



"The effect of empathy training with e-content model on developing social relation of 9-year old boys"

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Abstract

The present study has been done in order to investigate the effect of empathy training with e-content model on developing social relation of nine- year- old boys. Therefore, with multi-fluster sampling and random model, thirty students were chosen among the whole third grade students of elementary school in Karaj(in Iran), and they were placed in two groups of control and experimental. The research method is quasi-experimental in accordance with pre-test and post-test. The research instrument is social skill questionnaire of Matson. A pre-test was done by using the mentioned questionnaire before intervention. Then, empathy training with story and e-game was done for the experimental group during ten sessions of 45 minutes. A week after the last training session, the post-test was done for both groups by using the same questionnaire. For constant assessment, Again the experimental group answered social skill questionnaire 25 days after the post-test. The result showed that by using e-content, empathy training lead to social relation development between 9-year-old boys.

Key words: social relation, empathy, e-content, story, game



Introduction:

Children who are unable to communicate are beneficent not only in the society but also in getting along with others' feelings and their presence unavoidably bother others (Golman, 2007) according to Hartup, the only standard of predicting children achievement in adulthood is not IQ, school score and their behavior in the class but studying the way of children's social interaction can also be the standard of their achievement (Masten & Kutsorth, 1998). But empathy is what develops relations and makes social relations effective. This skill helps others make effective relation with others, confront the problems, conflict solving, self-assertion, Social support, social compatibility and many other abilities (Mansouri Shad, 2010). Empathy is the first step in making healthy relations and understanding others' feeling. This is what makes our children sensitive to others' points of view and increases their awareness of others' thoughts and beliefs (Borba, 2011). Empathy is an essential element of interpersonal successful action (Sosua et al, 2010) and emotional response to others' emotional reactions (Ali, et al. 2009). Empathy is also a key factor in improving social understanding and prosocial behavior (Pesokoniz, 2010). Now there is a question: "Is empathy capable of training children in the environments where they have group work?" when children are among their friends of the same age, they are able to practice empathy after trainings without time distance and rapidly receive its feedbacks.

Begyan findings (2013) show that empathy training in schools, especially in adolescence, can decrease impulsive behaviors and develop interpersonal relations of students with defects or hyperactive ones by providing the ability of understanding others.

Unfortunately, some parents and school staffs don't pay attention to children's educational affairs because of their old beliefs that "children don't understand" while Children's capacities to respond emotionally to the joys and sorrows of others and to express empathic concern are present during the first year of life (Davidov et al., 2013). As development progresses, empathic arousal becomes associated with an increasing ability to differentiate between self and other, which is a critical aspect of mature empathetic ability (Decety and Jackson, 2004). Empathic arousal is the first ontogenetic building block of empathy to appear during infancy and early childhood (Y. Cheng et al., 2014).

in spite of fast technologic and pedagogic development, social skills training is not still done in schools or it's done with traditional method that has no attraction for children. children today live in a world where many of their experiences are mediated by screen technologies (Wilson, 2008). because of technologies' attraction, like adults, children are the consumers of these technologies and traditional contents are no longer, effective but nowadays, the advantages and capabilities of e-contents made most educational systems go toward creating and developing e-contents. Since the first production of e-contents by media, contents have proved that we are forced to use e-contents because so many researches have confirmed these contents' effect on social and behavioral affairs.

Developmental psychologists and media scholars alike have argued that screen media play a crucial role in children's emotional development (Aimee dorr, 1982). For example Wilson begins by reviewing evidence on the link between media and children's emotions. She points out that children can learn about the nature and causes of different emotions from watching the emotional experiences of media characters and that they often experience empathy with those characters. Although research on the long-term effects of media exposure on children's emotional skill development is limited, a good deal of evidence shows that media exposure can contribute to children's fears and anxieties. Both fictional and news programming can cause lasting emotional sheer, though the themes that upset children differ according to a child's age. Television programs, movies, and even the Internet provide children with a window into popular culture. Children can come to appreciate norms and standards of conduct by watching social actors in fictional stories and can even experience emotional and social situations in a vicarious way through the media (Wilson, 2008).

