic, the indoor and the outdoor, the safe and the unsafe situations, pointing out to the fragility of the current state of each and every one of us. The subject of displacement formed another crucial pillar in building up the theme of neighborliness and was concretized in Volkan Aslan's newly commissioned video "Home Sweet Home" (2017), which depicts two female protagonists living on a dilapidated boat along the Bosphorus. The video was co-presented and staged at a house belonging to the Elgiz Museum on the Greek Island of Lesvos (also installed in three-channel form at the Istanbul Modern) [16]. As one of the main points of entry for people attempting to enter Europe through the continent's southern border, Lesvos has been in the media as of late for playing host to thousands of refugees fleeing global wars and conflicts.

However, we keep all this information for the end of the workshop. It is very important to emphasize that neither the participants of this workshop nor our potential classroom need this knowledge to approach the work of art. Using certain strategies we can observe the artwork and reflect on the issues of the newcomer, the neighbor, the borders and the crossroads without having any information about the artist or his work. Certainly, after having presented our reflections and emotions awakened by the observation of the artwork, we may share details related to the artwork itself and the artist. Moreover, for our workshop we have used 6 different images of this video art work (Fig 3-5)

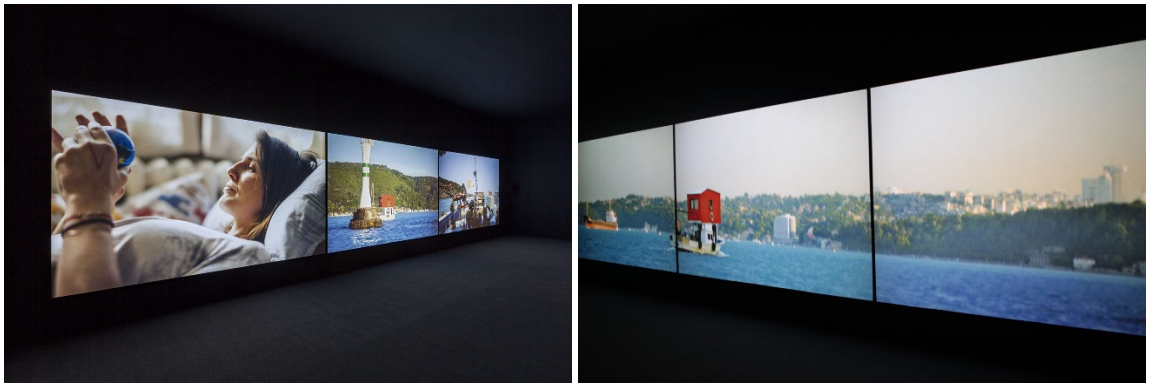


Fig. 3

Fig 4

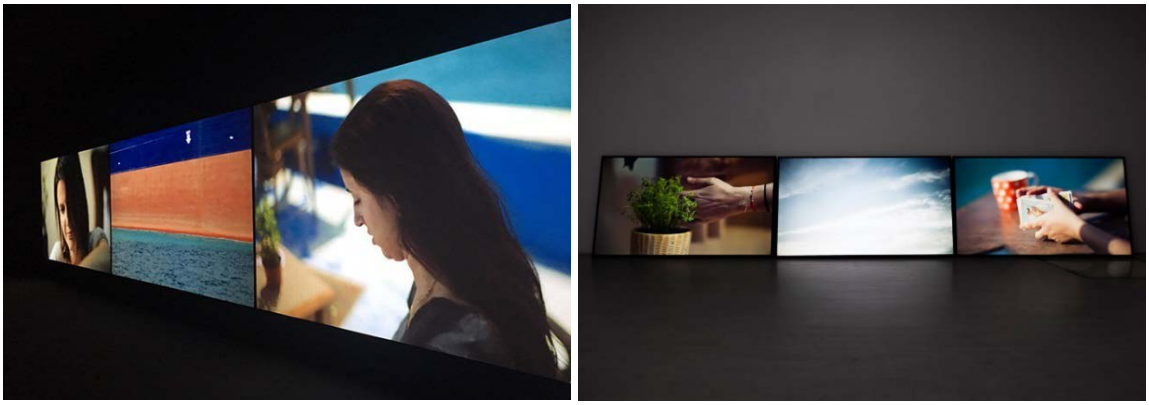


Fig. 5

4. The workshop

The workshop is structured in four phases following the same model with an educational program in the Museum of Contemporary Art of Crete [17]: the first phase of relax, ice breaker and get to know each other activities, the second phase of introduction to the subject, the third phase of reflection on the subject and the fourth phase of creative evaluation and emotional discharge.

4.1 First phase

The first phase helps to relieve stress, from them participants and prepare them holistically for the workshop cultivating the competencies of self-awareness and self-management. It is important for the whole procedure as also generally for the learning procedures to get a sense of being here and now, to regulate the emotions and then be aware of our breathing through activities of mindfulness in education

[18][19][20][21]. At the same time during this phase the participants of the group are getting to know each other.

For the first breathing activity, imagine that you have in front of you your favorite flower. If you want, you can close your eyes. Take a deep breath from the nose, smelling it. Be aware that you are basically all right, right now. There is enough air to breathe, you are doing ok. Have the exhalation through the mouth and imagine now that you blow its leaves. The exhalation might be longer than the inhalation. Repeat 3-4 times.

The second breathing activity is the 4x4x4x4 count breathing, also known as box breathing, which creates a rhythm that can be a helpful for stress relief and remind to the body to take deeper breathes. We inhale for a count of four seconds, hold the inhale for a count of four seconds, exhale for a count of four seconds and hold the exhale for a count of four seconds [22].

To have a first meeting each other, let's stand up and move loosely in the room. When we meet somebody, we tell him or her good morning and our name in our native language, making a gesture if we want, shaking the hands, smiling, or something similar.

The third activity is name activity but at the same time an introductory activity to the second phase. We will use the yarn web -Stand up in a circle with everyone facing inward toward the center of the circle.- The first who holds the yarn: tell everyone your name and one thing that you always take with you when you leave your house. Then hold firmly to the end of the string, at the same time quickly wrap the loose end of the yarn around your finger and then toss the ball of the string to someone else in the circle who has not yet received the string. The person receiving the string gives his/her name and one thing he/she always take with him/her. Then, holding firmly onto the string, he or she tosses the ball on to another person. The string should be held tightly and above the ground at all times. Continue until everyone has received the string. -At the end we pull the string tight. What it looks alike? - What this web reminds you? -How do we feel -Now we have to roll the yarn into a ball, going from the end to the beginning? Get up and reach the other. You should pass the obstacles, not touching the string. Each one of us tells the name of the one giving the yarn and share his/her own expectation of the workshop. Then he/she takes he/her place, and the other starts his/her journey until the whole yarn is rolled into a ball.

4.2 Second phase

During the second phase we are trying to approach the main notions of the workshop, which are the concepts of borders, crossroads and neighborhood. We aim to explore the previous experiences of the participants about the discussed notions and at the same time to build team bonding and first reflections on the subject through fun and kinesthetic activities. The first activity is based on the technique of brainstorming. We ask the participants if they listen to the word "borders", which pictures come to their minds. Similar, when they listen to the word "crossroads". We write down the answers and then we discuss.

The second activity of this phase calls the participants to take a paper and a pen. Then we ask them to rip the paper in 2 pieces and then think what a good neighbor is for them and write down some words or sketch on their piece of paper anonymously. We give them 3-4 minutes. Then we tell them to crumple the paper and gather in a circle. We ask them to get rid of stress and throw the paper balls everywhere. Take others from the floor and throw them again. At the end everybody gets a snowball. We open someone else's snowball and read aloud. Some of the participants' answers were that a good neighbor is someone with patience, smile.

The third activity is a kinesthetic one of understanding the notion of borders and crossroads in geography and the notion of displacement. This activity is known as *Land and Sea* [23]. We need a long rope that call out commands *land (Asia, Europe)*, *sea (Mediterranean, Sea of Marmara, Black Sea)*, or *air*. Participants' feet should always remain together. When we say Air, participants must hop into the air. And land in the same place they have started. When we say: Asia or Europe, they must place their toes behind the line. If they are already behind the line, they must not move their feet. If they are in front of the line, they must hop backward with both feet landing behind the line. When we say *Mediterranean, Sea of Marmara, Black Sea you* must place their feet entirely in front of the line. If they are already in front of the line, they must not move their feet. If they are behind the line, they must hop forward with both feet landing entirely in front of the line. Players should always remain facing forward. If players

make a mistake, they must run to a pre-identify location such as another line–and touch it before returning to the game.
The fourth activity is a creative one. Make your home out of paper and as you make it, think about what a home is for you. Below we describe the steps of this activity but we can also allow each one to create its own creation. Step 1: Begin with a square sheet. Step 2: Fold the paper in half from left edge to right edge, then unfold. Step 3. Fold the edges to the center Step 4: Turn the figure over. Step 6: Fold the left and right edges to the center. Step 7: Time for the tricky roof overhang. Open the top left and Right flaps, spread out the corners to the side, and flatten down like you see in the picture. Step 8: Turn the house over and draw the door and window [24].

4.3 Third phase

The objectives of this phase are the cultivation of the competencies of relationship skills, of social-awareness and of responsible decision making. At same time we encourage self-reflection and sharing of different points of view that empower the dialogue.

For this phase of the workshop we divide our classroom in six different groups using Lego bricks of 6 different colours: white, red, black, yellow, green, blue. We use at the same time the educational strategy of Gallery Walk Finding you group. Walking, gathering, thinking, discussing and sharing, 2 routines of the artful thinking method: Step inside and See, think, wonder and the educational technique, known as the 6 thinking hats of De Bono, a little alternative using 6 thinking glasses.

More specifically, we have laid around the classroom's floor 6 different images (screenshots of the video art work) of the artwork with a Lego brick and a pair of glasses. The brick and the glasses have the colors of the groups. 6 Thinking Hats is a simple, effective parallel thinking process that helps people be more productive, focused, and mindfully involved. Each thinking role is identified with a colored symbolic "thinking hat." By mentally wearing and switching "hats," you can easily focus or redirect thoughts, the conversation, or the meeting. Following the De Bono strategy each color represents a different perspective, a different style of thinking. White color focus on available data, red color use intuition and emotions, black color highlights the weak points and the pessimist thinking, yellow color helps to think positively, green color represent the creativity and blue color represents process control [25].
In that context we explain to our students that they will form their six different group and they will work around the classroom toy find out their part of the artwork following the color of the Lego brick they have. They actually step inside the artwork. Every group responds to the following 3 questions. What do I see? What do I think is going on? And why? and What do I wonder? [26].
The members of the groups have got 15 minutes for the self-reflection and the discussion. Next each group present in the classroom their discussions verbally and if they want not verbally. For example, they can create a work of art using their Lego Bricks. At the end of this phase and if our students want, we can share the artist thoughts about his artwork.

4.4 Fourth phase

Finally for the fourth phase we aim to give time to the participants to express their thoughts and emotions about the workshop but also about the discussed issues and thoughts. We would like also to help them discharge their emotional stress from all this procedure.

In this context we encourage the students to take their paper houses and draw or write on them their own thoughts referred to workshop. Then they can see the houses of their neighbors and discuss or silently offer as gift a phrase or a draw and post it on the neighbor's house. At the end we lay all the houses on the floor or on a table and create a neighborhood. We also give some time for discussion and sharing. We close with the same breathing activities we used at the beginning. This last activity is very important because it allows us to relieve the tensions and get relaxed.

5. Conclusions

We have presented the workshop in three different groups of teachers of preschool, primary and secondary education, from different backgrounds. As the participants have reported they found the proposed techniques and strategies very helpful and inspiring. However they pointed out that it would

be very helpful for them to follow more similar workshops in order to have the experiences to introduce art in the classrooms in the context of inquiry based learning. In the heart of museum learning is the importance of collaboration and synergies of the people working in the schools, the museums and the universities [27]

References

[1] Badrul Isa, Zuraimi Zakaria 2007 Museums and Education: Theoretical Approaches and Implications for Asian Universities. 2007 *Asian Journal of University Education* vol. 3, 93-110.

[2] Özylimaz Güzin Akamsa, R. Gunseili Yildirim, A. Murat Ellez 2017 An alternative educational method in early childhood: Museum Education. Educational Research and Reviews vol. 12 (14), pp. 688-694.

[3] Syuin Haynes 2019 Why a Plan to redefine the meaning of "Museum" is stirring up controversy. Time 10.09.2019.

[4] See: Proposed New Definition for museum by ICOM: Retrieved from https://icom.museum/en/news/icom-announces-the-alternative-museum-definition-that-will-be-subject-to-a-vote/

[5] Smith, L. F., Smith, J. K., & Tinio, P. P. L. (2017). Time spent viewing art and reading labels. Psychology of Aesthetics, Creativity, and the Arts, 11(1), 77–85.

