CROSS-CURRICULAR CONNECTION IN KINDERGARTEN

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Abstract
In the Pre-school Institutions Curriculum, the combining of six fields of activities is greatly emphasised. The experienced pre-school teachers who are aware of the fact that children experience the world holistically, in the desire to present certain subject-matters, take as a starting point in their everyday work with children the combining of subject-matters or objectives of more field activities. When they connect subject-matters or objectives of more field activities, they have constantly in their mind the premise that cross-curricular connections make sense, i. e. we talk about sensical cross-curricular connections when we achieve something that we would not without them or we would not achieve it as successfully. In all other cases, where cross-curricular connections include some field activities by force, we talk about non-sensical cross-curricular connections, which make the learning process poorer instead of richer. Practical classes with pre-school education students showed that they are also aware of the importance of connecting field activities that are included in the Pre-school Institutions Curriculum, but they also showed that they many times find unsuitable connections between them or they overlook the connections that are more than obvious. To this purpose, in practical classes, a pre-school teacher’s weekly lesson plan was divided into certain field activities in which they found objectives for each of the included field activities. In this paper, there is presented an example of sensical cross-curricular connection in which there were, as the detailed analysis of the weekly lesson plan with students in practical classes showed, included six fields, and there was as a starting and central field activity used the field of nature.

Key words: curriculum, fields of activity, cross-curricular connection, sensical cross-curricular connection

INTRODUCTION
In the Pre-school Institutions Curriculum, a national document which was accredited by the Professional Council of the Republic of Slovenia in 1999 and which represents the professional basis for the work of pre-school institutions, there is a great emphasis on combining six activity fields. The importance of combining six activity fields can be found in one of sixteen principles of the Pre-school Institutions Curriculum, i. e. in the principle of horizontal connectedness that deals with the connecting of “activities of different activity fields in a pre-school institution, and thus, different aspects of a child’s development and learning, as it is especially characteristic of a pre-school child that the aspects of their development are interdependent and interconnected”, and the choice of “those subject-matters and methods and techniques with pre-school children that consider specific traits of a pre-school child, and thus, to a greater degree enable the connection of different activity fields in a pre-school institution”. If the presented principle of the horizontal connectedness is divided into smaller segments, we notice that the principle deals with five very important matters, i. e. connecting activities in different fields, the development of a pre-school child, teaching a pre-school child, the choice of subject-matters and methods and techniques used with pre-school children. If we take a further step and unite smaller segments into a whole again, we can see that the principle of

1 The activity fields included in the Pre-school Institutions are: Sport, Language, Arts (Visual Arts, Music, Dance, Drama), Society, Nature and Mathematics.
2 The Pre-school Institutions Curriculum 1999: 7
3 The Pre-school Institutions Curriculum 1999: 8
horizontal connectedness deals with cross-curricular connections, in which adequately chosen subject-matters are supported by methods and techniques which consider the development and learning of a pre-school child. From what is written, we can elicit that it is very important in designing cross-curricular connections which subject-matters are included in them, and by which methods and techniques they are made closer to children.

Let us have a look at only one aspect of the cross-curricular connection here that is from now on, for easier understanding, going to be termed as an interdisciplinary connection, an aspect which will show us by presenting two contrasting, but closely connected methods the core of teaching by connecting different subjects, an aspect that is pointed out also by many other authors in their definitions, but from a bit different perspectives. The author Ciperle understands the phrase of interdisciplinary connection as analysis and synthesis. “Analysis is characterised by dividing, dissecting and analysing smaller and smaller elements of a complex whole. Synthesis is characterised by uniting different elements in something new” (Ciperle 2012: 12). From this perspective, connecting different subjects does not mean a try to erase borders between individual subjects and/or the abolishment of individual subjects – as some authors claim, and because of that, they do not advise, some of them even do not allow that some subjects would be included in connections, especially Slovenian, more precisely Literature (Saksida 2009) –, but it means the maximum use of every potential that is brought together by dividing the whole knowledge into individual fields (Ciperle 2012).