Fortunately, e-content make us able to create much attraction in contents according to text forms, voice sound, sound and image, fixed images, moving images, film, game, entertainment, television,



on-line content, on line webcams, video and on-line conference. Since the positive and negative effect of e-contents have been confirmed for educational experts, it's necessary to pay attention to the quality of these content because just using instruments cannot have positive or negative effects. It's considered important today that contents focus on mediation nature not training human knowledge which is going to be old and expired. It's also important to choose contents according to needs and the problems of the society. Psychological and environmental aspects of e-content users must also be considered. Because pre-elementary and elementary school ages are the best time to learn and communicate easily, children can be directly faced educational intervention. In accordance with the importance of childhood, accommodation problems especially among boys in this period of time, significant failures that can make problems in education, society, communication and other life stages, providing and predicting interventional models are required. It's also important to make a child involve in change and development process by training empathy skills with electronic story and game which is the language of children and has much attraction for them.

That's the reason why providing e-content with story and game was put into consideration. when training was done through story, it was more attractive than the time it was done directly and it cause better learning condition and it also makes children use and generalize them for the same situations or fields (Hafner,2003).Training based on story that is familiar and insight since a child can observe himself and his life in others' stories, so he can understand himself and his problems, and the way he can face them and find substitute solutions(Sahebi, 2010).

On the other hand, much educational training can be done through games and guide children easily. While playing, emotional conditions and children's behaviors could be found out. So, it's necessary for parents and school staffs to pay attention to the importance of game and provide suitable situations for suitable games of children (Ebrahimi, Esmaeeli, 2013). Prot et al., 2012, have summarized and negative effects of electronic games especially video games by different researches in the following table.

Summary of main research findings on positive and negative effects of video games on players(Prot et al)

Positive Effects	Negative effects
<p>Action games</p> <ul style="list-style-type: none"> - improve a range of visual spatial skills; - Educational games successfully teach specific knowledge and skills; - Exer games can improve physical activity levels; - Prosocial games Increase empathy and helping; - May decrease aggression; 	<p>Violent games</p> <ul style="list-style-type: none"> - Increase aggressive thoughts, feelings and behaviors; - Desensitize players to violence, - decrease empathy and helping; - Video game play is negatively related to school performance; - Video games may exacerbate attention problems; - It seems that some players can become addicted to video games.

As using update technologies is unavoidable these days, the necessity of using or not using these technologies is unimportant but focusing on the created contents in e-contents is essential. The results of different researches show that these instruments can be produced in two different sides and have different effects. There is an urgent need for teachers to understand how the different perceptual modalities function in relation to learning and memory and how each modality is socially and culturally represented (Grushka,et al, 2014).

It's been attempted to present documents about the effect of empathy training with e-content model to develop social relations.

Research Hypotheses:

1. Empathy training with e-content model causes social relation development in 9-year-old boys.
2. Empathy training with e-content model develops emotional learning of social relation among 9-year-old boys.



3. Empathy training with e-content model develops cognitive learning of social relation among 9-year-old boys.
4. Empathy training with e-content model develops behavioral learning of social relation among 9-year-old boys.
5. The effect of empathy training will be constant.

Research method:

A semi-empirical method has been used in the present study. It includes a pre-test and post-test with two groups of experimental and control. And the effect of independent variable (empathy training) on dependent variable (social relation) has been studied. The statistical universe of the present study is the whole 9-year-old students of third grade in elementary school in Karaj in 2013-2014. Thirty students were chosen and divided into multi-fluster random sampling.