[6] See: Slow Art Day Project: Retrieved from www.slowartday.com

[7] See: https://wam.umn.edu/education/artful-writing/perceive/

[8] See very interesting exhibition based on Mindful Museum. Manchester Art Gallery. And Breathe Retrieved from: https://manchesterartgallery.org/exhibitions-and-events/exhibition/and-breathe/

[9] CASEL (2017): Core Sel Competencias.

[10] Ampartzaki Maria, Giannikou Vassiliki, Michail Kalogiannakis, Nikolas Gerakianakis, Constantinos Christidis (2019). Mathisi meso tis diereunisis kai tis technis gia ti sunexi anaptixi ton dimokratikon axiakon sistimaton, me idiaiteri emfasi sti didaskalia tis topikis istorias. Early Childhood Education –building sustainable motivation and value paradigm for life. MOV-UP Program. (under print, in greek).

[11] Hannah Ellis Pettersen (2017). "Istanbul biennial hires provocative curators, but where's the political art?". The Guardian, 15 September 2017. Retrieved from:

[12] See:15th Istanbul Biennial: Retrieved from http://15b.iksv.org/home

[13] Image retrieved from: https://www.thinglink.com/scene/793879572557856769

[14] See: 15th Istanbul Biennial Retrieved from http://15b.iksv.org/news/14

[15] Ömer Albayrak, Anita Ianncchione, Sofie Krogh Christensen (2017). 15th Istanbul Biennial: A Good Neighbour. Retrieved from http://bulten.iksv.org/15B_EXHIBITION.pdf

[16] Dorian Batycka 2017. Amidst Uneasiness: the 15th Istanbul Biennial Draws to a Close. https://artistsatrisk.org/2017/11/10/amidst-uneasiness-15th-istanbul-biennial-draws-close/?lang=en

[17] Trouli Sofia **(**201**7). "**Discussing the refugee crisis, facing borders and crossroads".. CinziaAngelini (ed) (2017) *. BestPractice 6. A tool to improve museum education internationally*. Pp. 101-108. Edizione Nuova Cultura: Roma. Retrieved from: https://drive.google.com/file/d/1bn3kgNlslkN5d70nsPIJxPZfdKaeB5f1/view?usp=sharing

[18] Coates Charlotte (2019). What are Mindful Museum and how can they help us with our mental health? Museum Next Article. June 15 2019. Retrieved from: https://www.museumnext.com/article/being-mindful-in-the-museum/

[19] Akira S. Gutierrez, Sara B. Krachman, Ethan Scherer, Martin West, John Gabrieli 2019. Mindfulness in the classroom: Learning from a School-Bases mindfulness intervention through the Boston Charter Research Collaborative. https://www.transformingeducation.org/wp-content/uploads/2019/01/2019-BCRC-Mindfulness-Brief.pdf

[20] Edutopia. (2016). Resources on Mindfulness in Education. Edutopia. Retrieved from https://www.edutopia.org/article/mindfulness-resources

[21] Van der Kolk, B. (2014). The body keeps score. New York, NY: Penguin Books. Retrieved from: http://www.saiiowa.org/All%20Applied%20Educational%20Neuroscience%20Resources%20Documents(1).pdf

[22] Land, sea, air. Retrieved from: https://www.playworks.org/game-library/land-sea-air/

[23] How To Make Paper Home Easily For Kids - Origami House Making https://www.youtube.com/watch?v=xghC-JgLZdY. Retrieved from:

The West Witch and the math backpack: an educational project to enhance math learning in kindergarteners

Paula De Waal
University Ca' Foscari Venezia
Italy

Alice Tovazzi
University Ca' Foscari Venezia
Italy

Positive educational experiences seem to have positive effects for pupils, enhancing their learning and decreasing their anxiety level. Hence, the present research aims to propose a yearlong educational intervention in two classes of a kindergarten, in order to verify if a story-centred curriculum can support positive feelings toward math, but also numerical learning in pre-schoolers. Particularly, pupils were provided with a personalised backpack: each Thursday has been proposed a math activity with a so called "math tool", a homemade objects that promotes learning of a specific math content. After the activity, the instrument was stored in the rucksack, in order to allow children to use it both at school and at home, with friends or family. Children were told that instruments will help them to defeat the West Witch who was erasing math from the entire world. Learning math using the tools became in this way the only possibility to keep math alive, while becoming heroes. Results obtained through indirect observations seem to show the development of a positive attitude and the decrease of anxiety in pupils, even if further researchers are needed, in order to verify long term effects, proving if the positive learning experience during the preschool represents a protective factor for math anxiety also in successive school stages. Nevertheless, results obtained suggest that a story-centred curriculum for numerical concepts should be implemented in kindergartens, promoting positive math learning since earlier stages.

1. Foreword

The MOV-UP project, supported and funded by the European Union, aims to promote the exchange of good practices related to socio-emotional skills in early childhood (from entering the nursery to primary school) between participant partners (Italy, Lithuania, Greece, Bulgaria, Crete, Turkey and Malta).
In the first phase of the mov-up project (school year 2017/2018), different projects have been designed and implemented, each of which falls within the cultural and educational context of the partner States. In light of the success of this first phase, a meeting was organized from 27 to 31 August in order to share the good practices that emerged, training the new local project managers. The long-term goal is to reduce the dropout rate, psychosocial problems and antisocial behaviour in later life.

For the purposes previously specified, the principles learned and adopted from other MOV-UP partners' experiences are:

1. Dimensions of positive learning environments, with emphasis on engagement through facilitation of discovery, positive communication climate, and valorisation of the differences among children.
2. Storytelling as an Open Canvas for curriculum, where the teachers will refer and detail the main storyline ongoing, measuring emotional impact of the story events and the class management needs.
3. Embedding socio-emotive competencies pervasively in the school program, focusing on task related anxiety, empathy and collaboration.

4. Engaging through “props”, when objects and environments of the real world become part of the story, and children actions attribute value to the objects in the story.
5. Learning sciences in multiple and open spaces, through movement and sensory inputs.
6. The appeal and management of “celebrations”, focusing on shared building of representations of positive future events and recognizing value in these events.

2. Theoretical framework

The present proposal is part of the project framework concerning motivation, self-efficacy and positive attitudes towards mathematics at the kindergarten. Their acquisition will support children throughout their schooling, promoting especially the inclusion of those coming from low socio-economic backgrounds.
In particular, the project aims to establish a good relationship between math and pupils since the kindergarten, promoting the acquisition of basic math skills in enabling contexts. In fact, a strongly positive experience promotes a favourable attitude towards math and seems to be a protective factor for math anxiety in the subsequent phases of life [1]. This aspect is particularly relevant since the project aims to develop the affective domain of young learners building socio-emotional competencies that will help boys and girls in kindergarten and once they have grown up [2].
The assumption of the project is indeed to promote a positive attitude toward math preventing the vicious circle between lo achievement and anxiety, according to the positive psychology approach [3].
The project involves the adoption of the "mathematician backpack", an empty rucksack provided in the first meeting to each child. Each week a new instrument was given to the children, instrument firstly used in classroom and the inserted in the mathematician backpack, used both at school and at home, according to the principles of learning by doing.
The backpack did not only represent an object with a strong symbolic and identifying value, but also a link between home and school, favouring children to see math not as a set of school-related knowledge (an attitude that is typically assumed in primary school), but rather as an occasion of fun, sharing and socialization even in non-formal or informal contexts.

3. The project

3.1 The context

The project was implemented in a public kindergarten of the city of Rovereto, situated the North-East of Italy. The school, called “Il Giardino Incantato”, welcome children from 2 to 6 years old. In particular the project involved children between 4 and 6 years old of two classes: the *Elfs* and the *Magicians*, for a total of 29 pupils. Teachers involved are Cappelletti Maura, Modena Lucia, Scrinzi Nicoletta, Stoffella Ida.

3.2 Main goals and learning objectives

The main goals of the project, according to the general objectives of the MOV-UP project, are:

- inspiring a positive attitude towards Math;
- building up numeracy skills before primary school;
- preventing low self-esteem related problem-solving and social inclusion.

With regard to the learning objectives, they were outlined according to the mandatory goals for math skill in kindergarten Italian curriculum [4].

- The child can group and order objects and materials according to different criteria, can identify properties, compares and evaluates quantities; can use symbolic numbers; can perform measurements using instruments.
- He is familiar both with counting strategies, operating with numbers and with performing measurements of lengths, weights, and other quantities.

4. Learning events

In the first meeting pupils were equipped with a personalised backpack.

Every Thursday they were then provided with a “math instrument”, homemade objects that promote numerical learning. The objects were created by the researcher or the teachers in accordance to her

instructions. After the activity with the “math prop or tool”, it was added to the backpack collection of tools, in order to allow children to use it both at school and at home, with friends or family.

Within the main storyline, it was told to the children that the instruments would help them to defeat the West Witch who was erasing math from the entire world. Learning math would become in this way the only way to keep math alive.

The following images illustrate the phases of the process that took place each week (introduction of a new tool).

Fig. 1 - Secret tool/prop preparation by teachers, researcher or family

Fig. 2 - Once a week each child receives a little bag with a new the tool

Fig. 3 - Children are engaged in educational games and quests with the new resources

Fig. 4 - Each child stores the new tool in the bag and the bag in the mathematician backpack

Some weeks the new resources were given to the entire class to share instead of personal items. This approach was adopted when the activity was organized in open air or embedded in the environment of the classroom, for example, a numerical path created with a trunk, as shown in the following image.

Fig. 5 - Numerical path created with trunk slices

5. Learning activities

The project lasted from November 2018 to May 2019, with a moment dedicated only to the mathematician backpack's activities every Thursday (from 40 minutes to 1 hour per each age group). Workshops were proposed for each age group (4 years old and 5 years old) or for mixed groups (Elfs and Magicians or jointed classes).
All the school spaces were used, depending on the number of children and the proposed activity: the classrooms, the gym, the main room, the rest room and the garden.
The materials were created by the researcher, by the teachers and by volunteers outside the school, always under the supervision of the researcher.
For clarity, the activities and tools have been listed according to an order of learning based on recent evidence obtained from cognitive neuroscience (in particular from numerical cognition) and the underlying objective has been indicated [4] [5]

Activities	Learning goals
Put rods in order based on length 4 y.o.: longer, shorter 5 y.o.: half, double	Visuo-spatial abilities
Compare analogical quantities (card game)	Analogical quantity representation Number Sense
Sort analogical quantities and representation of the numerical line	Number Sense Analogical quantity representation
Numerical line representation	Analogical quantity representation Number Sense
Dominoes with analogical quantity representation	Analogical quantity representation Number Sense
Game with road numbers and cars (from 0 to 9)	Symbolic quantity representation (writing)
Reading picture books with numbers from 0 to 10	Symbolic quantity representation (counting)
Construction of the "counter" with handprints	Symbolic quantity representation (counting)
Treasure hunt of the analogical quantity to be inserted in the respective page of the counter	Symbolic quantity representation (counting)
Memory card game with analogical and symbolic quantity representation	Symbolic quantity representation (counting)
Play in the garden with the trunk sections	Symbolic quantity representation (counting)
Game of the goose on a straight line	Symbolic quantity representation (counting) Number Sense
Bingo with 10-sided dice (0 to 9) and analogical quantities cards	Symbolic quantity representation (counting)
Measure with object rods or body parts. 4 y.o.: how many rods is this object? 5 y.o.: how many rods is this object? (with half and double)	Number Sense Symbolic quantity representation (counting)
Treasure hunt of the symbolic quantity to be inserted in the respective page of the counter	Symbolic quantity representation (writing) Number Sense
Great party of math	Pleasantness of math

6. Observations

6.1 Time

The weekly frequency of the meetings allowed activities eventually missed by absent children to be recovered. Moreover, waiting for the weekly meeting stimulated the motivation: in fact, the children were clearly expecting and “counting” the remaining time lags until Thursdays.

6.2 Rituals

The unpacking of new materials, even if handmade and low cost, was a catalyst for joint attention and learning. Repacking and storing in the backpack added value to the activity and the resources, that were freely reused at home.

6.3 Impact on anxiety

Playful and positive environment encouraged even shy children to participate without suffering anxiety. Storytelling enhanced children attention both during each meeting and in general on the role of math in the real world, presenting this subject as something relevant for their lives.
The main goals were therefore fully centred: anxiety and fears toward math have been removed and maths has become important and pleasant in the collective imagination.

6.4 Perception of relevant improvement by teachers

The areas where the expected learning outcomes were perceived as meaningful by the teachers after evaluation of the process, are:

- interest towards Math and numbers in the real world;
- increased understanding of quantities and math ideas;
- using language to communicate and describe attributes of objects and facts spontaneously.