If we make concrete what was written before, we can say that the core of designing interdisciplinary connections is to use included subjects in them, where they have different roles, to achieve something that is very important in the subject that is supposed to be the leading one in the interdisciplinary connection, but all the remaining subjects included in the interdisciplinary connection, which have either a prominent or supporting role, have also benefit from it (Rutar Ilic, Pavlič Škerjanc 2010).

It seems simple. First, you choose a subject from which the connection derives, by the use of curriculum you define objectives you want to achieve in the subject. Then, you choose a subject or more subjects by which you will ease considerably achieving of the objectives you set within the leading subject. When you do that, you are obliged to take care of achieving or qualitatively upgrading the objectives within all the subjects that were assigned the prominent role. As the last one, you choose also a subject or more subjects by which you will support a bit more additionally the achievement of objectives that you set within the leading subject. When you do that, you take care that all the subjects that were assigned the supporting role achieve their important objectives.

Despite a supposed simplicity, it is not that easy to design interdisciplinary connections, which hold as one of the basic objectives the objective “to achieve a global approach which facilitates ‘holistic’ learning and teaching, which means, among other things, interdisciplinary problems or posing key questions or problems” (Žagar 2007: 13). If it were easy, then the author Hodnik Čadež most certainly would not draw our attention to the fact that “in our region, there prevails the type of connecting in which there are not in the centre objectives, but some kind of motivation that functions connectingly” (Hodnik Čadež 2007: 135). The interdisciplinary connections in which there is in the centre motivation and not objectives, in the definitions of many authors are considered as unsuitable or non-

\(^4\) Namely, in theory, we find different terms, and consequently also different definitions of cross-curricular, interdisciplinary connections.

\(^5\) From now on, when we write about the subjects, we mean the activity fields.

\(^6\) Subjects in an interdisciplinary connection have three functions: 1. The leading role is assigned to a subject from which a connection derives, and its objectives achieved by the connection are the key ones and most complex. 2. The prominent role is assigned to a subject in the connection the participation of which is very important, as it importantly complements or enables the realisation of common objective, and achieves at the same time its own learning objectives, i. e. by upgrading them in a qualitative way. 3. The supporting role is assigned to a subject which supports the achievement of common objective, but it is not undividedly connected to its realisation, and it achieves, at the same time, some important objective of its own (Rutar Ilic, Pavlič Škerjanc 2010).

\(^7\) In the European region, in Slovenia.
quality ones. Thus, the author points out the fact that in Slovenia, there prevails the unsuitable, non-quality type of interdisciplinary connecting. The prevalence of unsuitable, non-quality type of interdisciplinary connecting in Slovenia is confirmed by another thought of the mentioned author, i.e. a thought that claims that interdisciplinary connections frequently “a bit forcefully include some subjects, and because of that they lack persuasion, an authentic note and consistency” (Rutar Ilic, Pavlič Škerjanc 2010: 109). It is characteristic of interdisciplinary connections that are designed in such a way that they make a learning process poorer instead of making it richer, and that is not the purpose of connections at all. Namely, all connections have to be, at the same time, in the function of achieving the objectives of the curriculum and the objectives of individual subjects, “the cross-curricular connections which from above to below connect the whole curriculum, and such that are made among subjects in a linear stage, and also those ones inside the same subject which connect more teachers” (Rutar Ilic, Pavlič Škerjanc 2010: 21).

If we want to stop unsuitable, non-quality interdisciplinary connections, we have to know when their inclusion makes sense and when it does not. The answer to the question when does it make sense to include them in the learning process and when does not is not very simple. We talk about a sensical interdisciplinary connection when we achieve with it something that we would not without it or we would not achieve it equally well (Rutar Ilic, Pavlič Škerjanc 2010). In all the remaining instances, including interdisciplinary connections makes no sense. But even though this sounds simple, practice proves that it is not really the case. Namely, in each theme, each objective inside certain theme, it is necessary to think very carefully if it can be achieved successfully without including other subject or if it cannot be. If we think that we cannot achieve it without including other subjects, it is also necessary to consider well the way that those other subjects will be included in a connection, so that the connection will really benefit the subject, due to which we decided to connect the subjects in the first place, and it will not harm the subjects that we included in the connection, but it will also bring some benefit to them.