The research instruments:

In the present study, social skill questionnaire of Matson and scholar empathy training package are chosen as the instruments. Assessment scale of social skills that was compiled by Matson et al. in 1983 for assessing social skill of 4-18-year-old children was used in order to assess social skill of students. The primitive form of this scale included 62 phrases that was decreased to 56 through factor analysis by Yousefi and Kheir (2002). This scale describes social skills of people.

Subjects need to read each phrase and then choose their answer based on a 5-degree-index which includes Likert scale from 1 (never) to 5 (always) (matson et al, quoted by Yousefi and KHeir, 2002).

Some educational experts' ideas were put into consideration and questions of the questionnaire were divided into cognitive learning, emotional learning and behavioral learning of social relation and social relation and each was studied separately. Despite the score a responder gets from each, whole scores of 56 questions is calculated by a total score scale. And it shows a subject's social skill. It's essential to mention that in the total score, positive and negative phrases must be put into consideration.

The researches have shown that social skill scale of Matson include acceptable psychometric, high reliability of re-test and discrimination validity. Maston et al. used Split and Kornbakh Alpha coefficient to investigate the reliability of social skill scale. The sum of the achieved Split and Korunbakh Alpha coefficient was equal for the whole scale. It equals %87 and the reliability coefficient was %81.

Scholar e-content is another instrument that has been used in the present study and it was designed to train empathy through story and game. For designing this content empathy training methods (Borba, 2011) and empathy training course pattern which was compiled by psychologists, experts and experienced professors were used. This e-content educational package has been designed for 10 sessions of 45 minutes.

Five electronic games have been designed in the primitive empathy training process in order to make children get familiar with feelings and increase their emotional words. The cognition of positive of positive and negative excitements, learning the way of expressing and contorting feelings and also understanding others' feeling make children be more prepared to react properly against others' feelings. The significant feature of the mentioned games is that it needs children involve their three senses (visual, hearing and sense of touch) and because of instant feedback and the feedback got in the end of the game, training is not only so attractive for children but also the presence of instructors or parents is no longer required.

Five electronic stories were prepared with the purpose of making children get familiar with feelings (story of cute physiognomy), follow religious elders as a distinguished empathic people, show empathic answer to others' annoyance or worry, understand others' needs, look after the injured or



people in need (story of that kind man), increase children's sensitiveness to others' feelings and reach empathic understanding (story of that rainy day, being together and woolen socks).

Finding:

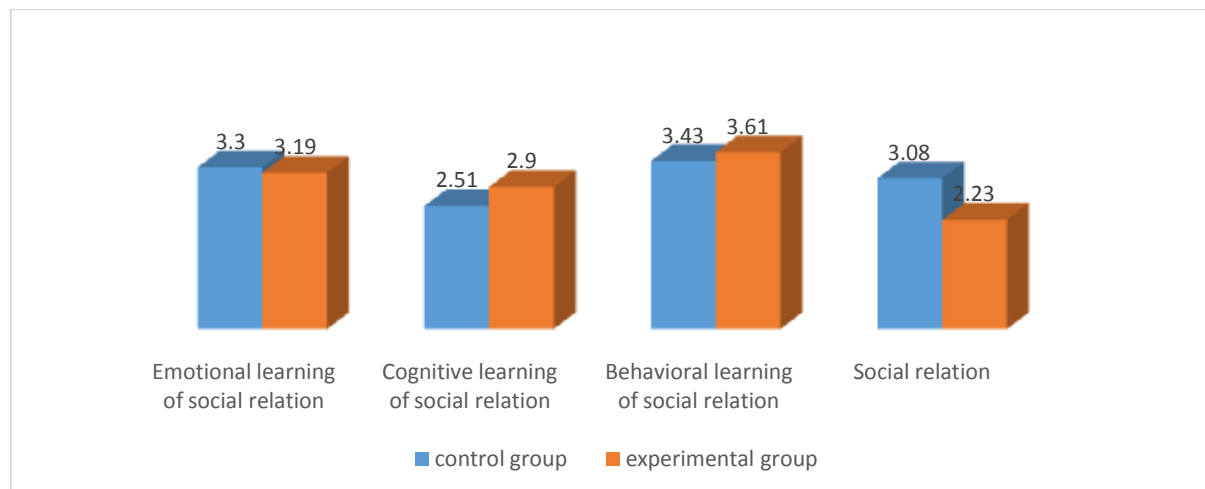
Table 1: mean and standard deviation of social relation and its scales in pre-test both of groups