7. Acknowledgements

A warm thank you to the teachers and the children for having participated with such enthusiasm.

References

[1] Fuson, K.C., Clements, D.H., & Sarama, J. (2015). Making early math education work for all children. *Phi Delta Kappan, 97*(3), 63-68.
[2] Cohrssen, C. & Niklas, F. (2019). Using mathematics games in preschool settings to support the development of children's numeracy skills. *International Journal of Early Years Education, 27*(3), 322-339.
[3] Seligman M.E.P., Csikszentmihalyi M. (2014). Positive psychology: an introduction. In M. Csikszentmihalyi (cur.), *Flow and the foundations of positive psychology* (pp. 279-298). Dordrecht: Springer.
[4] Indicazioni nazionali per il curricolo. (2012). *Annali della pubblica istruzione*.
[5] Lucangeli, D., Poli, S., & Molin, A. (2003). *L'intelligenza numerica: 1*. Trento: Erickson.

Paula De Waal *- Coordinator of several e-learning and blended learning projects in Italy, with focus on Teacher Competences Development. Her courses address innovation in continuing education, lifelong learning strategies, creative instructional design and digital learning environments. She is continuously engaged in the development of feasible pedagogical frameworks that allow the adoption of collaborative learning activities, iterative evaluation models and complex pedagogical strategies. Beyond her academic activities at the University of Ca' Foscari Venezia, Paula de Waal is the Head of the center for learning and teaching innovation.*

Alice Tovazzi *- PhD student in Learning Sciences, University Ca' Foscari of Venice (Italy). Alice's main research interest lies at the intersection of numerical cognition and education, according to the educational neuroscience approach. As a teacher and a researcher, she is deeply engaged in children math learning. Her research mainly focuses on inclusive and equal learning since early school stages, adopting both qualitative and quantitative methods.*

Quality in ECEC Settings to Nurture Positive and Enabling Environments

Adina Curta, Sylvia Liuti
FORMA.Azione srl
Italy

In 2014, the Report of the Working Group on ECEC under the auspices of the European Commission - Proposal for key principles of a Quality Framework for ECEC – highlighted the need to enhance quality in the sector and identified 5 areas of improvement, that are Access, Workforce, Curriculum, Monitoring and Evaluation, and Governance and Funding. Based on these recommendations and on ECEC professionals' needs, 7 partners from Italy, Romania, Lithuania, Malta, Hungary, and Ireland along with the European Parents' Association worked jointly within the Erasmus+ SEQUENCES project to design ready-to-use tools that can be easily put into practice by ECEC services. They conducted an analysis based on a survey that, together with the focus groups and stakeholders' meetings, laid the basis for the elaboration of 34 tools gathered in a Toolkit. To support the actual implementation, partners designed a Training Curriculum and related didactic materials that contains 34 learning activities designed to give deeper understanding of each tool. The Toolkit was piloted in 6 countries and involved a total of 112 professionals, 28 settings and indirectly 1673 children and their parents and families. Based on the outcomes of the testing, partners elaborated a Multistakeholders' Guidelines to support various stakeholders on how to approach and encourage the use of the Toolkit.
Within the MOV-UP conference, the workshop delivered intended to give a brief and practical insight on the "Empowering ECEC Staff", one of the tools included in the Toolkit, which is a model to nurture collaboration and teamwork among ECEC staff, allowing them to reflect on and share their skills.

"Learning and education do not begin with compulsory schooling – they start from birth. The early years from birth to compulsory school age are the most formative in children's lives and set the foundations for children's lifelong development and patterns for their lives. In this context, high quality early childhood education and care (ECEC) is an essential foundation for all children's successful lifelong learning, social integration, personal development and later employability" [1]. Many research studies show how ECEC services have positive impact not only on children, but also on their parents and families, on women employability, well-being and quality of life. They become an aid for the life and work balance, and at the same time a place to share, to debate and develop the parental dimension. Investing in quality of early childhood is thus a priority that guarantees the equal and quality level of services in both public and private ECEC providers. Moving from these assumptions and from the related scientific literature that highlights the need to raise awareness among providers and the larger public on the importance of quality services as well as the inequalities across Europe among ECEC service providers, the SEQUENCES project was born.

1. The SEQUENCES project

The project was carried out between 2016 and 2019 and it was financed by the Erasmus+ programme, under the Strategic Partnership – School Education strand [2]. It brought together 7 partners with extensive and complementary experience such as FORMA.Azione, a VET and Adult Learning training centre in Perugia (IT), with professional expertise in Quality Assurance, that over the years has delivered several training courses for ECEC professional, which also played the role of the project coordinator; two national-level teacher's trade unions – Lithuanian Education and Science Trade Union (LT) and Malta Union of Teachers (MT); academia represented by the Observatory Centre for Educational Development of the Corvinus University of Budapest (HU), a national policy-level non-profit organisation

that advocates and trainers ECEC professionals – Early Childhood Ireland (IE); a European-wide network of parents' representatives – European Parents' Association (BE) and 2 ECEC providers, a private one, Cooperativa SEM (IT) and a public one, Gradinita cu P.P Zana Zorilor (RO).

As mentioned above, the SEQUENCES project aimed at responding to the need to improve the quality of ECEC private and public services by designing adequate tools for the self and external evaluation, with the direct involvement of providers and relevant stakeholders as quality development partners. The strategic choice was to design activities through a bottom-up approach so to better respond to professionals' necessities and to strengthen the sense of ownership. Indeed, working at provider's level together with other stakeholders meant creating opportunities to exchange practices, approaches, allowing thorough discussions, stimulating creativity, critical thinking and problem solving during the transnational trainings, visits to ECEC settings in the different partner countries and drafting the tools.

The specific objectives pursued were:
1. to promote a culture of quality and quality assurance approaches at the ECEC settings' level;
2. to develop ready-to-use tools for the self and external evaluation of quality, with transnational validity, based on the five quality areas (access, workforce, curriculum, monitoring & evaluation, and governance & funding) as identified by the working group established by the European Commission, of which the results were gathered in the European quality framework for ECEC providers;
3. to elaborate guidelines and recommendations for key stakeholders to support the acquisition of a quality management mindset.

In order to reach the objectives, partners planned and implemented several activities that led also to the production of practical tools to support, even beyond the project duration, ECEC professionals in their pathway towards Quality Culture. They are: the SEQUENCES Toolkit, the Training Curriculum and related Didactic Materials, and the Multistakeholders' Guidelines for the implementation of the Toolkit. These were complemented by two training activities at transnational level, one in Ireland and one in Hungary and national trainings before the piloting of the Toolkit carried out in 6 countries. Along with the transnational trainings, the transnational project meetings were actual opportunities for ECEC professionals to observe the delivery of the service in different countries from their own and have a better understanding of the systems and policies in the ECEC sector of the partners' country.

1.1 Survey on quality in ECEC settings and good practices

Before the actual drafting of the Toolkit, FORMA.Azione together with the Corvinus University elaborated a questionnaire distributed among ECEC practitioners and parents related to the quality in the settings and gathered good practices in the partners' country.

The questionnaire was divided in 3 sections: the first one intended to collect general information about the respondents such as country of provenance, gender, age, category of applicant (parent/guardian or other family member such as grandparents and practitioners), category of institution in which practitioner work or attended by the child, namely a public or a private institution; and the type of setting, whether it offers services for children from birth to 3 year, from 3 to 5/6 or both. The second section aimed to discover how much respondents agreed or disagreed with several statements designed based on the indications given by the 5 quality areas of the European quality framework. For example, for the Access area, respondents were ask to highlight if ECEC services are spread in their territory, if they are free of charge or it depends on the parents' income, if services encourage participation, they are open to diversity and actively involve parents. Lastly, in the third section, respondents were required to describe up to three good practices they are aware about in the ECEC they are in contact with (as parent or practitioner) in the 5 areas indicated in the framework.

In order to assure accessibility, the questionnaire was translated from English to Italian, Romanian, Hungarian, Serbian and Slovenian, where the last two were actually covered members from the European Parents Association. The survey reached a total of 783 respondents (253 more than the target fixed), of which 60,15% were parents, out of which 16,56% males, and 39,85% ECEC practitioners, of which 2,24% males. These percentages show still low participation of fathers in issues related to their children education and even lower presence of male educators, that is a well-known issue in the ECEC sector asking for specific actions, but it is not the specific focus for now.

Three most popular areas covered by the examples were workforce, parents as well as curriculum and special activity projects, showing the most visible aspects of the daily operation of ECEC institutions for parents and practitioners, as opposed to the area of governance and funding. Below, some of the most appreciated practices divided by country:
- the “Green Kindergarten” and the use of ICT devices by children for Hungary
- children’s attitude to healthy living for Ireland;
- “Born to read” and “Born for music” as two flagship projects of the Region of Umbria, and the campaign trip to a farm for Italy;
- the exchange of practices with ECEC settings in Finland and integration of arts into the curriculum for Lithuania;
- the reading club for young children and parents in libraries or other places and the use of the virtual class to help parents monitor the activities in the classroom for Malta;
- “My mommy – educator for one day” that encourages parents, especially mother to prepare activities for children and spend the whole day and “Financial education” which introduces children to financial issues for Romania;
- projects to promote respect for diversity and inclusion, with focus on Roma children, and “Dancing for Beginners”, a city festival supported by parents and town citizens for Serbia;
- the “ECO kindergarten” for Slovenia.

These practices show the diversity of topics that are popular in the area of the respondents, but also highlight similarities based on which some of the tools were designed on.

1.2 The SEQUENCES Toolkit

In addition to the results of the survey, partners organised focus groups and stakeholders’ committees at local, regional and European level to receive further input and shared the common principles that lay at the basis for nurturing positive and enabling environments, namely:

- education and care as inseparable and interdependent – ECEC settings that can act as support hubs for children, parents, communities. The focus is on a nurturing pedagogy, where children’s learning is embedded in respectful, responsive relationships with others. It is therefore vital that early childhood settings work in partnership with parents, engage them in their children’s learning, and are understood as having the potential to act as support hubs for children, parents, families, and communities;
- holistic development of children according to their needs and interests;
- the role of ECEC professional to support the child in the present – children are considered as active citizens at the present moment and are capable of decision-making;
- child as competent learner, as a creator of knowledge. In keeping with this view, the child, ECEC professionals and parents are invited to think about the child’s strengths and positive dispositions and to think about other areas of interest that can be followed and supported;
- play as key methodology. Children are supported to make-meaning and co-construct experiences through play. In keeping with this active approach to learning, the curriculum is emergent, inquiry-led and based on the interests of the child. This constitutes a shift away from a didactic approach to learning where children are seen as recipients of knowledge, to one where children are creators of knowledge, bringing with them experience and knowledge, which forms the basis of their learning. Creativity is also highly valued and supported within the early years’ setting and children have opportunities to explore and engage with the arts;
- reflective practice is a key feature of a responsive, high-quality ECEC setting that adapts to the changing needs and requirements of children and families. This is characterised by ECEC professionals who engage in ongoing review and discussion of practice, with a view to establishing what is working well and highlighting areas which can be improved upon in collaboration with children, parents and families.

After sharing the common principles and the possible contents, partners decided the core structure of the tools, where the information is structured on the following scheme:
- the quality area of reference and the related statement(s) as indicated in the Key principles;
- a brief description of the tool;
- the objectives it aims to respond to;
- the direct and indirect target groups (ECEC professionals, managers, parents, the community etc.)
- children’s age to be applied (birth to 3, 3 to 6, birth to 6)

- the timing of implementation
- the section on “how to implement” the tools
- links with other tools in the Toolkit
- references as further resources or good practices.

From a methodological point of view, the working group was divided in 5 subgroups, the same as the number of the quality areas, where each was led by a coordinator and at least two representatives from two other partners. The first version of the Toolkit required a large investment, due to evident differences among ECEC system and quality practices in each country. Both the first and the second version were elaborated in English then translated in Lithuanian, Romanian, Italian and Serbian.

The final version of the Toolkit is a collection of 34 practical and flexible tools that allows practitioners to adapt them according to their own needs or even combine them with practices already in use in the settings. The tools are suitable for both attaining quality improvement and being part of a quality assurance system. They are also supported by a glossary to ease reading and understanding. The Toolkit is divided into 6 sections, of which 5 correspond to the 5 Quality Areas as indicated in the European quality framework, to which it was added a Common Area that includes quality management tools to support professionals in the implementation of the other tools and develop a quality mindset. This area includes for example the PDCA (Plan-Do-Check-Act), that is the fundamental management method for quality control and improvement of the process. It can easily be used as a general approach to implement all the other tools in the Toolkit, or when a specific problem in the ECEC setting arises, or to answer the need to improve the quality of the service provided.

