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INTEGRATED TEACHING APPROACH OF THE CURRICULUM IN READINESS GRADE

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Abstract: The hereby research study is intended to assess the effectiveness of an intervention program built on the integrated teaching strategies of the unit contents in readiness grade by using integrated lesson projects and cooperative group methods that should lead to the development of cooperative skills, positive interpersonal relationship, but also the development of learning abilities and skills, for the subject children in the experimental lot (n=21) as compared to those in the control one (n=22). The research tools were The Classroom Life Survey, designed by Johnson&Johnson (1983, 1996) and adapted for the Romanian population by C. Popa (2010) and Assessment Report for the Development of Children in Readiness Grade.The intervention program was conducted on a six-week period, with a 2-day frequency per week, thus including 14 lesson projects of integrated activities, implemented for school subjects from the readiness grade curriculum, following the timetable of the school days chosen for this program. The research findings show that the integrated approach in the activities with the readiness grade leads to an improvement of cooperation between children, of the interpersonal relationship and of the learning abilities and skills.

Key words: integrated activities, integrated curriculum, readiness grade, classroom climate

1. Introduction

Every day we witness observations and critique against nowadays teaching methods uttered by students, parents, employers and, still, there is clear evidence that change requires a longer period of time to set in. Huberman (1978) said: "(…) it is easier to acknowledge certain `things` or `information` than changes in practices, attitudes or values" (p.20). We agree that accepting a change in attitudes is much harder than accepting a change in knowledge. Shifting from a traditional teaching pattern, rigidly leveled for every school subject, one-way directed by the teacher without any consultation or dialogue with the students it is directed to, to a different teaching method, stepping over the boundaries between school subjects and taking the students in as active partners in the teaching process, is a challenge for both, an experienced teacher, but mainly for a beginner teacher for primary school level. To assume such a change is not truly welcomed by teachers that were formed in a different socio-professional context and who do not feel prepared for it: "(the theachers) do not have enough knowledge to put this belief into real practice". (Popa, 2015, p.39) There is the need for collaboration between professionals in the field of education and future teachers for primary school level: "they challenge university experts in sciences of education and psychology to get involved in solving problems encountered by pre-university teachers, mainly readiness grade ones". (Popa & Bochis, 2016, p.33)

For the present graduates of Pedagogy of Primary and Preschool Education, this teaching approach should become their second nature for designing and implementing the daily teaching activities for readiness grade, but also for the other grades. The hereby study is an actual example of the bold attempt of a young graduate to implement an integrated teaching pattern for readiness grade.

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2. Knowledge background

Organizing school activities around school subjects having unlinked distinctive aims and for whose achievement is designed a rigid succession of a timetable at the beginning at the school semester represents a stiff and antiquated context for a period in which children know how to satisfy (by themselves) their own need for knowledge from a very young age. The usage of a teaching approach focused on individual school subjects, disregarding the interests of students and centered on topics solely delivered by the teacher has consequences on the quality of education. In the field bibliography (Stan, 2001), the teaching process is seen as an interaction of teaching-learning-assessment-self-assessment activities. The way the teacher designs the lesson, thinks about how the children would interact with the new information also has consequences on the quality of learning and academic performance of the students. Teachers and students as well need to become inspired of their own learning and teaching. Integrating curriculum means that teaching and learning process is student-centered. The purpose is to develop independent and critical thinkers, positive and flexible individuals prepared to create a better world (Laurian-Fitzgerald & Fitzgerald, 2019).

From a teaching perspective, an integrated approach "requires the association of different school subjects belonging to the same field or to different fields, in the same teaching pattern". (Manolescu, M. et al., p.5) Thus, as a first step, the teacher has to understand the fields of interest of the students, and then to help him/her to establish connections between ideas belonging to the same area of knowledge or to different areas, as well as to real life. In fact, "the greatest effects on student learning occur when teachers become learners of their own teaching, and when students become their own teachers" (Hattie, 2014, p.40). Integrated teaching "is a strategy that asks for changes on the level of topic organization, and also on the `atmosphere` of teaching and learning. The starting point in the designing and implementing the curriculum is the students and his/her experience" (Manolescu, M. et al., p.6). In other words, the teacher has to reevaluate his/her role in the classroom as both, the main source of knowledge, but also as the activator of significant learning experiences for the student. Hattie stated that "my role as a teacher is to evaluate the effect I have on my students" (Hattie, 2014, p.40). Also, in everything he does, the teacher must take into account the specificity and the difficulties of the class he teaches, the educational climate as well as the impact of his personality on the number of students. (Barth, K., Florescu, M.C., 2016)

