The intervention: Improving social-emotional skills in early childhood as a factor of school performance

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Abstract

Contemporary studies show the major impact of early education on the future development of children, that justifies a quality educational approach from the early childhood, to meet the needs of children’s education for the onset of schooling. The dynamics of society and the updates in the field of education make it necessary to create an educational context as a response of the current needs of children’s competencies. In many countries, social-emotional education gains importance as an essential element of education, emotional intelligence being considered a determinant for success in life. The methods used were the pedagogical experiment, surveys, curricular analysis and systematic observation. When children experience well-being, the ability to think is increased. The active involvement of the teachers in the implementation of the programme, the use of recommended practices and the solving of the challenges that have appeared have led to an increase in the impact of the intervention.

Keywords: Early childhood education, social-emotional skills, well-being, social-emotional education.

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1. Introduction

Children’s school readiness, their education and caring for them is currently the topic of numerous debates for both Early Education specialists as well as parenting specialists. Considering the recent studies which indicate Early Childhood’s major impact on children’s subsequent development (Bruce, 2005; English, 2012), devoting attention to building strong educational bases even at such an early age is understandable in order for the future adults to have a well-rounded personality. Therefore, in order that Early Childhood education be efficient, high-quality standards are needed which would meet the children’s needs in their preparation for the beginning of school. The present dynamics in society requires educational settings which would meet children’s current needs of competencies. Year after year, all the factors involved in the educational process focused their attention on developing children’s cognitive skills, attempting to help them amass a vast amount of information and notions, not taking into account the fact that social and emotional skills are at least equally important to cognitive ones in order for a child to be successful at school and later on in life.

In Romania, the year 2000 marks as a new beginning regarding how Early Childhood Education is viewed and its major benefits in a child’s first years of life. In 2012, a new programme called ‘The Generalisation of K-5 in Romanian Early Education’ was begun which lowered the threshold for beginning first grade from 7 to 6 years of age. In April, UNICEF (2012) created ‘School Readiness: a conceptual framework’ in which two defining characteristics are mentioned (transition and acquiring competencies) and are analysed three-dimensionally: children’s school readiness in view of their learning and development, schools’ preparations for children-school environment along with school practices meant to facilitate an easy transition for the children into early elementary school and promote equal opportunities for all the children and their families, focusing on parental attitudes and parents’ involvement in early learning. All the three dimensions are important and require an interconnection and collaboration among all the factors involved, as school readiness is a time of transition which demands harmony among children, families and the system (Fabian & Dunlop, 2006; Vogler, Gina & Woodhead, 2008). School readiness cannot be defined without realising that all the factors involved (child, family and system) are subject to social, cultural and historic influences (Rogoff, 2003).

What does school readiness mean? The answer varies based on the respondent. Naturally, parents accentuate pre-academic skills and knowledge (Diamond, Reagan, & Bandyk, 2000; UNICEF, 2012), while elementary grades teachers tend to focus on social and emotional issues (Dockett & Perry, 2003). Thus, an important step has been taken in crossing from a general concept, namely, emotional intelligence, to a specific one, namely, abilities and competencies that an individual possesses. Elias et al. (1997) defined Social emotional learning (SEL) as the process of acquiring basic competencies for recognising and managing emotions, establishing and attaining positive goals, appreciating and understanding others’ perspectives, establishing and maintaining positive relationships, making responsible decisions and constructively managing interpersonal situations. The immediate objectives of SEL programmes are to develop five interdependent sets of cognitive, emotional and behavioural competencies: self-awareness, self-control, social awareness, relational abilities and making responsible decisions (Collaborative for Academic, Social and Emotional Learning, 2005).

A recent NESET II report (Strengthening Social and Emotional Education as a Core Curricular Area across the EU, 2018) makes recommendations for social and emotional integration as an essential element of the curriculum across the EU, all based on the international research, EU policy and current practices of member states. Among the recommendations made by the report, the one regarding a review of the current state of social and emotional education across member states should be noted although the importance of socio-emotional education is often recognised, there are considerable differences when it comes to the levels of educational policies, curricular settings and available programmes meant to help schools and children develop socio-emotional competencies. International proof based on the research strongly argues for the benefits of SEE in social, emotional and academic
achievements; this fact justifies the ESE acceleration policy as a priority in all the member states across the EU (Cefai, Bartolo, Cavioni & Downes, 2018).