1.3 The Training Curriculum

Before the actual testing of the Toolkit, partners attended a transnational training in Hungary to prepare trainers and facilitators for the country-based trainings. The participants were introduced to concepts and background references to quality assurance in education, in particular to policy recommendations and arrangements related to ECEC; methodologies and techniques on quality assurance and involvement of the relevant stakeholders; formats for team works and related activities to better engage participants and facilitate the understanding of tools. In addition, partners designed a plan for carrying out the national trainings that included a detailed description of 2 sessions (minimum required) with related topics, timing and materials. In terms of contents, the first session included ice-breaking activities, explanation of the aims of the training, introduction to the European Quality Framework, the SEQUENCES project and the needs analysis, while the second the quality areas and tools, feedback and discussion on the selected tools and evaluation. Trainers were also requested to use an ex-ante and ex-post questionnaire, a customer satisfaction survey and to perform a needs analysis with participants based on which the settings involved were guided towards picking and testing certain tools.

The elaboration of the Training Curriculum started from the assumption that non-formal learning is becoming a widespread practice through which professionals learn, share and strengthen their skills and competencies. It is innovative in this sector because usually ECEC providers are asked to acquire and improve competencies more related to pedagogical issues rather than the quality management, measurement and evaluation tools, contributing to strengthening the impact in terms of educational attainments (not just care). For this reasons, the Curriculum is meant to be a framework of reference for:
- designing effective initial trainings and continuous professional development opportunities for ECEC practitioners;
- recognising and validating competencies acquired in non-formal contexts and by professional experiences related to the promotion of quality in ECEC;
- analysing and updating the expected job performances of ECEC professionals related to quality, in the different settings in Europe;
- improving the minimum requirements of the ECEC services;
- raising awareness on the impact of low-quality ECEC provision and opportunities linked to investing in quality in the different 5 quality areas.

The final output is a set of educational materials intended to accompany the Toolkit, on which ECEC professionals can work through an element of practice as outlined in the 6 areas. The core structure includes the overall plan, 34 learning activities, each tailored to give a thorough understanding of the related tool, ice-breaking and activities for assessing how the training was received and perceived, a

model for the ex-ante and ex-post survey, and a satisfaction questionnaire. Each learning activity was designed according to the scheme below:
- the learning outcomes in terms of expected skills and competencies to be acquired by ECEC professionals;
- the resources needed to properly deliver the training activity;
- a list of steps to achieve the learning outcomes;
- the time duration of the activity; and lastly
- the challenges/ obstacles that can affect the implementation of the training.

The training sessions were organised in the 6 countries between December 2017 and May 2018 and all trainers created also ad-hoc materials (i.e. presentation of visits in ECEC settings in other countries) in addition to the basic materials. The training activities at national level involved:
- Italy: 12 professionals from 7 settings
- Lithuania: 28 professionals from 5 settings
- Ireland: 12 professionals from 4 settings
- Malta: 31 professionals from 4 settings
- Romania: 10 professionals from 5 settings
- Serbia: 15 professionals from 6 settings

Based on the experience of the training activities at the national level, the last version of the Training Curriculum includes a plan with 2 options for devising the training, taking into consideration 4 full-days and or several half-days training, with indications of topics to be approached on a scale going from must to optional. The plan was designed for an overall approach to all quality areas and tools from the Toolkit, but it can be used also for single units. The Training Curriculum and the related didactic materials are available in English, Italian, Lithuanian, Romanian and Hungarian.

1.4 Piloting of the Toolkit and the Multistakeholders' Guidelines

In order to ensure an adequate testing of the Toolkit and an accurate monitoring, partners elaborated a set of guidelines for the piloting that included clear indications on the recruitment of ECEC settings, how to jointly analyse the needs of the professionals, the selection of the tools, tasks to be completed before and during the implementation, together with the reporting procedure. The piloting of the Toolkit was carried out in the 6 countries and involved a total of 112 professionals, 28 settings and indirectly 1673 children and their parents and families.

The most relevant experiences in terms of impact can be summed up by the responses of partners during the round table in Brussels, which involved high-representative from the European Commission on ECEC sectors and other representatives of relevant European networks such as the Lifelong Learning Platform, Foundation for Well-being or Make Mothers Matter. To the question "which was the easiest tool implemented during the piloting", the trade union from Malta recalled the experience of an ECEC setting that implemented the Curriculum for environmental education tailored to make children aware of the importance of differentiating the waste. The setting from Romania presented the work to improve the involvement of parents in children's learning that resulted in a better relationship with them and a better understanding of the children. The Lithuanian trade union mentioned the learning platform to communicate with parents that led to a better relationship among the two key actors in the children's education. From Ireland, partners focused on the promotion of access and how parents started approaching the preschool settings. In Serbia the "green award" resulted quite popular, but they also pointed out that it was challenging to see during the training on the tools how educators need to reflect and be aware of what are they good at, to discover their personal talent and bring their self-esteem to the fore. Whereas in Italy, the partners from the ECEC setting outlined how the piloting of the tools from the Workforce area related to the self-reflection was highly appreciated by the educators.

The tested activities were in fact complementary to the tools and practices already used by ECEC service providers at local and/or national level as well as to other Quality Assurance measures. In Italy, the partner ECEC setting tested those tools that were new to them and given the positive impact on the staff and the improvement in the provision, it decided to include them in their quality assurance system starting from 2019. In Lithuania, the tested tools were recommended by the Ministry of Education and Training and the programme was approved by the Marijampole Municipality Education Centre to complement the accredited programme and curricula. In Romania, tools were tested and adopted by ECEC settings that were not involved in the piloting but informed about the Toolkit, thus complementing

their practices in an informal way, while in Malta some of the tested tools will integrate the Emergent Curriculum that is being adopted.

Following the piloting activities and together with the inputs received from the 9 focus groups organised and 7 stakeholders' meetings, partners elaborated the Multistakeholders' Guidelines. The document was designed to come as support for various stakeholders in adopting the Toolkit and quality assurance procedures. The recommendations targeted the institutional management that should be on board for assuring the improvement of the quality processes, while the educational staff should be motivated and aware of the time and resources needed. Parents and care should also come in support of educators by being involved in activities and sharing information about the children and the home situation. Lastly, the policy-makers could contribute in defining initiatives aimed at raising awareness towards the quality culture, while trade unions should play an active role as community key actors who have a say on how public funds are allocated and spent, according to quality standards/requirements and beneficiaries' expectations.

All in all, we can say that through the participation in the project, ECEC professionals learned how to assess the education provision, how to approach stakeholders, while the trade unions, AL professionals and parents representatives found out new ways to support the ECEC sector. As a follow-up, FORMA.Azione is already experiencing the transfer and adaptation of some of the tools in the SEQUENCES Toolkit towards ECEC settings in the province of Alba Iulia (Romania), through a project funded by the European Social Fund [3].

2. Empowering ECEC staff workshop

Within the MOVE-UP conference, Adina Curta delivered a workshop aimed to inform participants about the SEQUNECES project and to give an insight on how to put in practice one of the tools from the Toolkit, namely *Empowering ECEC staff*, developed under the Workforce area [4]. It was chosen because reflection on one's own strengths and skills requires time, which often practitioners lack of, it is challenging, as indicated by some of the partners that have put it into practice and nonetheless because it is crucial for making positive change into day-to-day practice. The workshop was attended by around 23 participants of various categories, such as ECEC managers, educators or teachers, students, researchers and project managers. The activity was supported by an online presentation, with which participants were able to interact in real-time using their own smartphones by giving feedback, responding to questions and have a final evaluation of the session.

The tool is a model to nurture collaboration and teamwork, but also to dedicate time for practitioners to identify, reflect on and share about what they are good at, and to discuss possibilities. In fact, the main aims of using it is to affirm practitioners' unique strengths, skills, knowledge, experience and relevant interest and explore possible ways to share and utilise them within the ECEC setting; to share and integrate new learning into practice; to enrich teamwork and enhance practice; and lastly to encourage reflective practice.

As a starting point, participants were asked to take a quiz and to reflect in 40 seconds on what is the most important feature of an ECEC professional. The options they had to select were among: good communicator, ability to develop children's perspective, practical and patient, enthusiasm for children, enhance and respect diversity, and lastly creative and flexible. The following considerations were made when choosing the possible answers:
- good communicator - educators need to have learned effective skills for working with young children and for communicating with them at their level. They need to be able to communicate with the child's parents about the child's needs, skills, problems and achievements, so both parties can help the child without undue emotion. On a daily basis, the educator must communicate with other ECEC professionals who may teach his/her class, as well as with the ECEC manager and other administrators. The more effectively the educator can communicate to all involved - both orally and in writing - the more rewarding and positive his/ her job will be;
- ability to develop children's perspective - a degree in early childhood development gives educators the skills they need to help every child learn. It is important to have a vision in which the child is seen as competent learner, as a creator of knowledge. ECEC professionals and parents are invited to reflect on the child's strengths and positive dispositions and to think about other areas of interest that can be supported;

- practical and patient - working with young children all day takes a lot of patience. The nature of their age makes young children exuberant, with short attention spans and little self control. Every child is different, too, which makes the job even more challenging, while the same and new challenges are present each day;
- enthusiasm and passion for children – this goes well beyond enjoying being with children, it means wanting to make a difference to each and every child. Educators should have the ability to guide every child on the learning pathway, overcoming any obstacle he or she may have;
- enhance and respect for diversity - every child has a unique personality and learning style which educators needs to respect and work with each child's style, rather than try to force the child to adapt to another style. Educators should also be prepared for multicultural classrooms with many ethnicities, cultures and traditions represented, that must be welcomed and embraced in order to create an open and exciting learning atmosphere;
- creative and flexible - planning activities with children requires also creativity. Adapting the activities and games to individual learning styles requires flexibility. Even though a good preparation is needed, the educators needs to remain flexible to handle all the issues that may come during the day. A successful ECEC practitioner shall use creativity and flexibility to make the best for every day.

The majority of the participants, considered that the most important feature for an ECEC professional is to demonstrate “enthusiasm and passion for children”, as a second choice they picked “creativity and flexibility, and as a third option they selected “good communicator”. The quiz showed that all choices were correct and in fact a good ECEC practitioner has to have a good mix of all the mentioned features.

Following this exercise, each of the participants was given a handout with a big butterfly as in the Figure 1 and asked to reflect on themselves. The upper part of the butterfly is related to the professional role, while the lower regards the personal attributes. For each section of the wing in the upper left side, participants were required to write key words by answering to three separate questions: “what are my unique strengths”, “what are my unique skills”, “what unique knowledge do I have” by thinking about their professional role. In the upper right, they were asked to reflect on how they can further integrate their unique strengths, skills and knowledge in their work. The same was for the lower part of the butterfly, where they had to answer to the questions: “what unique talents do I have”, “what unique interests do I have” and “what unique experience do I have” as personal attributes and find a correspondent on how they can integrate their practice. When the reflection time was over, participants were asked to share one key word per section and explain why they chose that feature. The aim was to give the floor to as many participants as possible and to create a collective butterfly. Afterwards, it was explained how to use the second tool as shown in Figure 2. By focusing on one’s strength, for example, the practitioner should fill a row by indicating the origin of information or new learning (e.g. article, seminar, conversation with other professionals), then the object of information or new learning, the considerations/discussions and implication for practice – to be done with either the ECEC manager and/or colleagues, and finally the actions to be taken.

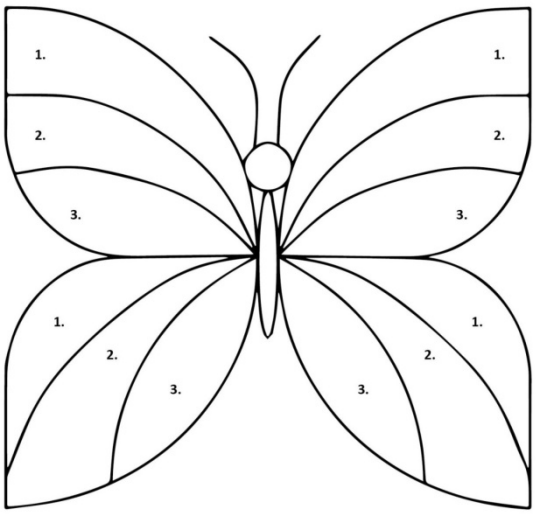


Figure 1

Origin of information/new learning *(e.g. article, seminar, training, conversation with other professionals)*	Information/new learning	Considerations/ discussion/ implications for practice	Actions to be taken

Name:_____ Position: _____ Date: _____

Figure 2

In the end, why was this exercise important? When you share insights about your skills and passions within your work with children and families, it means that you are aware about yourself, your role and how can this impact on the life and education of others. Moreover, when you listen to others speaking about their passions and skills, you may feel more inspired and grateful. In showcasing our diversity of talent and skill, and receiving feedback it, becomes clearer how we can our unique capacities contribute to the care and education of children, and in a wider perspective how we can put theses to the service and wellbeing of others.