The two systems of reference seen as the base for integrated teaching are: topics and student learning. The trigger of an integrated activity should be the identification of certain topics that arouse the student's interest in exploring and self-discovery. Within integrated lessons, learning is facilitated by the possibility that information could be analyzed from various perspectives, the students having the chance to gradually add to it more meanings. Students are encouraged to establish connections between notions, phenomena and processes belonging to different fields, to compare information gathered from various sources; the result: the information is easier and better remembered. In *Powerful Teaching* (2019), Agarwal and Bain underlined `interleaving` as a powerful teaching strategy: "Interleaving boosts learning by mixing up closely related topics and encouraging discrimination" (p.5). They said: "It is important to interleave similar concepts so students really have to think about the subtle differences" (p.114), "(...) interleaving is how we mix things up" (p.115). The integrated approach facilitates this process of practice on several related skills together.

Fortunately, in this research, the integrated approach was completed by cooperative learning techniques used in the classroom. Cooperative learning gives the students the possibility to learn together, to share their ideas. The key element of cooperation is the opportunity of interaction. "In a cooperative climate, students are capable to communicate acceptance, support and cooperation" (Popa, p. 288). Cooperative groups should offer the students the chance "of learning together, not only to solve together a task to show the teacher they master it" (Popa, p.292). By interacting, the students learn to view a situation or a problem from various other perspectives, not only from their own one, and to develop the ability to broaden and enlarge their own perspective.

2. 1. Research goal

Our research goal is to demonstrate the effectiveness of the integrated approach for the adaptation and academic success of the children in readiness grade in what the development of cooperative skills, positive interrelationship and learning abilities and skills are concerned. You can use as many subsections as necessary in a section. If you have subsubsections, just bold them, as in the example below.

2.2. Research hypothesis

Our research starts from the premises that the integrated teaching approach at the readiness grade level by using integrated lessons and cooperative group methods that should lead to the development of cooperative skills, positive interpersonal relationship, but also the development of learning abilities and skills.

Independent variable (a): integrated teaching throughout the school day; group activities.

Dependent variable (x): the level of development of interpersonal relationships, cooperation skills and the development of learning abilities and skills.

2.3. Participants

There were 43 children in the readiness grade from "Avram Iancu" Middle School, Oradea, who were included in the subject lot; 21 children were part of the experimental lot, and the rest of 22, of the control group. As gender is concerned, there were 20 girls and 23 boys.

2.4. Research procedure

The intervention program was conducted on a six-week period of time, with a 2-day frequency per week, thus including 14 lessons of integrated activities, implemented for school subjects from the readiness grade curriculum, following the timetable of the school days chosen for this program: Communication in Romanian Language (3 classes/week), Mathematics and Environment Knowledge (1 class/week), Arts and Crafts (1 class/week), Music and Dance (1 class/week). During these classes, the teacher chose to deliver the unit contents through integrated teaching strategies.

The topics of the integrated activities of the intervention program were: "The Grouchy Ladybug", "Colorful Butterflies", "Romania – my country!", "Cleanny the Fairy helps us to be tidy", "The Magic Ice cream", "Water Cycle in Nature", "Spring Flowers", "It's Spring Time!", "The Sun and the Moon!", "A Journey in Space", "The World of Birds", "Zorro, Save the World!", "The Story of the Easter Bunny", "The Mission: egg decorating".

2.5. Description of the Intervention Program

The intervention program was implemented through the above mentioned 14 lessons of integrated activities. During the first day, the children were divided into groups, the landscape of the classroom was also modified: there were islands made of 4 desks, thus the children were given the possibility to work into cooperative groups, to interact and to better understand one another. Each of the readiness grades included in the research was divided into 5 groups made of 4-5 children. The groups were formed by the class teacher on the basis that there should be a nucleus of children willing and wanting to work together in each of the teams. They were heterogeneous as gender and academic performance are concerned.