2. Purpose

The proposed research topic is a part of the aforementioned context and aims at creating a study based on a group of children ages 5–6 regarding the level of development and improvement of socio-emotional competencies as well as behavioural control after implementing an extensive intervention programme. Research suggests that a high quality early education has positive effects on the development of cognitive, social and emotional skills, greatly influencing academic success during school years and even in adulthood (Gormley, Phillips, Newmark, Welti & Adelstein, 2011; Huang, Invernizzi & Drake, 2012). Social and emotional education should become an essential part of learning programmes across Europe, as adequate and sufficient sources, keeping in mind the amount of formatting and the time required by such prioritisation. Such recommendations have better chances of properly functioning if they are accompanied by parallel interventions meant to eliminate barriers and create structures and systems that promote mental health and well-being, equal opportunities and social justice (Cefai et al., 2018). The present Curriculum for Early Childhood from Romania allocates an insignificant part to socio-emotional education, which is why the educational policies document used in elaborating and setting the intervention programme is titled Fundamental Guidelines in a Child’s Early Learning and Development from Birth to 7 Years of Age (Ionescu et al., 2010).

3. Method

3.1. Participants

Research took place in Babes-Bolyai University’s Kindergarten, a public urban kindergarten which has 10 groups divided arranged on age level but randomly divided based on gender in such a way that each group has an approximately equal number of each gender. Children’s parents are of various social categories, most of them having undergraduate studies. The study was based on three groups of children (N = 90) representing 32% of the children who attend Babes-Bolyai University Kindergarten. The research was conducted during the 2017–2018 school year, with the pre-test phase between October 2017 and the post-test phase between June 2018. Children ages 5–6 attended kindergarten since they were 3-year old; the experimental group (GE) was comprised N = 57, the focus group of N = 28 and five parents declined participation in the study.

The content material included scientific notions as given by The National Curriculum for Early Education (2008) for children aged 5–6 years old. Our aim was to conform to the requirements of a formatting programme linked to the organisation and implementation of learning and education in kindergarten via certain punctual educational interventions meant to improve social and emotional competencies by identifying and correcting problematic behavioural issues. The materials used were diverse (story books, poems, drawings, images, emojis, etc.) and were selected based on the proposed objectives using materials available both online and in print format related to the topic of socio-emotional development, according to the themes proposed by the teachers as indicated in the plan for each group of children and meeting the requirements given by the early education curriculum.

3.2. Research design

Based on the nature of the subject at hand, the research conducted is of a practical-applied type, and the manner of approach is a longitudinal one, tracing the same group of children during K5 (2017–2018 school year) and the beginning of their elementary school (2018–2019 school year). Based on the method used the research was conducted in two stages: the first one of diagnosis and the second one of intervention. Considering the specifics of the problem investigated, the present research has a
flexible structure which is most adequate for such pedagogical research. This study aims at identifying the effects of the intervention programme regarding socio-emotional skills in preschool children of 5–6 years old and was designed and implemented according to the model. The general objective of the research is the implementation of an intervention programme focused on shaping and developing socio-emotional skills in preschool children of 5–6 years old.

The stages of the research had as a starting point the pre-experimental stage in which we tried to emphasise the level of children’s social, emotional and cognitive development using standardised instruments for observing and measuring. Teachers who participated in the programme attended eight workshops regarding socio-emotional education where we provided them with informative material and courses, while the kindergarten’s psychologist presented techniques and methods of forming and moulding desirable behaviour in preschoolers, methods of intervention for developing social and emotional skills as well as positive interaction and strategies of effectively solving conflicts (e.g., writing a letter of request, waiting for one’s turn, verbally expressing anger, sharing toys, obeying rules); we also undertook steps to systematically observe preschoolers and create an inventory of inadequate behaviour exhibited by children in the studied groups, behaviours which were then ranked according to frequency, length, latency and intensity.