Variables	Excremental group		Control group	
	mean	s.d	mean	s.d
Emotional learning of social relation	3.19	0.45	3.3	0.4
Cognitive learning of social relation	2.9	0.49	2.51	0.52
Behavioral learning of social relation	3.61	0.42	3.43	0.42
Social relation	3.23	0.38	3.08	0.36

According to the results of the above table, in the experimental group, social relation mean and its scales in the pre-test is 3.23, cognitive learning mean of social relation is 2.9 and behavioral learning mean of social relation is 3.61. The middle number in 5-choice Likert spectrum is 3. Based on the table results, cognitive learning mean of social relation was less than the spectrum middle and other variable were more than it and as a whole, social relation mean is more than middle.

In the control group, social relation mean and its scales in the students' pre-test was deficient, cognitive learning of social relation was 2.51 and 3.43 for behavioral learning of social relation.

According to the table results, cognitive learning mean of social relation was less than middle spectrum in the control group, other variables were than it and social relation mean is exactly in the middle. The following graph shows the mean of social relation scores and its scales in the pre-test of control and experimental groups.



graph 1: mean of social relation and its scales in pre-test in both groups

Table 2: mean and standard deviation of social relation and its scales in post-test in both groups

Variable	Excremental group		Control group	
	mean	s.d	mean	s.d
Emotional learning of social relation	4.06	0.47	3.41	0.33
Cognitive learning of social relation	3.93	0.45	2.71	0.38
Behavioral learning of social relation	4.35	0.3	3.52	0.35
Social relation	4.12	0.3	3.21	0.29

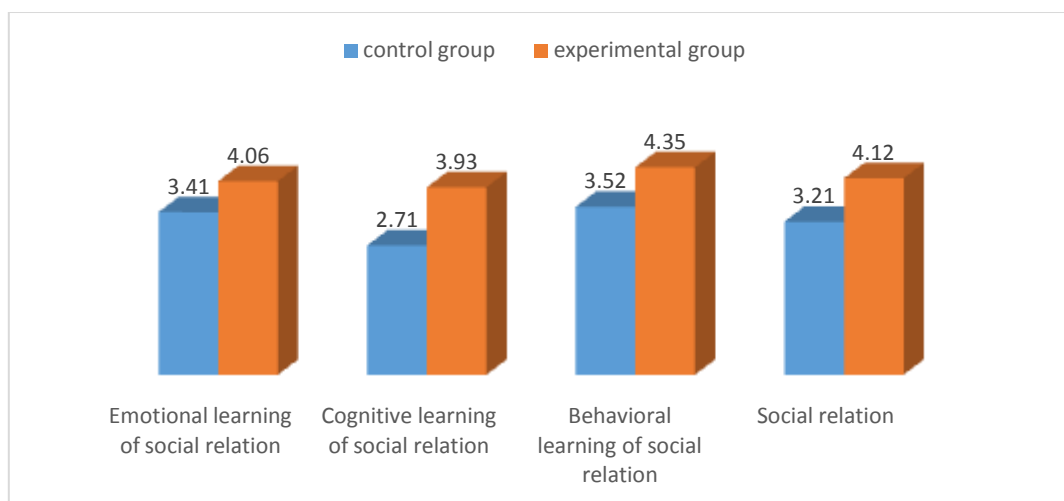
Based on the above table result:

In the experimental group, social relation mean and its scales in the students' post-test was 4.12, cognitive learning mean of social relation was 3.93, behavioral learning mean of social relation was 4.35 and emotional learning mean of social relation was 4.06.