And it is really here, in choosing the subjects that we will include in the connections, that fatal mistakes take place. We would think that the mistakes derive from teachers/pre-school teachers with little experience in their work with children, but the research shows that it is not really the case. Mistakes are not connected with inexperience, as they derive not only from teachers/pre-school teachers with many years of experience, but also from the teachers who have just started their professional career in education.

The teachers/pre-school teachers who had already finished their study and left the university can be influenced to a smaller degree, i.e. by additional training, organised seminars, but students who will finish their study today or tomorrow and start teaching school or pre-school children can be greatly influenced. That is why all of us, professors and assistants, have to do all in our power to teach them already at the university during their study what interdisciplinary connections are, why they are important for children, how we deal with their designing and how we carry them out in every-day work with children.

To this purpose, some hours in practical classes with the students of pre-school education and the students of primary education have been deliberately assigned to interdisciplinary connections that derive from the society field. The practical classes showed that students in both programmes are aware of the importance of designing interdisciplinary connections, but they also showed that they many times:

1. overlook connections that are more than obvious or
2. find totally unsuitable connections between subjects.

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8 In the elementary school and in the pre-school institution, questionnaires and interviews carried out show that not only experienced, but also non-experienced teachers/pre-school teachers have problems when designing sensical interdisciplinary connections. Namely, both many times take a certain subject, most frequently Slovenian, Literature, as they want to motivate children for work in some subject.
The example of an obvious most frequently overlooked field is reading a literary text to get some society theme closer to children. The practical classes with students showed that they literally use literary texts to achieve the objectives in the society field, by doing that, they are not aware that they can or have to connect the used literary text, covered by steps by which a literary text is covered, with language, literature.

Searching subject-matters suitable for designing interdisciplinary connections in which reading a literary text would be used, and we know that it, among other things:

- helps a child "to easier overcome periods of crisis in their life"\(^9\),
- offers a child “security, coping with fears, existential dilemmas, learning emotions, understanding themselves and life”\(^8\),
- helps a child to learn to find joy, fulfillment in small things\(^10\) such as rustling of the wind, the sound of waves etc.,
- educates a child, as a child by identifying with a hero learns how to cope with life, how to choose the right way, what to do in certain situations,
- teaches a child about “culture, tradition and ethics of the people and nations where it was created”\(^9\),
- helps developing imagination, enriches vocabulary, influences verbal and later written expression, develops the ability of concentration,
- enables the transfer of values, such as goodness, fairness, trust, help and respect of those that are most helpless and in need of trust and understanding\(^11\),
- faces a child with some problems and the way of solving those problems (e. g. parents’ divorce, eating disorders, loneliness that is known by single children, the lack of time that they experience on a daily basis, as the parents are employed all days etc.)\(^9\),
- tells to a child what parents do not about taboo themes, such as “love, a child worthy of love, sexuality, parents’ divorce, being different, faith”\(^12\),
- consoles a child more than a word\(^13\) does,

many times leads to students’ designing non-sensical interdisciplinary connections, as the students choose, in order to present some society theme, literary texts with totally wrong subject-matters, and consequently, that leads to children’s not perceiving the connection between the read literary text and covered society theme.

To present to the students\(^14\) cross-curricular connections\(^15\) in the Pre-school Institutions Curriculum practical classes, we analysed individual activity fields of the weekly pre-school teacher’s lesson plan for the theme Four seasons – with the emphasis on the current season of winter, by finding together objectives for each of the included activity fields.