The formative stage of the experiment included the implementation of the intervention programme and activities for the groups we worked with, according to the aim and objectives of the research. In order for this stage to be successful, two main actions were conducted: the organisation of activities based on established principles and the monitoring and support of teachers in their work with the help of weekly counselling.

The post-experimental stage involved reassigning the PEDa questionnaires, namely, the scales for parents and teachers in evaluating social, emotional and cognitive competencies. Discussions with teachers participating in the programme also took place in view of collecting data which would allow subsequent in-depth analysis and interpretation of findings as well as improvement of the intervention programme.

3.3. Instruments

In evaluating preschoolers’ social and emotional competencies questionnaire batteries available on the Platform for Development Evaluation in Children Ages 3–7 were used (PEDa, Miclea, Balaj, Porumb, Porumb & Porumb, 2010). This platform is a multi-method and multi-observant evaluation system which includes 18 scales for parents, 36 scales for educators and 49 scales for psychologists. The Platform for Development Evaluation (PEDa) was validated in Romania in 2010 with the intent of offering a means of complex evaluation in developmental areas of children aged 3–7 and was used with permission as an instrument in the present research. The research used scales for evaluating social, emotional and cognitive competencies for children aged 5–7, the scales being filled in by children’s parents who were a part of the programme and by preschool teachers who participated in the intervention programme. The scale which evaluates social competencies in preschoolers has three basic dimensions: compliance to rules, social relations and prosocial behaviour. The scale which evaluates emotional competencies includes three dimensions: understanding emotions, expressing emotions and managing emotions. Each age category has two variants of the scale, one being completed by the educators and the other one by the parents or tutors. In total, there are six different scales for screening social abilities of preschoolers. The present study used the scales for children aged 5–7. For each item the answer is given on a scale of 1–5, where 1 means almost never, 2 seldom, 3 sometimes, 4 very often and 5 almost always. The respondent must circle only one answer for each item, based on the frequency displayed by the child’s behaviour.
4. Intervention

The basis of the intervention programme was the principles promoted by two educational models regarding the development of such abilities.

4.1. Principles of rational emotive behaviour therapy—ABC model (Ellis, 1979)

Rational–Emotional–Behavioural Education is a positive, preventive educational programme which supports the development of positive self-esteem, of self-control, and of establishing social relations. A. Ellis reached the conclusion that language influences thoughts, and emotions determine the way in which the latter ones are structured. The implementation of the concepts promoted by Ellis in the educational realm is done using the rational emotive behaviour education. Ellis (1979; 1985 apud Opre & Vaida, 2008) traces the applicability of this theory using the ABC (DE) model (activating event, cognitions, consequences, disputing and effect). The aim is to prevent the formation of irrational thoughts. Thus, children will learn problem solving strategies and how to control their emotions, will develop adequate social behaviour, will increase their self-esteem and perseverance and will facilitate teamwork (Ellis & Bernard, 2007).

4.2. The pyramid model for supporting social emotional competence in infants and young children

The Pyramid Model for Supporting Social Emotional Competence in Infants and Young Children (Fox, Dunlap, Hemmeter, Joseph & Strain, 2003) is a conceptual setting for approaching social and emotional development and for correcting provocative behaviour at young children. This Pyramid Model setting includes four levels of practice meant to meet the needs of all children, including those with problematic behaviour. The key implication is that most answers to provocative behaviour are probably found by analysing adults’ behaviour and general practice in the classroom, not by identifying the children who need specialised intervention. This model applied in current practice demonstrates that good preparation and planned activities by teachers who are willing to offer all the students a high-quality educational experience can solve numerous issues arising in the classroom.

Socio-emotional development shows the way in which preschool children gain social abilities, self-awareness and emotional control, factors connected with learning. This area of development has two interdependent directions. First, the concept of self, which includes self-awareness, belief in oneself and personality, all in turn allowing children to become competent students (Harter, 2006; Thompson, 2006). The same area includes the development of self-awareness and self-esteem, the level of empathy and care for those around and preschoolers’ initiative of becoming enthusiastic and active students. Social competencies include abilities to interact positively with adults and classmates in formal and informal contexts of learning, understanding the roles and responsibilities of participating in group activities and cooperating, while abiding by the adults’ instructions, acquiring and developing pro-social behaviour. The quality of attachment relationships and interaction with family members, teachers and classmates influences children’s learning in various ways, both direct and indirect (Dunn, 1993; Thompson, 1990).