In the control group, social relation model and its scales in the students' post-test was 3.21, cognitive learning mean of social relation was 2.71, behavioral learning mean was 3.52 and 3.41 was the emotional learning of social relation .

According to the above results, social relation mean and its scales in the post-test of experimental group was more than the control group.



graph 2: mean of social relation and its scales in post-test in both groups

Covariance analysis was used to answer the main hypothesis: "Empathy training with e-content method causes social relation development in 9-year-old boys ".

Table 3: the comparison between the scores of social relations in both control and experimental groups

source	Sum of Squares	df	Mean Square	F	Sig	Observed Power
Pre-test social relation	0.589	1	0.589	8.802	0.006	0.247
Independent variable	5.127	1	5.127	76.633	0.001	0.739
Error	1.806	27	0.067			
total	411.454	30				

The result of covariance analysis shows that empathy training with e-content has effected social relation development in 9-year-old boys. The significant level for calculated F is less than 0.05 with 1 and 27 degree freedom. Therefore, it can be strongly stated that the mentioned hypothesis; "Empathy training with e-content causes social relation development in 9-year-old boys" is confirmed ($p < 0.001$). The percentage of empathy training effect on social relation development in children is 73.9.

Table4: the comparison between the scores of emotional relations in both control and experimental groups

Source	Sum of Squares	df	Mean Square	F	sig	Observed Power
Pre-test emotional learning	1.124	1	1.124	8.65	0.007	0.243
Independent variable	3.608	1	3.608	27.761	0.001	0.507
Error	3.51	27	0.13			
Total	427.037	30				

The results show that the pre-test as an auxiliary variable had a significant impact on the the scores of emotional relations. For removing that effect, Covariance analysis result shows empathy training with e-content method has had effect on emotional learning development of social relation in 9-year-old boys. the significant level for calculated F with 1 and 27 degree freedom is less than 0.05, so with %95 certainty it can be claimed that the second hypothesis; "Empathy training with e-content method cause emotional learning development of social relation in 9-year-old boys", is confirmed ($p < 0.001$).The effect of (Eta coefficient) empathy training on emotional learning development of social relation in children is 50.7 percent.



Table5: the comparison between the scores of cognitive learning social relations in both control and experimental groups

Source	Sum of Squares	df	Mean Square	F	sig	Observed Power
Pre-test cognitive learning	0.831	1	0.831	5.483	0.027	0.169
Independent variable	7.774	1	7.774	51.295	0.001	0.655
Error	4.092	27	0.152			
total	346.88	30				

The result of covariance analysis shows empathy training with e-content method has had effect on cognitive learning development of social relation in 9-year-old boys. significant level for calculated F with 1 and 27 degree freedom is less than 0.05 so with 95 percent certainty, the third hypothesis, "Empathy training with e-content method leads to cognitive learning development of social relation in 9-year-old boys" is confirmed ($p > 0.001$). The effect of (Eta coefficient) empathy training on cognitive learning development of social relation is %65.5.

Table 6: the results of a t-test for comparing behavioral learning mean in both groups

Mean of addition in experimental group	Mean of addition in control group	Levin test	Significant level	t	d.f	Significant level
0.745	0.0897	7.924	0.009	4.764	20.573	0.001

In the above table, the result of t-test for comparing behavioral learning mean in both groups shows behavioral learning in both groups had significant difference, $t=4.764$, $d.f=20.57$, $p < 0.05$ (significant level was less than 0.05). Therefore the above hypothesis is confirmed. In fact, empathy with e-content method causes behavioral learning development of social relation in 9-year-old boys.