Conclusions

In conclusion, the SEQUENCES experience has proven to be effective and useful for ECEC settings to work with and in quality, that should be further consolidated and exploited. It showed that quality is not an abstract topic or reserved only to managers, but everybody can be included and play a key role in the process of delivery of a quality service. Working in quality and shaping a quality mindset means starting from the bottom and at the grassroot level, in an environment that allows practitioners to reflect on their own practice, to cooperate and share experience with their colleagues in view of a constant improvement. It has also a positive impact on the perception of the general public regarding the profession of educators, in creating positive enabling environments for the children and in general to improve the working conditions or the atmosphere at their workplace. Another finding is that ECEC professionals register low rates of participation in transnational trainings or mobility opportunities, very often because language is a real barrier, and therefore there is a reduced demand and awareness of its importance for the professional development. To overcome this aspect, for example the Lithuanian trade union is working to increase the mobility of educators by submitting applications on the ERASMUS+ KA1 strand.
Moreover, as it is well known, this profession is widely participated by women also because very often it is considered more a care profession rather than an educational one. In the last years a shift is being registered in the scientific literature, policies at European and national level that emphasise the crucial role of ECEC settings and professionals in child education, since the first years, also through cooperation with parents and the community at large. Related to this it should be also considered that this profession is less attractive for men in terms of reputation, low remuneration and gratification, therefore specific actions need to be taken in order to increase their presence in the sector and strengthen the male figure in the child's education.
Nonetheless, quality in ECEC settings means also developing an attitude towards lifelong learning by laying the foundations for shaping key competence (e.g. learning to learn) and life skills. The educators' day-to-day practice, that includes openness and collaboration with colleagues or other stakeholder or working with the emergent curriculum, is set to respond to the lifelong learning approach and guarantee a better start in life for each child.

References

[28] *Proposal for Key Principles of a Quality Framework for Early Childhood Education and Care*, Report of the Working Groups on ECCE under the auspices of the European Commission, 2014, p. 3.
[29] *SEQUENCES - Self and external Evaluation of QUality in Europe to Nourish Childhood Education Services*, no. id. 2016-1-IT02-KA201-024628; https://sequences-project.eu.
[30] *"Scoala prietenoasa" (Friendly school)*, no. id. POCU 74/6/18/106468 2018-2021.
[31] *SEQUENCES Toolkit for the Self and External Evaluation of Early Childhoos Education and Care Provision*, 2019, pp. 52-54. The elaboration of the tool was inspired by activities indicated in the Irish Quality Framework, see *Sìolta, the National Quality Framework for Early Childhood Education*, Department Education and Skills, Early Years Education Policy Unit, Ireland, 2017, Sìolta Standard 10 Organisation and Standard 11 Professional Practice.

Adina Curta *– European project officer, FORMA.Azione srl. Graduated in History and Art History, expert in European projects designing and management at FORMA.Azione, and International Relations responsible for the Regional Youth Forum. She has previously worked in the development of bids related to the European Capital of Culture and European Youth Capital. Currently, she is also member of the Europeana Network Association aimed to improve access to Europe's digital cultural heritage. Thanks to her solid relationships with Romanian education institutions and policy-makers, she has developed*

profitable cooperation activities with Romanian schools and ECEC providers, among which those involved in the SEQUENECES and Friendly School projects, the latter funded by the ESF funds in Romania.

***Sylvia Liuti** – Director of European projects, Quality Assurance and Gender Equality, FORMA.Azione srl. She is one of the three founders of FORMA.Azione since 1997, that is a consultancy and vocational training company, specialised in applying for public funds (ESF, European, national and local funds) and acting as accredited training centre. Her professional topics are Gender Equality in the labour market and at the workplaces, combating online hate speech, Quality Assurance in the Educational domains and public speaking. Recently, she was involved in the designing and development of the first European Minimum Standard of Competences on Gender Equality for professionals acting in transition phases (guidance experts, teachers, trainers, HR managers, recruiters) within the "GET UP" project. She is member of EfVET and of the CEDEFOP working group on migrants.*

Values education and nurturing creativity in learning local history

Vasiliki Giannakou
University of Crete
Greece

Maria Ampartzaki
University of Crete
Greece

Styliani Frantzeskaki
Primary Teacher
Greece

Styliani Tsatsaraki
Primary Teacher
Greece

Nikolaos Gerakianakis
University of Crete
Greece

Encouraging children to explore and learn local history provides an excellent opportunity for values education and the development of creativity. This paper briefly presents some of the guiding principles and conditions that shape up value education through the learning of history and creativity in the classroom and gives practical examples from a nursery project (for children 4-5-year-old). We are highlighting and commenting not only on the values cultivated but also on the ways in which children of ethnic minority or special needs were included and supported through history learning.

1. Focusing on local history or historical artifacts

Local history can be understood by students of a wide age, range and ability, offering much opportunity for various approaches to the historical events. Since historical concepts are not easily understood by preschool children, activities on local history can become a challenge and attract a lot of interest. They can be adventurous, whilst they provide children with opportunities to develop a wide range of personal skills (Leontsinis & Repousi, 2002).

Educational programs that focus on the history of a place have many benefits for the students. The children are encouraged to explore, to discover things on their own, to touch, to experiment, to use objects, to be influenced by and interact with the environment. “The fact that they can connect with the same objects that people of the past had invented, manufactured, used and touched, leads to the experiental and empathetic approach of the communities of the past, an important aspect which helps the development of historical thought and knowledge” (Nakou, 2004, p. 168). When inquiry about a historical place takes the form of a project, the place stops being boring or inaccessible. It becomes the medium for the exploration and consolidation of historical information and field for the development of research. Children learn to observe and inspect environments, objects, ceremonies etc. and surroundings become focus points with special meanings (Xadjigiannis, Melas, & Mpelegratis, 1995). Young children become explorers of their environment rather than passive and detached passers-by. In this way, they eventually get a grasp of hidden meanings and interpretations for the residues of the past.

Fieldwork on historical sites, monuments, and museum, or investigation into primary and secondary resources enables the cultivation of inquiry skills and, in a sense, scientific literacy (Demetriadou, 2002). In outings children can maps, which introduces children to the skills of decoding abstract space representations. These processes engage children in the study of interaction between the historical past and present, the significance of the cultural heritage and the need to preserve it. Young investigators can also bond with the environment which will ultimately strengthen their environmental awareness.

2. Learning history through art and creativity

Approaching the cultural artefacts of other cultures provides opportunities for exploration, interpretation and learning about the other. This is beneficial to the development of social understanding and empathy since children can get engaged in a process of trying to understand the needs, the thinking, the perspectives, the intentions or the emotions of others. Arts, in general, provide a positive environment for the development of social skills, as they encapsulate social interaction, communication and expression of ideas and feelings (Bahman & Maffini, 2008). Research indicates that the development of social and emotional competences (such as self-confidence, self-regulation and management of emotions) can be promoted through artistic expression and activities (Bahman & Maffini, 2008; Menzer, 2015).

Moreover, cultural artefacts are shaped up, incorporate and display cultural perspectives, ideas, technologies, concepts and values. Through a rich use and manipulation of highly symbolic modes of expression, artefacts carry meanings and messages for all who share and use them (Wallace, 2006). Thus, to try and understand what a piece of art or any cultural artefact is, the meanings it conveys and the cultural ideas or values it carries, is a process that offers the potential of learning. If the given object is historical, has historical value, or refers to the life of the past or historical events, it enables a further exploration about the past in all the relevant dimensions.

3. Values education in learning history

John Dewey (1966) said “Value education means primarily to prize to esteem to appraise, holding it dear and also the act of passing judgment upon the nature and amount of its value as compared with something else” (Dewey, 1966, in Lakshmi & Paul, 2018, p. 29). Values education is focusing on the teaching and cultivating in everyday life of the values, ideas and perceptions that community adopts and uses in social life (Robb, 2008). The benefits of values education spread across all areas of development and there is growing evidence that they particularly support academic performance (Lovat, 2017).

The importance of values education in today’s society is reflected in the principles of MOV-UP project. We highlight some of those which were placed at the heart of the educational interventions created in the context of the MOV-UP project: Inclusion of disadvantaged learners, and the prevention of discriminatory practices; promotion of democratic values, equity, tolerance and understanding; promotion of active citizenship, dialogue, respect for the fundamental rights and the empowerment of the oppressed.

Historical events provide opportunities to students to explore the dimensions of conflict, the consequences of political decisions, the feelings of common people and the interactions between populations. Through history, children can study cultural differences and the development of civilizations drawing important lessons about survival, evolvement and prosperity. Values lie at the heart of these lessons and can be explicitly discussed by children as young as four, who hear stories and make their own interpretations. In what follows we present the example of a nursery class who explored values and gained knowledge about the history of a local school through a creative, multidimensional and art-based project work.

4. Researching through local history

The teacher of the Nursery class was involved in the MOV-UP classroom implementations and used the MOV- UP principles and guidelines to plan and deliver a project about the history of her school. Through this project, children were involved in activities to learn to:

- Make observations;
- Pose questions;
- Examining books and other sources of information;
- Organize investigations;
- Develop answers, explanations, and predictions;
- Communicate the results.

The students of her class had different ethnic origins and they represented various nationalities, and several social groups. The majority were immigrant children who did not speak fluently the language of the host country and had a great difficulty in communicating their ideas verbally. Among them there were also children who displayed a variety of special educational needs and characteristics.

The teacher requested support by the MOV-UP project organizers and received assistance in planning the activities, searching and collecting educational resources, identifying children's needs, and implementing methodological principles. The MOV-UP team also helped her to collect data and samples of work for the assessment and evaluation of the implementation. Five main categories of data were collected: Diary logs, interview data, children's samples of work, recordings of children's interactions and photographs from the classroom implementation.

4.1 Data analysis

The teacher's diary and interviews were subjected to a thematic analysis. Thematic analysis has been recognized as an autonomous qualitative method (Braun & Clarke, 2006). It identifies recurring patterns in meaning, that is, 'themes' that have a significant relationship to research questions and emerge from the data (Isari & Pourkos, 2015, p. 116).

4.2 Results

From the emerging themes, we are going to focus on the following three main realizations:

- The project enabled lively and friendly interaction between children and between children and the environment.

Interaction occurred not only between children, regardless of their ethnic origins or profile, but also revealed between children and the school environment. In particular, the classroom was in the front of the building with two big windows overlooking the schoolyard and a mosque with a minaret. Students were encouraged to observe, take pictures or use a tape recorder and video-recorder to collect evidence. Free observation, initiated interaction between children, the school environment, and the neighborhood.

Children came up with more ideas about observation: for example, they used paper rolls as binoculars to focus on details or to compare objects near or far. They also used magnifying glasses and cameras. They used all their senses to capture whatever impressed them most. There was the very distinctive example of a young girl with language and other difficulties who interacted incredibly well with the environment as well as with other students. She even tried to place her paper binoculars on her ear in order to listen to the sounds of the environment or on her nose in order to smell all the smells of the neighborhood.

- The project created the conditions for the development of values such as social development, respect, friendship, socialization, equity, collaboration, etc.

The observation of the school neighborhood brought the children in contact with locals and the students' family members. School visitors were actively involved in the process of children's research and interaction among them helped students to become friendly and start developing acceptance of different religious beliefs and faiths. More specifically, students visited a local elderly man, called "Grandfather Leonidas" to interview him and learn more about life and school life in the past. An interview carried out in his house enabled children to process some very important values: caring, honesty, respect and love. All students, irrespective of their nationality and skill, approached Grandfather Leonidas with the same interest and enthusiasm, starring at him and observing his house which was full of old stuff. His house

was like a museum. “This visit astounded us all. He was old and wise, and yet simple, and he talked about people of two centuries ago, people who used to go to the same school”.

- The context of the project was a context for the development of creativity.

Children created a variety of artwork either individually or in groups. Here we are going to mention some very special examples: a) The students spent time to inspect closely the gate of the school, as it is at present, as part of their field work, taking notes down on clipboards, and making drawings. They also made comparisons of photographs of the same gate taken in different years (1969, 1990 and 2019). They decided to construct a gate of their own out of cardboard boxes. They debated about the colour of the should use to paint their “gate” and split up in groups to experiment with colour and different mixtures. b) They created Lego models of the old and the new school. c) At the very end of the project, they created a piece of artwork which children themselves named “lines connect us”. In this, children had walked around the school yard, and drew their own favourite line in their clipboards. Next, they transferred it in a meter-long paper and joined everybody’s line with each other. To join the lines each student used their favourite colour to paint the connection points. Finally, all children “wrote” their thoughts, desires and values on this piece of artwork. The activity lasted for a week and took place in the last phase of the program. It became a symbolic representation of the students’ trajectory through the project. In all these specific activities students with special needs, language or other difficulties were entirely and deeply involved.