4.3. Curriculum criteria of the intervention programme

Child-centred education must be viewed as a guiding line of education in general, and the level and quality of preschoolers’ acquisitions depend on facilitating a state of well-being for children by creating favourable contexts of learning. In this regard, the programme aims at developing children’s social and emotional competencies by making use of the varied activities appropriate for kindergarten level. The premise for implementing this programme is that the development of socio-emotional competencies in children is directly related to children’s better adjustment during elementary grades and can predict the child’s future evolution regarding academic success.
The general objective of the programme is the development of preschoolers’ social and emotional competencies as the bases for establishing the mechanisms of socio-emotional as well as behavioural self-management in order to create a state of well-being and a favourable beginning during school years. The programme’s objectives were established based on Fundamental Guidelines in a Child’s Early Learning and Development from Birth to 7 Years of Age (Ionescu et al., 2011). Actions for developing social competencies (61–84 months): initiating positive interactions with adults and children of similar age; manifesting prosocial behaviour; manifesting compliance to rules and accepting/respecting diversity. Actions for developing emotional competencies (61–84 months): forming a positive image of one’s self as a unique being; utilising certain strategies of emotional self-management; emotional alphabetisation by recognising one’s emotions and those of other people as well as what causes emotions, offering an adequate response; verbal and non-verbal expression of primary or complex emotions.

The planning of activities as a part of the programme was done taking into consideration the daily schedule outlined by the Lesson Plan of the Curriculum for Early Education and keeping in mind all the activity categories mentioned in it: personal development activities (routines, transitions, etc.), games and free choice activities, activities from the various fields. The methods and techniques used in the intervention programme were as follows: the expository method, role play, conversation, explanation, exercise, debate and case study. Children’s evaluation was conducted based on children’s portfolios as well as the Sheet for Assessing the Child’s Individual Progress before Signing Up for School Readiness Class and the Notebook for Psycho Pedagogical Observations, both instruments being issued by the Ministry of Education. Preschoolers’ social and emotional skills were evaluated by applying the screening instruments available on the Platform for Development Evaluation in Children Ages 3–7 (PEDa, Miclea et al., 2010). Teachers’ knowledge before the start of the intervention programme was taken into account, and teachers attended eight 2-hour sessions in which a series of specific didactic methods and techniques were presented (the principles of rational–emotional–behavioural education, the ABC model, the Pyramid Model for developing socio-emotional competencies in children). All these combined in a creative way lead to attaining the objectives regarding children’s development of social and emotional competencies.

The intervention programme created and implemented aims at forming and developing social and emotional abilities and has as a theoretical basis Rational–Emotional–Behavioural Education and the Pyramid Model of Supporting Social Emotional Competence which supports those competencies. The intervention was implemented on a daily basis for 7 months (November 2017–June 2018), and was done by the teachers for the entire duration of the instructive-educational process for the entire group of children as well as for small groups or individually.

The programme made use of the materials prepared beforehand by teachers, print and online accessible materials and school provided materials, using them in such a way as to form and develop socio-emotional competencies based on proposed strategies and personalised questions. The programme also included stories, poems, songs and educational games with specific content based on the proposed objectives and used in various ways. In order to achieve the main objective proposed, the programme is structured in two parts: activities which aim at developing interacting abilities with adults and classmates, as well as developing prosocial behaviour, and activities which aim at developing the concept of one’s self, emotional autocontrol and emotional expression.

5. Results

Of the 85 children aged 5–6 who participated in the study, 58 were part of the intervention group (68.2%) and 27 of the control group (GC) (31.8%), gender based distribution being of 58.8% female and 41.2% male. Although analysis of variance (ANOVA) analysis was attempted using repeated measurements which allows for the simultaneous insertion in the equation of the time factor (pre-test/post-test) and group factor (experimental/control), it was observed that the circular assumption would be invalidated. Consequently, data were processed sequentially.
In the first phase, differences between the pre-test and post-test averages were analysed in evaluating both parents and educators and in establishing whether or not statistically speaking significant differences between the two tests existed while considering the entire group of participants (experimental and control) in order to exclude the hypothesis that such differences are caused by other factors, such as time or development. Thus, an analysis was conducted to determine if those differences are constant and significant for the GC versus the GE, making a comparison of the pre-test and the post-test score differences between the two groups. The second phase investigated the group differences (experimental/control) between average scores. All the statistical analyses were conducted in IBM SPSS 20.0 (2011).