The lesson projects of integrated activities followed both, the general and the specific competences of the syllabi of the school subjects at the readiness grade level. The daily activities started with the "Morning meeting" and went on with all the other classes as planned in the class timetable, with the difference that they were all delivered through an integrated approach focused on the topic of the day.

The teaching methods were integrated and active-participatory. The school day ended with "Good bye meeting" that summed up and draw the conclusions for the daily activities of the current day.

The morning meeting is a participatory teaching method, pupil-centered, also having a social implication. It focuses children onto the requirements of the group, of the landscape, as well as onto the activities of the current day.

The morning meeting was an activity performed during each day of the intervention program, lasting between 15 to 20 minutes, children sitting on the floor, in a semicircle.

The drill is the same on every morning of the intervention program: saying hello, nature calendar, calling out the names of the children, the new topic of the day and group activity.

The advantages of the morning meeting are various: encourages children to express their feelings, thoughts and ideas; focuses their attention and facilitates comprehension; arises their curiosity; they learn to listen to and respect their peers; educates tolerance, acceptance and empathy; strengthens group cohesion; creates a positive atmosphere throughout the day. (Bane, 2004, p.26)

Each school day ended with a "good bye meeting" when they summed up the activities of the current day. Thus, the children could express their feelings towards the activities of the day and towards their peers.

The following lines give an actual example of an integrated activity, having the topic "The Grouchy Ladybug!"

The morning meeting started with the children sitting on the floor, in a semicircle; the teacher said first the greeting formula of that morning, then each child had to greet the colleague on his/her right, following the greeting chosen by the teacher. The next step, the teacher called the names of the children to see if they were all present, they elected The Man of the Day and filled in the panel of Nature Calendar, and then the children played the game "Stop! Say what you see!" – an interactive game having a set of rules that requested the children to stick images with different insects and objects on the petals of a flower.

Every morning of the intervention program started with a story that links the integrated activities of the day. In the above mentioned example, the story was "The Grouchy Ladybug" by Eric Carle. Afterwards, they had a little discussion on the text, found the new vocabulary and explained it. The unknown word was aphids. To explain it, the children searched for information about their habitat and about their benefic influence for ladybugs and for the natural world in atlases and on the Internet. They retold the adventures of the Ladybug, found the message of the story, discussed on the images of the story, and arranged them in a chronological order, as presented in the story. The message was a tool to talk about friendship and for writing certain graphic signs on some drawings.

In the same day, the children followed the evolution of the Ladybug and the changes in nature. With the help of a poster, they learnt about the life cycle of the ladybug: egg-larva-pupa-adult, its body and its characteristics.

The teacher read the story one more time and they all talked about the hours the Ladybug met different characters and marked them on a poster. Thus, the children learnt about the clock, hours and time.

During the good bye meeting, they recalled the topic of the day, the newly found things, and furthermore, the children were asked about what they had mostly enjoyed on that day, what they had learnt, if they had any questions about the things they had learnt during the day and how was their day in school. Thus, the teacher got an important feedback on the whole school day.

2.6. Research tools

The research data were gathered by using The Classroom Climate Questionnaire and Assessment Report for the Development of Children in Readiness Grade.

The classroom climate is based on the patterns of school life, reflecting the norms, values, the interpersonal relationships and the teaching-learning strategies. The Classroom Life Survey designed by Johnson & Johnson (1983, 1996) and adapted for the Romanian population by C. Popa (2010) has a

number of 48 items grouped into 5 subscales: student support, teacher support, cooperation, competition, extrinsic motivation and individual learning. The questionnaire was presented individually, to each one of the children taking part in the research, under the form of an investigation. The answers were recorded on a 5-level Likert scale.

The Assessment Report has a pre-established form and is part of the *Methodological guide for assessing pupils in readiness class*, designed and coordinated by M. Manolescu (2013). This report marks the level of the child's physical, socio-emotional, cognitive, linguistic and communication development, as well as the development of learning abilities and skills. Out of the five fields of development of this national document, we used only those relevant for our research: socio-emotional development and development of learning abilities and skills. Our report was written based on the children portfolios and on the observation sheets of the teachers whose classes were included in our study.