5. Conclusions

In her final interview the class teacher has noted: “All students irrespective of their nationality and skills, were involved in all the activities, working with enthusiasm and collaboratively, interacting happily with each other”. Searching, exploring and making observations were their most favorite procedure. In total, children had built new knowledge and developed critical thinking through cooperative and experiental activity. These realizations strenghten the belief that the natural curiosity young children have for the past contributes to the development of their own sense of identity, so much in reference to others as much as in reference to the passing of time (Demetriadou, 2002, p. 124). The exploration of the local environment involves a range of activities, from a simple walk to the visit at historical and archeological sites, museums, galleries, libraries and anything else that has significance for local history and this can be developed further in carefully planned activities for young children. By exploring their local environment children can take part in activities that open up opportunities to:

- comprehend the ways in which the members of a community are interdependent and learn to appreciate difference as an element of community enrichment (Helm & Katz, 2002),
- cultivate their emotional and aesthetic sensitivity (Nakou, 2004)
- develop their empathy (Nakou, 2004),
- develop social-emotional, motor and cognitive skills through the implementation of individual, and group activities (Helm & Katz, 2002)
- obtain knowledge and collect information especially in the course of visits in places (museums, places of historical interest, and other) (Demetriadou, 2002).

Finally, the mystery and the search for the unknown as well as the prospect of discovery trigger the imagination and activate all senses. The results of the present case study highlight that exploring and learning local history provides an excellent opportunity for values education and the development of creativity.

References

[1] Bahman, S., & Maffini, H. (2008). *Developing children's emotional intelligence*. London & New York: Continuum.

[2] Braun, V. & Clarke, V. (2006) Using thematic analysis in psychology. Qualitative Research in Psychology, *3*(2). pp. 77-101. ISSN 1478-0887. Retrieved from http://eprints.uwe.ac.uk/11735

[3] Cohen, L., Manion, L., & Morisson K. (2007) *Research Methods in Education* (5th ed.). London: Routledge Falmer.

[4] Demetriadou, K. (2002). *Istoria kai geografia stin proti sxoliki ilikia: efarmogi kai axiologisi mias ekpedeutikis parembasis ston istoriko horo. [History and geography in the early years: implementation and evaluation of an educational intervention in the historical field]*. Thessaloniki: Kiriakidis.

[5] Helm, J. H., & Katz, L. G. (2002). *Young investigators. The project approach in the early years*. New York & London: Teachers College Press.

[6] Isari, F. & Pourkos, M. (2015). *Piotiki Methodologia Ereynas. [Qualitative Research Methodology],* Athens: Syndesmos Elinikon Bibliothikon.

[7] Lakshmi, V. V., & Paul, M. M. (2018). Value education in educational institutions and role of teachers in promoting the concept. *International Journal of Educational Science and Research*, *8*(4), 29-38.

[8] Leontsinis, J. N., & Repousi, M. (2002). *H Topiki Istoria os Pedio Spoudis sto Plaisio ths Sxolikis Paidias.* Athens: OEDB.

[9] Lovat, T. (2017). Values education as good practice pedagogy: Evidence from Australian empirical research. *Journal of Moral Education*, *46*(1), 88-96.

[10] Mumford, L. (1996). The value of local history. In C. Kammen (Eds.), *The pursuit of local history. Readings on theory and practice* (pp. 85-89). Walnut Creek, California: Altamira Press.

[11] Nakou, E. (2004). *H xrisi ylikon katalipon sto mathima tis Istorias. [The use of material residue in the history lesson].* Athens: Metexmio.

[12] Robb, B 2008, 'Values education – What is it?', Centre for Alleviating Social Problems Through Values Education (CAVE). Retrieved from www.valueseducation.co.uk

[13] Xadjigiannis, K., Melas, TH., & Mpelegratis, S.1995).*H Topiki Istoria sto sholio. Methodologikes prosegisis. [Local History at school. Methodological Approaches].* Genika Arhia tou kratous.Retrieved July 14, 2016, Retrieved from: http://www.gak.eyv.sch.gr/Ekd/loc_hist.pdf

Maria Ampartzaki *is a Permanent Assistant Professor of Early Childhood Education at the Department of Preschool Education at the University of Crete. Her research interests include action research, science education, art-based and inquiry-based education, and ICT in education among others.*

Vasiliki Giannakou *is a Preschool Teacher. She holds an MA in Early Childhood Education. She is currently undertaking doctoral work on the development, evaluation and assessment of educational programs about history in early years.*

Styliani Frantzeskaki *is a Preschool Teacher and her research interests relate to the teaching of local history, theater games and creativity.*

Styliani Tsatsaraki *is a Preschool teacher and her research interests relate to the teaching of local history, science and drama play.*

Nikolaos Gerakianakis *is a post-graduate student at the Department of Pre-School Education at The University of Crete. He is also a music expert and his research interests include art-based and music education and applications of ICT in Pre-School Education.*

Inquiry based learning and STEM

Burak Güveniş
Halkalı 2 Doğa Primary School,
Turkey

Danny Arati
BeCREO Technologies,
United Kingdom

Ramazan Sezer
Doğa Schools,
Turkey

Zuhal Yılmaz Doğan
Doğa Schools,
Turkey

The aim of this study is to illustrate how science and mathematics competencies can be gained at an early age through science teaching which incorporates experiments and fun activities, with an additional focus on social and emotional skills. The workshop resulting from this study will enable participant teachers to test new techniques and materials, which they will be able to adapt to their classroom. The development of specific competencies necessary in science and mathematics are covered in this study, as well as important cognitive and emotional processes such as learning to learn, taking the initiative, understanding and empathising, feeling responsible, solidarity, non-discrimination and social cohesion. This has been made possible by the interdisciplinary approach taken. The workshop was be delivered on the basis of inquiry-based learning in science education, which places students' questions and ideas at the centre of the learning experience. Five different experiments with participants were created in five different groups, and a cooperative learning environment was created. The following stages of inquiry-based learning were included: curiosity and investigation, discovery, findings and testing of results. Before engaging with the learning activities based on questioning with simple experiments, participant teachers took part in warm-up exercises based on drama, music and video. These activities were focusing on emotions, connecting them to written and verbal reporting. The overall aim was to design a learning and teaching approach which combined socio-emotional learning to make learners more flexible and sensitive towards difficulties. A group evaluation form of peer review study examples will be presented.

Key words: *inquiry-based science learning, inquiry-based learning, socio-emotional, early years education*

1. Introduction

Inquiry-based learning is a learning approach based on research and collaboration. Learners begin to search for information about a topic, an issue, a problem, or something that attracts their attention. They develop questions and decide about the sources of information they are going to rely on [1]. Field work and a close inspection is a vital part of this approach, as well as the use of primary sources such as testimonies, oral accounts, interviews, direct experiments etc. This is because direct experience makes inquiry-based learning more active, sensory and energetic, promoting the development of critical thinking skills at the same time. Learners are also encouraged to collaborate in research tasks, make joint decisions and cross check data. As such, inquiry-based learning is considered to be a constructivist approach which promotes meaningful learning based on personal and societal experience [1].

Inquiry is about looking for relevant data and information. This involves curiosity and investigation, exploration and study. Inquiry-based learning as a methodology places questions and ideas of the learners at the centre of the learning experience [2].

The inquisitive nature of this methodology makes it particularly apt for problem-solving which, in essence, is what scientific research is all about. Therefore, the methodology is particularly useful when trying to teach scientific topics. Teachers establish a learning culture for ideas to be respectfully challenged and tested. Learners start by wondering and move to a form of understanding which leads to further questioning [3].

In addition, inquiry-based learning also contains a social element, as learners exchange information and learn from each other. In this context, the process is as important as the knowledge gained. Since the responsibility for learning is shared between teacher and learners, specific emotional aspects such as resilience can also be developed.

Inquiry-based science education (IBSE) is an approach to teaching and learning science that comes from an understanding of how students learn, the nature of science inquiry, and a focus on basic content to be learned. It also is based on the belief that it is important to ensure that students truly *understand what they are learning*, and not simply learn to repeat content and information [3].

Science processes are also used to guide student learning. These skills focus on thinking patterns that scientists use to construct knowledge, represent ideas, and communicate information. Science process skills help students pose questions, state problems, make observations, classify data, construct inferences, form hypotheses, communicate findings, and conduct experiments [3].

In order to ensure that learners understand what is being learned, and in order to avoid falling into the trap of a superficial learning process in which motivation is based on simple rewards (e.g. passing the test) rather than on the greater satisfaction that comes from exploration and discovery, an iterative, step-by-step process can be defined as follows [4]:

1. Surprise, curiosity, questioning: Create a learning culture where learners collaborate, share ideas and contribute to ideas of others, and learn from what does not work. This requires equity and equality among learners, mutual respect, and active participation by all in various forms (hands on, talking, writing, thinking, observing).

2. Problem statement: In order to engage learners, they need to understand the question they are working on; furthermore, it must be meaningful to them. Learners need to be given the opportunity to contribute to the selection of a problem to investigate, and they will need time to become acquainted with the subject matter.

3. Hypothesis statement: One of the most important skills required for science inquiry is observation. In order for an observation to be useful, learners need to know what to observe, what to look out for. Typically, learners will need specific guidance at this stage. Since observations lead to a very personal experience, it is likely that there will be many different hypotheses resulting from it. In order to reinforce the statement made under Step 1 above, it is important that at this stage, no hypothesis is discarded.

4.Possible explanations, answers and solutions: Learning science is more than just observing and interacting with phenomena, it also involves reasoning, exchanging with others, writing, etc. Whilst the hands-on experience is definitely essential in the inquiry-based science learning process, learners need to be able to think critically and draw conclusions. In addition, it is important to remember that secondary sources (e.g. books, experts, etc.) are a valuable and important complement to direct experience.

5. Design experimental protocols: For the experiment findings to be interpretable, certain requirements need to be met. Setting out a controlled experiment requires to list all factors, and to be able to vary only one factor at a time whilst keeping all other factors constant. By listing what actions will be taken and how in a template, and by recording their actions during the experiment, learners have also the possibility to track back their steps, and to spot potential issues.

6. Confirm or reject hypotheses, compare with established facts: As learners start sharing their findings, they are able to analyse them and to compare them with their hypotheses. Identified errors should be used as an additional learning opportunity.

7. Re-use in lesson or in everyday situations: Learners are encouraged to leave a record, i.e. to produce written or non-written material that summarises and structures their learning. The material produced can be used as points of reference, as inspiration to others, etc.

1.1. Inquiry Based Science Learning in Science Programs

Since the learning of an inquiry-based approach focuses on the process itself as well as on the topic, and since it involves a number of transferable skills, it becomes immediately apparent how the approach can be replicated in other learning situations.

When analysing the science programs defined by the Ministry of National Education in Turkey (2018), the specific definitions covering primary and secondary schools include skills that are to be developed through experiments in a holistic manner. These hands-on research skills can be listed as follows under three separate headings [5]:

> **a) Scientific Process Skills:** This heading covers the skills used by scientists as part of their research work, such as observing, measuring, classifying, recording data, formulating hypothesis, data modelling, modifying and controlling variables, as well as carrying out experiments.
>
> **b) Life Skills:** These include basic life skills such as analytical thinking, decision making, creativity, entrepreneurship, communication and teamwork related to the application of scientific knowledge.
>
> **c) Engineering and Design Skills:** This heading covers the integration of science with mathematics, technology and engineering, taking students from an interdisciplinary perspective of a problem statement to a practical level of invention and innovation; using the knowledge and skills acquired, students will be able to create relevant solutions and develop strategies to add value to their solutions.

Although the syllabus of 1st graders in Primary School does not specifically cover science, it still includes specific objectives around life science. These include gaining basic scientific process skills, being sensitive towards nature and the environment, developing an awareness of a healthy and safe life as well as developing social skills.

By looking at the pre-school level, it becomes apparent how specific objectives can be met in preparation for primary school. These include the observation of objects or entities, comparing their properties, measuring objects, recognise cause and effect relationships and developing solutions to basic problems [6].