In the following part of this paper, there is thus presented the example of a sensical cross-curricular connection, in which there was as the starting and central activity field used the field of nature.

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\(^{9}\) Kordigel, 2000  
\(^{10}\) Kordigel, 2000  
\(^{11}\) Štefan, 2011  
\(^{12}\) Isakovič, 2012  
\(^{13}\) Ambrožič 2012.  
\(^{14}\) Ambrožič 2012.  
\(^{15}\) The word students refers from this point on to the students of pre-school education.
The Example of a Sensical Connection, in Which There Is as the Starting and Central Activity Field Used the Field of Nature

The First Day

When the children sat in a semi-circle on thin mattresses, first, we together, by the help of the description of four coloured colouring papers, where there were drawn different seasons, tried to find out what they showed. When we found out that in them there were shown seasons, i.e., four seasons, we tried to find out which of them represents the current season. When we found out which of them shows winter, a season that we entered a while ago, we fastened it to the notice-board. Next to it, we fastened, in the form of a circle the remaining three—first, spring, then, summer, and at last, autumn—, in order to present that seasons repeat every year in the same order.

The starting point of the nature theme of season coverage is, as we can see, the nature field, in which there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature. In describing coloured colouring papers, there was present also the language field, in which there were achieved the following objectives: 1. A child in every-day communication listens to a language and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 2. A child develops a linguistic ability in different functions and positions during every-day activities and in various social situations. 3. A child develops the language on all linguistic levels (from the phonological and morphological to the syntactic and semantic ones). 4. A child expresses themselves creatively linguistically. There was also present the mathematics field, in which there were achieved the following objectives: 1. A child gets to know graphical presentations, they form them and read them.

In continuation, I read to the children by using the illustrations in the book one of the four stories from the book Do you know how much I love you, i.e., a story entitled Winter.

While reading the story, there was in the centre the language field, in which there were achieved the following objectives: 1. A child experiences comfort, joy, fun, they connect aesthetic and physical pleasure and they acquire a positive attitude towards literature. 2. A child identifies with a literary figure and experiences literary space. 3. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness).

After we read the story, a short conversation about it followed by the help of questions:

- What did the story we read talk about?
- Who were the characters in the story?
- What did the big and small rabbit do?
- What game did they play?

In the conversation about the subject-matter of the read story, there was once again as a starting point the language field, in which there were achieved the following objectives: 1. A child gets to know the word, book as the source of information. 2. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 3. A child learns to narrate independently. 4. A child develops a linguistic ability in

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16 Instead of interdisciplinary connections, from here on, we talk once again about cross-curricular connections, as in a pre-school institution, there are no school subjects, but only activity fields.
17 The Pre-school Institutions Curriculum 2009: 38
18 The Pre-school Institutions Curriculum 1999: 19, 20
19 The Pre-school Institutions Curriculum 1999: 44
different functions and positions during every-day activities and in various social situations. 5. A child
develops the language on all linguistic levels (from the phonological and morphological to the

A short conversation about the story read was followed by playing a game that was played by two
rabbits in the book, i.e. in such a way that they included in the game only the pieces of clothing that
we need in winter:

1. “I saw something that I put around my neck when it is cold.” A SCARF
2. “I saw something that I put on my head, so that I am not cold.” A CAP
3. “I saw something that I put on my feet when I play on the snow.” BOOTS
4. “I saw something that I wear over a warm pullover when I go out.” A JACKET

With each piece of clothing that I described, the children had to find the described piece of clothing in
the room and bring it to the floor in the centre of the semi-circle. When they brought it, we described it
together by the help of short guided questions.

In playing the game, there was present the language field, but also the mathematics field. Within
the language field, there were achieved the following objectives: 1. A child listens to the language in
every-day communication and they are involved in communicational processes with children and
adults (non-verbal and verbal communication, the culture of communication, the styles of
communication, politeness). Within the mathematics field, there were achieved the following
objectives: 1. A child classifies and sorts. 2. A child uses terms for describing the positions of objects
(on, in, in front of, under, behind, at the front, at the back, above, on the left, on the right ...) and they
learn orientation in the room. 3. A child gets to know the room, its borders, outside part, inside part.