Table7: The mean and Standard Deviation and T-test for comparison between social relations and its scales in posttest-following

Variables	Mean difference	Std.diviation	Std.error difference	t	df	Significant
Emotional learning	-2.3	3.4	0.104	-2.895	14	0.012
Cognitive learning	-0.102	3.4	0.109	-0.928	14	0.369
Behavioral learning	-0.623	0.69	0.178	-3.48	14	0.004
Social relation	0.179	0.44	0.114	-1.578	14	0.137

The result of t-test for dependent group showed this decrease in the score mean was for the score of significant emotional and behavioral aspect ($p > 0.05$). The following table and graph show social relation mean and its scales in pre-test and follow-up of experimental group.

Table8: The mean scores of social relations and their scales in pre-test, posttest and follow up in the experimental group

Variables	Mean of pre-test	Mean of post -test	Mean of follow up
Emotional learning	3.19	4.06	3.96
Cognitive learning	2.9	3.93	3.31
Behavioral learning	3.61	4.35	4.17
Social relation	3.23	4.12	3.81

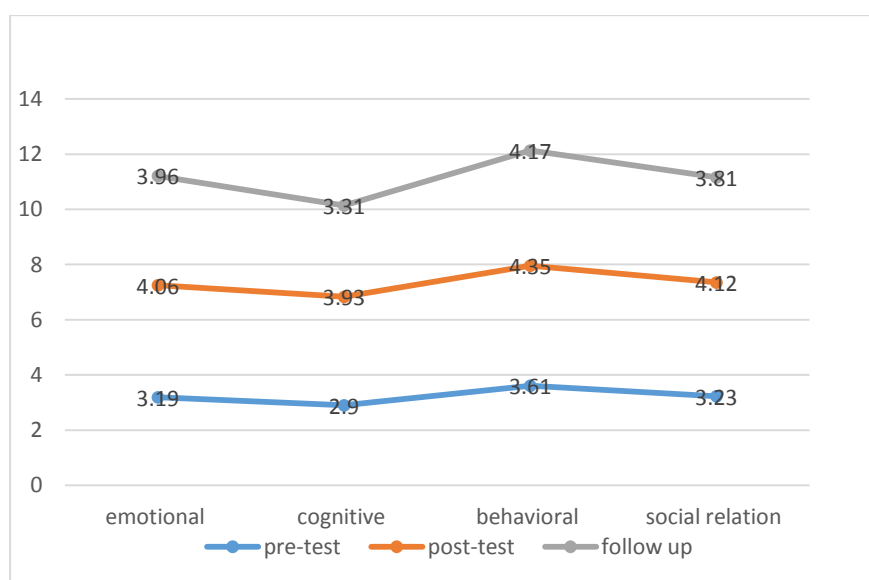


table3: The mean scores of social relations and their scales in pre-test, posttest and follow up in the experimental group

The above table and group show that social relation mean and its scales in the post-test of experimental group has increased in comparison with pre-test. In follow up social relation mean and its scales have decreased in comparison with the post-test but still it was more than social relation mean and its scales in the post-test. So a little decrease was observed but it hasn't reached the base; it's still more.

Discussion and conclusion

The result of the present study showed a child could make better and more effective relation with others specially children of their same ages through empathizing, recognizing and understanding feeling and even predicating others' behaviors. And empathy training was also effective in the decrease of behavioral disorders such as shyness. In this way shy children could make better social relation with empathy training, gain self-confidence and even speak and give their ideas in front of other children of their same ages.

The mentioned subjects help children make intimate relations and faded social behavior problems. It was observed that by empathy training, a child's aggression in the experimental group has decreased and he was able to have better behavior with his friends and make friendly relations. Based on the



present study findings about the relation of empathy increase, social relation quality and correlation of these two variables, it can be totally claimed that empathy is a personal trait which is related to social relation and helps people develop their social relations reduce the problems of social relation quality. As it's observed, these results have been homolateral with the findings of other researches. According to Lawrence et al, 2004, empathy lets a person have an effective contact with the surrounding social relation, join him with social environment and also makes it easy to help and stop bothering others (Lawrence et al., 2004). Empathy lead to aggressive behaviors decrease and also influenced social interactions (Vaziri & Lotfi, 2011). In making the second hypothesis clear, it can he said that children react against others' feelings and emotions specially their friends' worry and try to remove their sadness.