It is very important to contribute to the development of science and mathematics proficiency in early school education and to create an effective learning process. The aim of this study is to offer an approach to science teaching which includes experiments and fun activities at primary and pre-school levels, in order to develop science and mathematical skills by supporting the development with social emotional skills. In line with these objectives, the MOV-UP project supports pre-school and primary school teachers to adequately address the growing needs of students to develop their personal skills and flexibility needed to address challenges they face. It also aims to synchronise personal values and the motivation of children with the values of a democratic society. From a broader perspective, the MOV-UP project focuses on quality teaching and learning outcomes which will be beneficial to all students, especially in support of an empathic and non-discriminating social cohesion, striving for equality and improving civic qualifications. These applications will allow teachers to test new techniques and materials to prepare activities tailored to their own classrooms and contents. The educational process aims to improve teachers' skills in organising a learning environment to engage in a positive and constructive dialogue with children, which shall include aspects of compassion, empathy and emotional support.

1.2. The Procedure of Experiments

This study, based on the above-mentioned objectives, considers the concept of "sustainability" along the guidelines set by the European Union within the scope of the "Education for Sustainable Development" approach, which is also reflected in Turkish qualifications. Some experimental practices for Primary School are also included. Among the main objectives of the study are competence and sustainable development; from there, it is possible to identify proficiency in science and mathematics, both from a passive and active learning perspective. Furthermore, practices for skills such as understanding, responsibility, solidarity, discrimination and social cohesion have been included for the first time in such an approach, which also led to interdisciplinary practice. For the practical implementation, the experiment resources used in primary classrooms in Doğa Schools in Turkey were made available.

In the study, the workshop was held with 21 primary and pre-primary schoolteachers. Five groups of four teachers were formed, each carrying out one experiment and thus creating a collaborative learning environment. The videoclip about emotions was used as a warm-up activity to allow participants establish an emotional connection through sound and images. With these techniques the participants can identify different moods and learn how to resolve the conflicts and manage their emotions. After the warm-up activity, five experiments were randomly allocated to the randomly.

The workshop was held in 6 steps:

1. The participants are given 3 minutes to read the instructions and decide which materials they will need.
2. They go to the "**Science Buffet"** and take their experiment materials.
3. They run the experiment within their groups.
4. They record the process and results of their experiment in their experiment report.
5. Once they have carried out their experiment, they choose and share their team's motto.
6. The final step is to present their experiment to peers with a song: they will compose their song and share it with all participants.

The five simple experiments were chosen from Doğa primary school's "Young Inventors" experiment book for 2nd graders. The following experiments were carried out:

1. Slip the egg into the flask
2. Make a magnet
3. The unexploded balloon
4. Make a fire extinguisher
5. Non-flammable money

The stages and results of the above-mentioned experiments are shared below:

First experiment: Slip the egg into the flask

The procedure of the experiment:

1. Spread the resources across the table.
2. Put on the apron and safety goggles.
3. Carefully peel the shell of a boiled egg, to leave it with a smooth surface.
4. With the help of an adult, throw 10-15 burning matchsticks into the flask.
5. While the matchsticks are burning inside the flask, place the egg on the mouth of the flask so that it covers it completely, without a gap to let air in.
6. Observe the outcome.
7. Complete the experiment form.

Learning outcomes

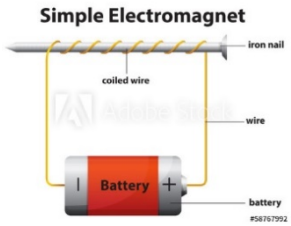
A burning flame uses up oxygen, reducing its presence in the atmosphere. In our experiment, the burning matchsticks lead to a decrease of oxygen, which in turn lowers the pressure so that the egg is actually sucked into the flask.

Second experiment: Make a magnet

The procedure of the experiment:

1. Touch the paperclip with the nail to see whether it is magnetised.
2. Wrap the plastic-coated copper wire tightly around the nail, leaving some space at both ends.

3. Tape the wire on to the nail so that it does not slip off.
4. Cut off some of the plastic from both ends of the wire, tape these ends to the ends of the battery.
5. Carefully bring one end of the nail closer to the paperclips. Observe the outcome.
6. Complete the experiment form.



Learning outcomes

If two sides of a battery are connected to each other with a conductive wire, electrical current flows through it and creates a magnetic field. This field, like magnets, has the property to attract some metals; this is how conventional bells were made.

Fig. 1. Simple Electromagnet

Third Experiment: Unexploded Balloon

The procedure of the experiment:
1. Put on the gloves, apron and safety goggles.
2. Fill half of the beaker with water and pour the water into the balloon, using the funnel.
3. Blow the balloon up a bit and tie it tightly.
4. Ask the teacher to light the candle.
5. Using the tongs, hold the top of the balloon tightly. Bring it over the candle. Keep the bottom of the balloon 20 cm away from candle.
6. Wait for a few minutes and observe the balloon.
7. Complete the experiment form.

Learning outcomes

Heat is transmitted through matter. In the experiment, the heat radiating from the candle is transmitted to the water through the balloon. Were the heat not transmitted from the balloon to the water, the candle would melt because of excess heat. The water in the balloon absorbs the heat of the candle and prevents the balloon from exploding.

Fourth Experiment: Make a fire extinguisher

The procedure of the experiment:
1. Put on your safety goggles and gloves.
2. Ask the teacher to light the candle.
3. Put 50 ml of vinegar and 5ml of baking powder into the flask and immediately place the cork with a hole on its mouth.
4. Hold the gas coming out of the flask close to the candle.
5. What happens to the candle flame? Discuss with your friends and complete the experiment form.

Learning outcomes

When an acid and a base are combined, they produce carbon-dioxide and salt. As the density of the carbon-dioxide gas is bigger than the density of oxygen, it displaces the oxygen which is necessary for a flame to burn. As a result, the burning stops.

Fifth Experiment: Non-flammable money

The procedure of the experiment:
1. Put on the safety goggles and gloves.
2. Use the volumetric cylinder to measure 60 ml of cologne and pour it into the beaker.
3. Use the volumetric cylinder to measure 40 ml of water and pour it into the same beaker.
4. Stir the mixture with the plastic stirrer for one minute.
5. Use the tongs to dip the paper money into the mixture.
6. Ask the teacher to burn the wet paper money with the matches.
7. After the wet money ignites and the flames disappear, touch the paper money.
8. Clean the table and complete the experiment form.

Learning outcomes
Under normal circumstances, water is not flammable, whereas the alcohol contained in the cologne is a flammable material. When we ignite the mixture of water and cologne, water prevents the mixture from burning by absorbing the heat released by the combustion of alcohol in the cologne. Each group carries out their simple experiment using the materials provided and take notes of the procedures and outcomes, and then compare the procedure followed with the procedure provided by the instructor. Finally, they write down their hypothesis. Taking turns, they share their procedure with the other groups and are prepared to answer questions.

2. Method

At the end of the workshops, the participants filled in the evaluation form to share their thoughts about the workshop. Topics and questions discussed with the teachers included:

1. Achievements of the training sessions;
2. Most challenging aspects of the training sessions;
3. Topics the participants intend to cover in their lessons;
4. The outcomes of the workshop.

2.1. Analysis of the data

The qualitative data obtained was analysed using a content analysis method. The aim of the content analysis was to relate the collected data to concepts and relationships that could explain it [7]. The process of the content analysis consolidated similar data within certain defined concepts and themes in such a way that it could be put in order and interpreted. The qualitative data obtained through focus group discussions was analysed in four stages [8]:

1. **Coding the data:** The responses of teachers participating in the workshop were carefully read and matched to a predetermined code list.
2. **Finding themes:** The codes were brought together and common aspects were found; themes emerged through the categorisation of the collected data using codes.
3. **Arranging codes and themes:** The themes and codes took their final form and were presented in relation to the themes that emerged, with the aim of defining the collected data.
4. **Defining and interpreting the findings:** The discussion data was interpreted according to codes and themes, using quotations from teachers and providing examples and explanations.

Table 1. An example of the data coding work

QUOTATION	Code	Category
Teacher 4: *"It has made positive contributions to my professional development."*	*Positive contribution*	*Personal & Professional Development*
	Professional development	
Teacher 2: *"I learned new experiments, new and different perspectives."*	*New experiments*	*New skills and learning*
	Different perspectives	

2.2. Findings

For most of the participants, expectations for the training have been very well met, for one they have been met well and for the remaining participant the response was average. Most of the participants were very happy about the overall organisation and content of the training session. Most of the participants stated that the content of the training was very good in terms of new things they learned. In terms of length of the training sessions, one participant expressed that it was not long enough, six of the participants thought the sessions could have been a bit longer while the remaining 14 stated that the duration of the sessions was of a suitable length. Most of the participants agreed that the structure of the training was very good and that the methods and approaches shown were used very well. The content of the training materials was a very good fit with the profile and expectation of the participants. Most of the participants were very pleased with the work of the trainers. All of the participants stated that they were supported by the trainers with their questions and opinions. Most of the participants stated that they would recommend the training to their colleagues.

Most of the participants think that training contributes strongly to their professional and personal development. All of the participants think that training has provided them with new knowledge and skills. Most of the participants think that the training provided new knowledge and skills that they can apply in their own institutions. Most of the participants think that thanks to the training sessions, they gained new professional knowledge and skills which, in turn, they can share with their colleagues. Most of the participants think that the training increased their interest in the topics covered.

Most of the participants expressed appreciation for the content and structure of the training sessions. Most of the participants found the training sessions to be productive and useful for their own professional development. They were also very happy about the welcoming environment at the training venue.

3. Discussion and Conclusion

Based on the findings, it can be said the training session was a success in terms of participants' satisfaction and in terms of new skills and techniques they learned. The session was also very successful in terms of the participants' eagerness to replicate the newly acquired skills and knowledge in their own classrooms; it would be interesting to this end to organise a follow-up survey at the end of the following academic year, to verify the actual implementation numbers.
Another strong theme emerging from the feedback received is that participants felt welcomed, eagerly participated and joined in hands-on activities with peers, without feeling overburdened or put off by the tasks at hand. This aligns well with the positive feedback received about the trainers and the venue alike, which was another important contributing factor to the success of the training sessions.

References

[1] Chiappetta, E. L., & Adams, A. D. (2004). Inquiry-based instruction. *The Science Teacher*, *71*(2), 46.
[2] Engaging Young Learners Through Inquiry-Based Learning. (2015, September 2). Retrieved from https://www.oxfordlearning.com/engaging-young-learners-through-inquiry-based-learning/
[3] Worth, K., Duque, M., & Saltiel, É. (2009). *Designing and implementing inquiry-based science units for primary education*. Fondation La main à la pâte.
[4] Saltiel, E. (2010). Inquiry-Based Science Education: Applying it in the Classroom - Methodological Guide.
[5] *Ministry of National Education (2018). Curriculum (elementary and secondary school 3rd-8th grades); Ankara*
[6] *Ministry of National Education (2013). Preschool Education Program; Ankara*
[7] Doğan, Z. Y., & Altun, S. (2018). The Effects of the Research Lesson Study (RLS) Model on Teachers' Professional Development. *International Online Journal of Educational Sciences*, *10*(3).
[8] Yıldırım, A., Şimşek. H., (2013). *Sosyal bilimlerde nitel araştırma yöntemleri*. (7. Baskı). Ankara: Seçkin Yayıncılık.