2.7. Results

We used JASP, an open-source statistics program, to test the research hypotheses and we analyzed the research data with comparison tests (Independent Samples T-test and Paired Samples T-test).

In the pretest stage, the findings after the comparison of the means of the two subject lots at the Classroom Climate questionnaire justify their usage as being equivalent; the exception are the results for the cooperation subscale (the mean for the control lot being 7,4, while the mean for the experimental lot was 7,5). There was a higher mean for the experimental lot than for the control one. The same difference was also present for 2 more variables: extrinsic motivation (m_ control lot 9,25, m_ experimental lot 9,38) and individual learning (m_control lot 8,453, m_ experimental lot 8,250).

For the Assessment Report for the two fields chosen for this research, the results of the pretest showed there were no significant differences between the means of the development fields, although the mean of the experimental lot was higher than the mean of the control lot for socio-emotional development subscale.

The research hypothesis was validated by Independent Samples T-test and Paired Samples T-test. The results for the comparisons on independent samples for Classroom climate are shown in Table 1.

Table 1. *Comparative results on independent samples for "Classroom Climate" Questionnaire in posttest*

Subscales	Lots	Mean	SD	SE	t	p	Df
1.Students support	Experimental lot	8,194	0,830	0,181	0,281	0,828	40
	Control lot	8,250	0,825	0,180			
2.Teacher support	Experimental lot	9,764	0,305	0,066	0,057	0,955	40
	Control lot	9,770	0,288	0,063			
3.Cooperation	Experimental lot	7,937	0,539	0,118	-1,544	0,130	40
	Control lot	7,606	0,821	0,179			
4.Competition	Experimental lot	9,276	0,937	0,169	0,361	0,720	40
	Control lot	9,180	0,937	0,204			
5.Extrinsic motivation	Experimental lot	9,486	0,524	0,114	-0,401	0,691	40
	Control lot	9,429	0,524	0,114			
6.Individual learning	Experimental lot	8,330	0,802	0,175	1,379	0,175	40
	Control lot	8,648	0,686	0,150			

The analysis of the results of the comparison of the two lots in the posttest stage of the "Classroom Climate" Questionnaire showed a significant difference between the means of the two lots for the

cooperation subscale; the experimental lot (m= 7,937) had a higher mean than the control lot (m= 7,606).

The intervention program led to a better cooperation between the children in the experimental lot who worked in groups during the integrated activities, as compared to the children in the control lot, the ones that were taught by traditional teaching methods.

The results for the comparisons on Assessment Report are shown in Table 2.

Table 2. *Comparative results on independent samples for Assessment Report (Romanian abrev. RED)*

Fields od development	Lots	Mean	SD	SE	t	p	Df
1.Socio-emotional development	Experimental lot	9,320	0,977	0,218	-0,550	0,586	39
	Control lot	9,143	1,086	0,237			
2. Development of learning abilities and skills	Experimental lot	9,492	0,864	0,193	-0,307	0,760	39
	Control lot	9,405	0,949	0,207			

The research findings showed there were no statistically significant differences between the two subject lots after the completion of the intervention program. The sole difference is the higher mean of the experimental lot for the development of learning abilities and skills which underlines an improvement of the children's academic performance due to the use of interactive methods during the integrated activities. The control lot worked with traditional teaching methods.

The results for the comparisons on paired samples for Classroom Climate questionnaire are shown in Table 3.