It's completely opposite of children's behavior before training. Children recognized emotions, feelings and non-verbal sings better while playing games and telling stories. They could also identify others' internal excitement by staring at their faces and have a good reaction against others' feelings and emotions and also they could make and attempt to remove others' sadness or be near them when they're happy. By awareness and understanding others' exciting manners, children could make warmer and friendly relations with their same age's children and decrease their own behavioral problems. These results are with the previous researches findings. Empathy is analysis individual's emotional response to others' emotional reactions (Ali et al., 2009). Many theorize that environmental factors, such as parenting style and relationships, play a significant role in the development of empathy in children, It is a basic part of social excitement that connects self and other senses. It reduces interpersonal problems through others' feelings awareness and provides social relation progress.

Based on some psychologists, cognitive growth focuses on mediation process and educational system's purpose is to make the learner autonomic pensive. Because training should help create cognitive growth, the researchers have tried to put this matter into consideration and design empathy training package in a way that children can understand with their own imagination and visualization. Children imagine themselves in the story's characters while listening to a story and they try to identify with somebody.

By asking these questions; "How did I feel if I was in shoes?" or "what could I do for him?" , children started thinking and also they thought about others' feelings, "what do I want others do for me if I was in his shoes?". Despite understanding non-verbal signs of feelings, children's sensitiveness was increased so they could reach empathic understanding. Therefore, the findings confirmed the third hypothesis. This finding can be interpreted by these probabilities: children could understand others' feelings and emotions better and more completely by having the ability of understanding others' views and thoughts, so they helped them compassionately. With empathy children made an attempt to help others in their needs and then make better and more relation and others help them in their needs. With empathy training, children conscience was stimulated and they learned not to just think about themselves but feel responsible against others.

Children, who learned empathy, understood how people feel or how they behave against problems. They learned not to impose their ideas to others and respect their wants and needs. They were successful in social relations with their same old friends. this finding can be interpreted by the following probabilities:

In this training, with patterning and identify with children learned have to reach empathic understanding by increasing their sensitiveness against others' feelings so they could show empathic behavior.

Verbal behavior growth of subjects and others' feelings recognition by increasing emotional words and vocabularies could be observed. Children used words like worry, sadness, stress, etc. in their relation with others in appropriate situations. They identified with them through recognition and awareness of others' behaviors reason so they had better social relation. Empathy also decreased aggression. Through empathy training, children learned to recognize their friends' emotional manners and use their words and continue their dialogue through the assessment and true understanding about other's feeling.



So they could be successful in their social relations. As a whole, empathy made an individual help others voluntarily not by force and try to remove others' needs and finally could step toward behavior and social relation promotion.

The results of the previous researches are homolateral with forth hypothesis: "empathy is related to pre-social behavior and social relation development" (Miaskiz, 2008).

Data result confirmed the fifth hypothesis which was "durability effect of empathy training with e-content on empathy training development in 9-year-old children." It was shown that after 25 days, constant mean of empathy training was more than social relation mean and its scales in the pre-test and children reacted against each other's feelings, their intimate relations continued, they understood each other's excitement and behaved with better words and contacts. Based on these results, in educational system's programs, life skill training must be done along with scientific training in elementary schools. It must be indirect with attractive ways methods for children. Involving multi-senses while training with stories and games which are more effective, is another essential factor that must be put into consideration because empathy is a skill and ability that like other skills needs training, practice and experience. For later researches, it seems better to compile indexes with different goals for content assessment in order to help providers and consumers in preparation, production and content assessment. And there must be books that are written by technical experts for teachers and others in schools and institutes to make people in charge like teachers use these books as references for content production and consumption. By using these in schools and other places where children are present, we can reach better social life goals although the nature of these instruments is individualistic.



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