When we found all four pieces of clothing, I divided the children in four groups, i.e. so that the
children drew from the bag the picture of one of four pieces of clothing, which took part in the game
called I saw. When the individual child drew the picture, they put it under their backsides and waited
until all drew their pictures. When the last child in the semi-circle had the picture under their backside,
I put on the prepared four desks a scarf, a cap, boots and a jacket, and asked the children to find which
picture they drew, to find a desk on which there is the same kind of piece of clothing as in the picture
that they held in the hand, and to sit down behind it. When they did that, I gave them instructions and
tools for further work. Each of the children received their pieces of the puzzle that they tried to put
together as quickly as possible. When they put them together, they described the puzzle by the help of
guiding questions to describe what they see in it.

In putting together the pieces of the puzzle, there was in the centre the mathematics field, in which
there were achieved the following objectives: 1. A child classifies and sorts. 2. A child uses terms for
describing the positions of objects (on, in, in front of, under, behind, at the front, at the back, above,
on the left, on the right ...) and they learn orientation in the room. There was also present the
language field, in which there were achieved the following objectives: 1. A child expresses themselves
creatively linguistically. 2. A child learns to narrate independently. 3. A child listens to the language
in every-day communication and they are involved in communicational processes with children and
adults.

When the children put together the pieces of the puzzle and described it, I invited the children into the
circle on the floor where I myself also put together the pieces of some puzzles, i.e. four different ones.
When I put them together, I left the children to take their time to observe them carefully, then we
played the game called I saw. While playing, I was describing one of four puzzles, and the children
had to find out which of four puzzles I was describing.

In putting together the pieces of the puzzles and in describing them, there was present the language
field, in which were achieved the following objectives: 1. A child listens to the language in every-day
communication and they are involved in communicational processes with children and adults (non-
verbal and verbal communication, the culture of communication, the styles of communication, politeness).  

In the next step, I made it possible for the children, for the ones, of course, that wanted to see how good they are at leading the mentioned game. The children could describe whatever was connected with winter.

In putting together the pieces of the puzzles, there was present the language field, in which there were achieved the following objectives: 1. A child expresses themselves creatively linguistically. 2. A child learns to narrate independently. 3. A child develops the ability of language use in connection with thinking in forming pre-conceptual structures (a figure, quantity, weight, space, time), in mutual relationships. 4. A child experiences and gets to know verbal communication as a source of pleasure, fun and solving problems. 5. A child develops the language on all linguistic levels (from the phonological and morphological to the syntactic and semantic ones). 6. A child develops a linguistic ability in different functions and positions during everyday activities and in various social situations. 7. A child listens to the language in everyday communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). There was also present the nature field, as the children who were leading the game called I saw had to have in their mind all the time the fact that they were describing something that was connected with the winter season. In the nature field, there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature.

With the children who still sat on the floor in a circle, we played in the final part the game called Guess what I’m drawing. On the piece of paper, I drew a picture with a pencil, and they were guessing what I was drawing.

In the game called Guess what I’m drawing, there was present the language field, in which there were achieved the following objectives: 1. A child listens to the language in everyday communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 2. A child experiences and gets to know verbal communication as a source of pleasure, fun and solving problems. There is also present the nature field, in which there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature.

The second day

When the children sat in a semi-circle on thin mattresses, we tried to remember what season we talked about last time. When we found out that it was winter, we tried to describe its characteristics. When we named some characteristics of winter, we tried to remember songs which talk about winter, winter’s characteristics. We also sang some of them. The ones that wanted it, they accompanied singing of songs by clapping.