In order to establish if the GC’s averages of the emotional and social competencies level measured in the pre-test and post-test differed from the GE’s averages of the emotional and social competencies level measured in the pre-test, a quasi-experimental study was done using the t-test for independent groups. In order to establish if there are significant differences in each of the two groups, we used a t-test for paired groups.

The Pearson correlation analysis results indicated strong intensity relationships of association \( r > 0.70, p < 0.001 \) among the scores of the tested variables, both in educators’ and parents’ responses. The difference between the pre-test and post-test average scores was tested and the effect was measured by calculating Cohen’s \( d \) coefficient (Cohen, 1977). The results indicated the following aspects: significant statistic differences between the pre-test and post-test scores of the cognitive competencies reported by educators (SCC_E), \( t(84) = 11.03, p < 0.001, d = 1.06 \); significant statistic differences between the pre-test and post-test scores of the emotional competencies reported by educators (SCE_E), \( t(84) = 15.68, p < 0.001, d = 0.92 \); significant statistic differences between the pre-test and post-test scores of the social competencies reported by educators (SCS_E), \( t(57) = 13.50, p < 0.001, d = 1.23 \); significant statistic differences between the pre-test and post-test scores of the cognitive competencies reported by the parent (SCC_P), \( t(84) = 8.62, p < 0.001, d = 0.84 \); significant statistic differences between the pre-test and post-test scores of the emotional competencies reported by the parent (SCE_P), \( t(84) = 11.18, p < 0.001, d = 0.86 \) and significant statistic differences between the pre-test and post-test scores of the social competencies reported by the parent (SCS_P), \( t(84) = 10.06, p < 0.001, d = 0.76 \).

The statistic’s results suggest that for those who participated in the intervention there is a considerable improvement of the children’s emotional, social and cognitive competency averages as well as the educators’ and parents’ reportings. The \( d \) coefficients indicated considerable effect increases of the variables tested, according to Cohen’s (1977) interpretation recommendations. A single coefficient of medium value was identified, for the level of social competencies reported by parents (SCS_P). Therefore, the findings have not only statistical significance but also practical one, mostly indicating high differences of magnitude regarding children’s level of competencies in the initial stage of the study compared to their levels in the final stage of the study. This finding could be interpreted as follows: in a timespan of seven months in which the GC benefited from learning activities according to the early childhood curriculum while the GE additionally benefited from specific activities as part of the intervention programme, there was a significant progress regarding acquisition for all competencies studied in all the children who were part of the study.

The second stage focused on investigating group differences (experimental/control) between score averages in order to highlight the intervention’s positive effect on the GE. Last but not the least, the differences in score averages were tested based on gender and the respondent’s function (educator/parent). The relationship analysis between the pre-test and post-test scores of the two groups was performed using a one-way ANOVA analysis. Thus, for both groups the degree to which the statistically significant growth of the score from the pre-test to the post-test phase indicated in the previous analysis (the \( t \)-test) differs was verified. In order to determine if the assumption of variance equality is met, the Levene (1961) test was used. The results indicated that the variables cognitive competencies, emotional competencies and social competencies reported by educators do not meet
the variance equality. Consequently, for those variables a Welch ANOVA analysis was conducted, an analysis which, as indicated by scholarly literature, reduces the occurrence possibility of Type I errors in situations where the compared groups are small or unequal in number and the variance equality is not met (Maxwell & Delaney, 2004). When calculating the Omega coefficients of effect degree, the coefficients indicated values \( \omega^2 > 0.14 \), a threshold which, according to interpretation recommendations offered by Field (2013), corresponds to a high degree of effect. The result indicates that the intervention had a high magnitude impact on group participants’ cognitive, emotional and social competencies. In conclusion, the results obtained based on statistic analysis of data (pre-test/post-test, GE/GC) indicate multiple positive effects of the intervention for all considered indicators: cognitive, behavioural, social and emotional.