Table 3. *Comparative results on paired samples*

Lots	Subscales	Stage	Mean	SD	t	p	Df
Experimental lot	1.Student support	pretest	7,965	0,866	-5,220	<.001	20
		posttest	8,194	0,830			
	2.teacher support	pretest	9,695	0,406	-1,598	0,126	20
		posttest	9,764	0,305			
	3.Cooperation	pretest	7,531	0,579	-9,877	<.001	20
		posttest	7,937	0,530			
	4.Competition	pretest	9,153	1,097	-0,330	0,745	20
		posttest	9,180	0,937			
	5.Extrinsic motivation	pretest	9,253	0,638	-3,754	0,001	20
		posttest	9,486	0,524			
	6.Individual learning	pretest	8,250	0,931	-0,902	0,378	20
		posttest	8,330	0,802			
Control lot	1.Student support	pretest	8,188	0,811	-1,597	0,126	20
		posttest	8,250	0,824			
	2.teacher support	pretest	9,700	0,311	-1,699	0,105	20
		posttest	9,770	0,288			
	3.Cooperation	pretest	7,425	0,911	-3,774	0,001	20
		posttest	7,606	0,821			
	4.Competition	pretest	9,179	0,752	-1,470	0,157	20
		posttest	9,276	0,776			
	5.Extrinsic motivation	pretest	9,386	0,410	-0,591	0,561	20
		posttest	9,429	0,391			
	6.Individual learning	pretest	8,453	0,558	-2,044	0,054	20
		posttest	8,648	0,686			

The results presented in the above mentioned table show there are statistically significant results for two of the subscales of "Classroom Climate" questionnaire for the experimental lot.

For the subscale student support, t = -5,220 and p = <.001, which points out that the children's need for student support had increased in posttest, a fact also underlined by the value of the mean: in posttest (m = 8,194), the mean is higher than in pretest (m= 7,965).

For the cooperation subscale, t = -9,877 and p = <.001, indicating that children's desire to cooperate had increased in posttest, a reality underlined by the values of the mean for this subscale: in pretest (m= 7,531), the mean is lower than in posttest (m= 7,937).

For the control lot, there were no statistically significant differences, but in one of the subscales of the "Classroom Climate" questionnaire.

The results for the comparisons on paired samples for Classroom Climate questionnaire are shown in Table 4.

Table 4. *Comparative results on paired samples*

Lots	Fields of development	Stage	Mean	SD	t	p	df
Experimental lot	1.Socio-emotional development	Pretest	9,180	1,100	-3,305	0,004	20
		Posttest	9,336	0,955			
	2. Development of learning abilities and skills	Pretest	9,279	0,855	-5,693	<.001	20
		Posttest	9,510	0,846			
Control lot	1.Socio-emotional development	Pretest	9,054	1,174	-3,357	0,003	20
		Posttest	9,143	1,086			
	2. Development of learning abilities and skills	Pretest	9,327	0,962	-2,782	0,012	20
		Posttest	9,405	0,949			

The results presented in the previous table show there are statistically significant differences for the control lot, for development of learning abilities and skills. For this field of development, t = -5,693 and p = <,001, thus underlining that the children's attitude towards learning and their academic performance were greater in posttest, the value of the mean validating it: in posttest (m=9,510), the mean is higher than in pretest (m=9,279). Although there was no statistically significant result for the socio-emotional development, there is evidence that the mean increased form pretest (m=9,180) to posttest (m=9,336).

There were no statistically significant differences for the control lot for any of the fields of development.

2.8. Conclusion

The results of the intervention program centered on integrated teaching strategies show there was a significant development of student cooperation, of interpersonal relationships and of learning abilities and skills.

The intervention program performed with the experimental lot underlined that the usage, throughout the entire school day, of integrated lessons focused on interactive teaching methods within cooperative groups leads to a higher level of cooperation between children in readiness grade and develops positive interpersonal relationships, but it also points out an increase of the learning abilities and skills, even if it is not a significant one. These aspects validate the hypothesis of the hereby research and strengthen our belief that an integrated teaching approach has positive aspects on the social development of children, but also on classroom climate. During the intervention program, the children in the experimental lot actively participated in the activities of the integrated lessons. The learning tasks offered children the possibility to correlate information from different content areas. The

interactive methods were student centered, and the methods of landscaping, placing children in groups, in pairs or individually, facilitated aspects such as interrelationship, world knowledge and self-knowledge.

It is important to access the classroom and the curriculum in an integrated, student-centered manner in order to assist all students in their learning and development. All students and educators benefit when the focus of educational endeavors are developed as partnerships among all parties rather than a unilateral approach (Laurian-Fitzgerald & Fitzgerald, 2017).

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