In describing the characteristics of winter, there was present the nature field, in which there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature. Closely connected was the language field, in which there were achieved the following objectives: 1. A child expresses themselves creatively linguistically. 2. A child learns to narrate
independently. 3. A child develops the language on all linguistic levels (from the phonological and morphological to the syntactic and semantic ones). 4. A child develops a linguistic ability in different functions and positions during every-day activities and in various social situations. 5. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). In singing winter songs, there was present the music field, in which there were achieved the following objectives: 1. Use and development of abilities; getting to know, researching, experimenting with artistic means (the body, voice, materials, objects, instruments, techniques and technologies) and their expressive traits. 2. Discovering and taking care of specific artistic abilities and talents.

When we sang some winter songs with children, I read to them by using the illustrations in the book a short story entitled *Bor and Bina on the snow*.

During listening to the short story, there was in the centre the language field, in which there were achieved the following objectives: 1. A child experiences comfort, joy, fun, they connect aesthetic and physical pleasure and they acquire a positive attitude towards literature. 2. A child identifies with a character and experiences plot. 3. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness).

After we read the story, there followed a short conversation about it:

- What did the story we read talk about?
- Who were the characters in the story?
- What did Bor and Bina do before they went out?
- What did Bor and Bina do outside?
- Who did they make the snowman with?
- What happened when the bear sat on the sleigh?
- What did they drink to warm themselves when they came home?

In the conversation about the subject-matter of the read story, there was once again as a starting point the language field, in which there were achieved the following objectives: 1. A child gets to know the word, book as the source of information. 2. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 3. A child learns to narrate independently. 4. A child develops a linguistic ability in different functions and positions during every-day activities and in various social situations. 5. A child develops the language on all linguistic levels (from the phonological and morphological to the syntactic and semantic ones). 6. A child expresses themselves creatively linguistically.

In the next step, I announced to the children that we were also going to play on the snow then. First, I explained them the rules of the first game:

1. “Each of you will get two newspaper sheets that will represent skates. When the last one gets the ‘skates’, skating will start. You skate on the ground and pay attention that you don’t lose your skates. Observe first how I skate.” After the signal – a whistle – the children started skating on the ground.

2. When they heard the agreed signal – a whistle – once again, they sat on the ground on the spot where they stopped and listened to the instruction of a game that followed: “Now, our skates will turn into skis. As skiers, you will compete among yourselves in two groups, that is who is skiing

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21 I drew a hill covered by the snow, falling snowflakes, a sleigh and footprints in the snow.
better and more precisely." I divided the children in two groups by the help of counting out (first, second …), and they formed two single files, then I continued the instruction: “Observe first how I ski, so that you know what you’re supposed to do.” After the signal – a whistle – the children started skiing to the marked end and back.

3. When they heard the agreed signal that marked the end of the game once again, they sat on the ground where they stopped and listened to the instruction of a new game: “Now, our skis will turn into a snowball. Let’s crumple the newspaper sheets (I showed them how). Now, snowballing with the friends starts (I showed them how).”

4. When they once again, for the last time, heard a noisy whistle, they sat on the ground where they stopped and listened to the instruction of the last game: “Now, when we’ve got tired of snowballing with the friends, we’ll try to hit the wastepaper basket with our snowballs (I brought it and showed them how we throw things away to the wastepaper basket).”

When there were no newspaper sheets on the ground, we sat with the children on the ground, we shut our eyes in a total silence and imagined that we sat at the table with warm tea and biscuits. The ones who wanted, described what and out of what they drank and what they ate.

In the snow games, there was present the sport field, in which there were achieved the following objectives: 1. Developing co-ordination or the harmony of movement (the co-ordination of movement of the whole body, hands and legs), balance. 2. Acquiring basic moving concepts: getting aware of the space (where the body is moving), manner (how the body is moving), getting to know different positions and relations between the parts of the body, between objects and people, between people. 3. Getting to know winter activities. 4. Finding out one’s own way in solving movement problems. 5. Relaxed performing of natural forms of movement. 6. Getting to know the importance of co-operation in a play group, mutual help and “sportive behaviour”.22 There was also present the society field, in which there were achieved the following objectives: 1. A child has a possibility to develop abilities and ways of starting, maintaining and enjoying in friendly relations with one or more people (which includes solving problems, negotiating and making agreements, understanding and accepting viewpoints, behaviours and feelings of other people, politeness in mutual communication etc.).23

The third day

When the children sat in the semi-circle on thin mattresses, I put on the floor the first sheet of paper and started drawing.