Burak Güveniş – *Burak works as a primary school teacher in Halkalı 1 Doğa Schools, he has been working in Doğa Schools for the past 5 years. He graduated from Celal Bayar University in 2008, graduating from the Primary School Teaching department.*

Danny Arati – *Danny joined the BeCREO start-up, which focuses on game-based and interactive approaches in education, after having spent 16 years as the Education Manager for Europe at Intel, where he focused on the delivery of continuous professional development programmes for teachers, on the shaping of policies that drive innovation in education and on the research of specific usage models of technology in education. The main focus of his role was how Education can be transformed in order to deliver 21st Century Skills, with the support of technology. He was regularly involved in the hands-on delivery of professional development programmes to teachers, as well as in drafting policies and guidelines with various Ministries, NGOs, Academia and industry partners. He holds a BA in Literature, Philology and Journalism from Fribourg University (CH) and an MA in Mass Communication Research from Leicester University (UK). He has taught languages at secondary and post-secondary level in Switzerland, and in Adult Education Colleges both in Switzerland and England. A member of the Chartered Institute of Linguists, he is also a Principal Examiner for the International Baccalaureate.*

Ramazan Sezer- *Ramazan is the Head of Classroom Teachers at Doğa Schools. He received his bachelor's degree in Primary School Teaching at Süleyman Demirel University in 2007 and his Master's degree in Primary School Teaching at Mehmet Akif Ersoy University in 2010. He has conducted many national and international projects, and acted as the expert for the SUSTAIN and NTSE projects within the Erasmus Plus Program.*

Dr. Zuhal Yılmaz Doğan - *manages the Projects Coordination Office at Doğa Schools and is in charge of the school's involvement in numerous scientific, Erasmus+ and H2020 projects. In her role, she has gained great experience as a project coordinator. She contributed to the development of on-line courses and coordinated project activities in schools in Lifelong Learning Programmes. She has extended experience as a foreign language teacher and as a teacher trainer at the Ministry of National Education, training language teachers on current methodologies and programmes, instructional design on interdisciplinary teaching. She earned a TESOL certificate from UMASS in 2011. She completed studies about the applicability of "A CEF-R for Languages" in public schools during her master education and gained a PhD at Yıldız Technical University, Program Design and Development Department.*

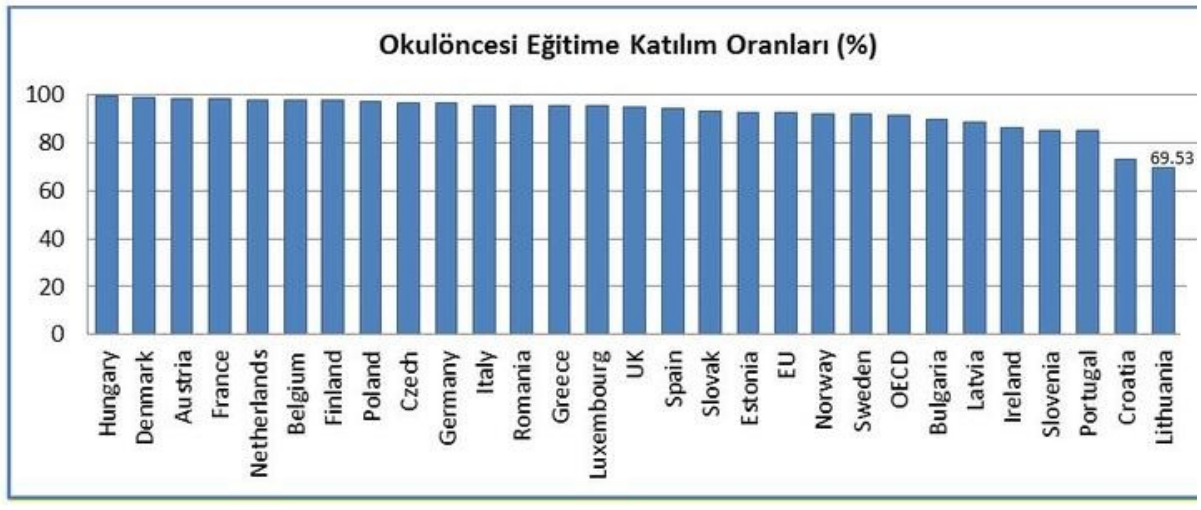
Okulöncesi Dönemde Sosyal ve Duygusal Öğrenme

Tolga YAZICI
Sosyal ve Duygusal Öğrenme
Türkiye

21. Yüzyıl, sosyal ve duygusal öğrenmeyi yaşam yetkinliklerinin anahtarı olarak kabul etmektedir. Okulöncesi dönemin bireyin sonraki yaşantılarına etki eden kritik bir dönem olduğu düşünüldüğünde çocukların sosyal ve duygusal öğrenme gelişim dönemleri titizlikle ele alınmalıdır. Bu hususta ülkelerin okulöncesi döneme yaptığı yatırım okulöncesi eğitime erişimde fırsat eşitliğinin sağlanması ilerleyen süreçte getirisi yüksek dönütler alınmasına zemin hazırlayacaktır. Okulöncesi eğitime erişimin ve teşviğin sınırlı ya da hiç olmadığı durumlarda çocuklar adil olmayan bir yarışta mücadele etmek zorunda bırakılmakta nitekim bu hususta ailelerin tutumları çocukların geleceğine doğrudan etki eden sonuçlar ortaya koymaktadır. Ebeveyn ve öğretmenlerin rol model olduğu düşünüldüğünde çocukların sosyal ve duygusal öğrenmelerini, duygu yönetim becerilerini destekleyecek tutumlar içerisinde yer alması bu becerilerin gelişimine katkı sağlayacak unsurlar olacaktır.

Okulöncesi dönem bireylerin tüm öğrenim hayatına; sosyal, duygusal ve bilişsel gelişim evrelerine etki eden önemli bir dönemdir. Çocukların gelişim dönemlerine yönelik yapılan araştırmalar incelendiğimde okulöncesi dönemin diğer dönemlere kıyasla daha fazla kazanç sağladığı anlaşılmaktadır. Nitekim bu ifadeyi destekler nitelikte olarak Nobel ödülü sahibi James HACKMAN'da getirisi en yüksek yatırımın okulöncesi dönem olduğunu ifade etmektedir [1]. Bu doğrultuda ülkelerin eğitim politikaları incelendiğinde de okulöncesi eğitime katılım OECD ülkeleri tarafından dikkate alınır bir gelişme olmuştur. Aşağıda yer alan tabloda OECD ülkelerinin okulöncesi eğitime katılım oranları yer almaktadır. Birçok ülkenin okulöncesi eğitime katılım oranları 80 ve üzeri iken Hırvatistan ve Litvanya OECD ortalaması altında kalan iki ülke olarak dikkat çekmektedir.

Tablo.1. Okul Öncesi Eğitime Katılım Oranları



Okulöncesi eğitime katılım toplumların sosyoekonomik durumlardan bağımsız düşünülmemelidir. Nitekim sosyoekonomik düzeyi düşük ailelerin öğrencileri bu dönemde okulöncesi eğitim alamazken ekonomik düzeyi yüksek bir ailenin çocuğu okulöncesi eğitim alabilmektedir. Bu durum bir çocuğu avantajlı kılarken diğer çocuğu ise dezavantajlı konuma düşürmektedir. Yukarıdaki tabloda yer alan ülkelerin okulöncesi döneme yaptığı yatırım, sağladığı destek ve tüm ülke çocuklarının eğitime erişiminin kolaylaştırılması katılım oranlarını yüksek tutan bir gelişme olabilir.

30 Milyon Kelime Farkı

New York Üniversitesi'nde akademisyenlik görevini sürdüren Prof. Dr. Selçuk ŞİRİN, öğrencilerin bilişsel gelişiminin en etkin olduğu yıllar **0-3 yaş dönemidir** diyor ve bu dönemde çocuklara kitap okumanın, okuma esnasında *diyalog* kurmanın çocukların bilişsel gelişimi için önemli bir kazanç olduğunu ifade ediyor [2]. Sosyal, duygusal ve bilişsel gelişim üçlüsünü birbirinden bağımsız düşünmemeliyiz. Nitekim **duygu yönetim becerileri** ile **sosyal beceriler** ve **akademik başarı** arasındaki en önemli anahtar beceri **iletişim ve dinleme** becerileridir [3]. Bilişsel gelişimin akademik başarı ile bağlantılı olduğu düşünüldüğünde, sosyal beceriler ve duygu yönetim becerileri iletişim ve dinleme ile ilişkilidir. Erken çocuklukta okunacak masallar, kurulacak diyaloglar da iletişim ve dinleme becerileri üzerine. Dolayısıyla hem çocuğun **bilişsel gelişimini hem de sosyal ve duygu yönetim** becerilerini de destekler niteliktedir. Hart ve Risley yaptığı bir çalışmada farklı gelir düzeylerinde olan ailelerin çocukları ile kurduğu 1 saatlik diyaloğu aylarca takip ediyor. Çocuklar **36 aylık** olduğunda çarpıcı bir sonuç ortaya çıkıyor. Sosyoekonomik düzeyi yüksek aileler, çocuklarıyla daha fazla kaliteli zaman geçiriyor, çocukla diyalogda daha fazla kelime kullanıyor. Aradaki fark 30 milyon kelime.

Marshmallow Test

Bu dönemde çocukların duygu yönetim becerileri üzerine yapılan bir araştırmadan bahsetmek istiyorum. Marshmallow testi. 1960'lı yılların sonu Colorado, Harvard, Stanford ve Columbia üniversitelerinde akademisyenlik yapan Walter Mischel bu testi okul öncesi çocuklara uygulanmaya başlıyor.

Şekil.1. Marshmallow Test

Çocuklar şekerleme dolu bir odada yalnız bırakılarak bu şekerleri yememeleri gerektiği anlatılıyor. Amaç çocukların ne kadar kendilerini kontrol edebildikleri ve hazzı erteleyerek daha çok arzu edilen için bekleme becerilerini ölçmek. Ünlü fizikçi Kaku, bu testten başarı ile geçen çocukların yaşamları incelendiğinde daha başarılı olduklarının görüldüğünü söylüyor. O yüzden de "şimdi" diyenlerin ve bu şekilde hareket edenlerin kısa vadeli düşünenler olduğunu vurgulayan Kaku, başarılı olacaklar için "Şimdi ne elde edebilirimi değil" uzun vadeli düşünenler olacağını vurguluyor [4].

Duygusal Öğrenmede Ebeveyn ve Öğretmenin Rolü

Ebeveynlerin problem çözerken rol model olduğunun bilincinde olması duygusal öğrenmeyi destekleyecek ilişkiler içerisinde olması çocukların duygu yönetim becerilerini geliştirebilir. Problem çözümü için çatışmayı tercih eden ebeveyn çocuğuna da örtük bir öğrenme ile yanlış bir davranış kazandırır. Öğretmenlerin de yapıcı ve ikna edici/açıklayıcı/ fevri tutumlardan uzak bir yaklaşım içerisinde olması doğru bir etki bırakacaktır. Öğretmenlerin ve ebeveynlerin, öğrencilerin yaşadıkları probleme müdahil olması ve çocuklar adına çözüm arayışına girmesi çocukların problem çözme becerilerini ve duygu yönetim becerilerini olumsuz etkileyerek akranlarıyla yaşadıkları problemlerde çözüm üretme durumlarını engelleyen sonuçlar ortaya koyabilir. Bu sebeple kolaylaştırıcı ve problem çözücü ebeveynlerin çocuklardan ellerini çekerek akranlarıyla ilişkilerini kendilerinin yönetmesini istemeleri bu becerileri geliştirmeye yönelik atılacak önemli bir adım olabilir.

Kaynakça

[32] acevokulöncesi.org. *0-6 Yaş Dönemi ve Erken Çocukluk Eğitiminin Önemi*. Erişim Adresi: https://www.acevokuloncesi.org/index.php/size-ozel-kaynaklar/kaynak-dokumanlar/category/6-gelisim-ogrenme

[33] Şirin, S., (2019) Yetişin Çocuklar, İstanbul: Doğan Kitap

[34] Türnüklü A. (2004). Okullarda Sosyal Ve Duygusal Öğrenme. *Kuram Ve Uygulamada Eğitim Yönetimi Dergisi,* Sayı:37, 136-152 (2004)

[35] http://www.pervinkaplan.com/detay/seker-testini-gecen-basarili-mi-oluyor/938

Tolga Yazıcı *– İstanbul*

1992 yılında İstanbul/Fatih'te doğmuştur. Lisans eğitimini burslu olarak İstanbul Aydın Üniversitesi Eğitim Fakültesi Sınıf Öğretmenliği bölümünü 2014 yılında tamamlamıştır. 2015 yılında Boğaziçi Üniversitesi/ BÜYEM'in Sınıf Öğretmenliği Gelişim Programı'na katılmış 2017 yılının aralık ayında uzmanlık belgesini alarak mezun olmuştur. 2016 yılında İstanbul Aydın Üniversitesi'nde İlköğretim Sınıf Öğretmenliği Tezli Yüksek Lisans programına başlamış 2019 yılında mezun olmuştur. Kolektif yazar grubuyla yazdığı Eğitim Her Yerde Seçkileri adlı bir kitabı, eğitsel içerikli birçok makale yayını bulunmaktadır. Birçok zirve ve ulusal/uluslararası konferansta yer almış, sempozyum ve çalıştaylarda görev almıştır. Çalışma alanları STEM, 21. yy. becerileri, çocuklar için felsefe, öğretmen eğitimi ve proje çalışmaları şeklindedir.

This publication is prepared in the frames of the international project **"Early Childhood Education – building sustainable motivation and value paradigm for life" (MOV-UP)** with the financial support of the European Commission under Erasmus+ Program, Key Action 3: Social Inclusion through Education, Training and Youth (ref. No 580339-EPP-1-2016-1-BG-EPPKA3-IPI-SOC-IN). The content of the publication reflects the views only of its authors, and the Commission cannot be held responsible for any use, which may be made of the information contained therein.

MOV UP **partners:**

Co-funded by the Erasmus+ Programme of the European Union

FONDAZIONE NAZIONALE CARLO COLLODI

PANEVĖŽIO RAJONO ŠVIETIMO CENTRAS

doğa SCHOOLS

L-Università ta' Malta

ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΡΗΤΗΣ
UNIVERSITY OF CRETE

INTERCULTURAL COOPERATION FOUNDATION

РАЙОН НАДЕЖДА
NADEZHDA DISTRICT