A multiple regression analysis was conducted in order to test the acquisitions’ predictive effect in the realm of social and emotional competencies upon cognitive competencies. Educators’ reportings indicate that the two independent variables (social competencies and emotional competencies) significantly predicted cognitive competencies and explained 56% of the dependent variable’s (cognitive competency’s) variance \( F(2,82) = 53.87, p < 0.001 \). Both predictor variables, emotional competencies (\( \beta = 0.48, p < 0.001 \)) and social competencies (\( \beta = 0.33, p = 0.001 \)) significantly contributed statistically in explaining the criteria variable, namely, the cognitive competencies. Parents’ reportings explained 27% of the dependent variable’s (cognitive competency’s) variance \( F(2,82) = 16.52, p < 0.001 \). Both predicting variables, the emotional competencies (\( \beta = 0.36, p < 0.001 \)) and the social competencies (\( \beta = 0.23, p = 0.001 \)), significantly contributed statistically in explaining the criteria variable, namely, cognitive competencies.

In conclusion, based on both the scores reported by educators and those reported by parents, there is a clear indication that the rise in emotional and social competencies’ scores represents a significant predictor of the rise in cognitive competencies.

6. Discussion

The present study was performed as a response to the need of emphasising more emotional intelligence development in preschool years. Many educators, who regard socio-emotional development with skepticism due to the fact that it is outside of the preschool and school activities’ objectives, believe that the educational system’s major task is to develop children’s academic abilities (writing, reading and computing). Preschoolers who demonstrate high levels of socio-emotional abilities in early childhood exhibit less instances of provocative behaviour, engage easier in activities and demonstrate stability in fulfilling tasks (McClelland et al., 2007; Miller, Gouley, Seifer, Dickstein & Shields, 2004). These children demonstrate good school integration and excellent academic performance in their first years of school (Rhoades, Warren, Domitrovich & Greenberg, 2011; Torres, Domitrovich & Bierman, 2013).

The conducted experimental study validated the assumption that the implementation of an intervention programme applied intensively at all times throughout the school day leads to an accelerated development of both social and emotional competencies. The development is noticeable in the educational environment by exhibiting more frequently pro-social behaviour, compliance to rules, better usage of emotional abilities (such as identifying one’s own emotions but also those of others and offering adequate responses based on context), the creation of a positive self-image and the development of the ability to empathise with those around. Parents’ reports indicated that the development level of social and emotional competencies significantly increased between the pre-test and post-test phase, demonstrating the fact that the competencies transferred from the educational to the family environment. It is my strong belief that implementing such an intensive programme throughout an entire school year or even throughout all preschool years, while at the same time following specific objectives for each child developmental stage would contribute to reaching a high level of development for the aforementioned competencies and to the formation of certain response mechanism adapted to problematic situations that children might encounter.
7. Conclusion

The importance of social and emotional skills has already been proven, and the reasons leading to using them in such a way are numerous, such as heightened self-esteem as a student, vivid curiosity, attention, thought and impulse self-control, initiative in developing new ideas; all these are essential to the learning process at any age. Learning, problem solving and creativity all are based on social-emotional and motivational qualities, as well as on basic cognitive abilities. As a result, when learning takes place in groups, such as kindergarten or the family, the setting greatly influences the way in which the learning process takes place. When children enjoy interaction with adults and other children, they are more enthusiastic about activities and participate more (Ladd, Kocherderfer & Coleman, 1996). Furthermore, others’ interest and enthusiasm increases the child’s enthusiasm for learning, and children are motivated when given recognition for their achievements.

The major limits of the research are the small number of participants and the fact that the intervention programme’s implementation could raise problems for less experienced teachers. The above-mentioned limits will be used as further ideas for future research. As a further line of research I propose the continuation of this longitudinal study by retesting participants at the end of the first semester of their last year in kindergarten in order to determine if the competencies acquired in preschool will remain stable during the first years of school. The intervention programme will also be implemented in other 5-6 years old kindergarten classes of Babes-Bolyai University Kindergarten during the 2018–2019 school year.

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