1. First, I drew a tree which did not have leaves, and asked the children:
   - What did I draw?
   - What is the tree like?

2. Then, I took another sheet of paper, on which I drew a tree with some green leaves, and asked the children:
   - What have I drawn now?
   - What is this tree like?

3. In continuation, I added to the same tree some blossoms, and asked the children once again:
   - What have I drawn on our tree now?

4. In the next step, I took the third sheet of paper on which I drew a tree with a lot of green leaves, some apples, and asked the children:

22 The Pre-school Institutions Curriculum 1999: 24
23 The Pre-school Institutions Curriculum 1999: 33
5. In the last step, I took the last, fourth sheet of paper on which I drew a tree with some brown yellow leaves, some of the leaves I drew on the ground around the tree, and asked the children:

- What have I drawn now?
- What is this tree like?

When we described the last, fourth tree with the children, I put in front of the children all four trees, and I asked them to describe them to me.

In the above described activity, there were two fields in the centre, the nature field and the language field. Within the nature field, there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature.17 Within the language field, there were achieved the following objectives: 1. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 2. A child experiences and gets to know verbal communication as a source of pleasure, fun and solving problems. 3. A child expresses themselves creatively linguistically. 4. A child learns to narrate independently.18

When we described four drawn trees, I put a poster in front of the children, on which there were drawn four bare trees. I explained to the children that they were going to present four seasons by the help of four drawn trees on the poster.

We started with the current season.

1. In front of the children, I put pieces of cotton wool, and I asked some of them to show me by using them what is a tree like in winter when it is snowing.

2. In continuation, I put in front of them two cups with light green and light pink leaves, and I asked one of them to show me by using them what is a tree like in spring when everything is blossoming.

3. In the next step, I put two cups in front of them with green and red leaves, and I asked one of them to show me by using them what is a tree like in summer, when everything is ripe.

4. At the end, I put a cup with orange, yellow, brown leaves in front of them, and I asked one of them to show me by using them what is a tree like in autumn, when trees start losing leaves.

In making a poster, there was in the centre once again the nature field, in which there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature.17 There was also present the art field, in which there were achieved the following objectives: 1. Developing artistic ability to imagine things and imagination by visualising and creating. 2. Taking care of and developing individual creative potentials in the phases of experiencing, visualising, expressing, communicating and being assertive in the artistic activity field. 3. Discovering and taking care of specific artistic abilities and talents.22 There was also present the mathematics field, in which there were achieved the following objectives: 1. A child classifies and sorts. 2. A child uses terms for describing the positions of objects (on, in, in front of, under, behind, at the front, at the back, above, on the left, on the right …) and they learn orientation in the room.19

When a poster was finished, I showed a box to the children, in which there were different pictures. I told them that each of them will reach into the box, in which there are different pictures. I told them that each of them will reach into the box, and take from it one picture, describe it and try to put it next
to a suitable tree – to a suitable season – on the poster that we made together. In order to make it easier for the children, first, I demonstrated to them how we were to do it.

In the described activity, there were in the centre three fields, the nature field, the language field and the mathematics field. Within the nature field, there were achieved the following objectives: 1. A child develops an image about when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature. Within the language field, there were achieved the following objectives: 1. A child expresses themselves creatively linguistically. 2. A child learns to narrate independently. 3. A child develops the ability of language use in connection with thinking in forming pre-conceptual structures (a figure, quantity, weight, space, time), in mutual relationships. 4. A child experiences and gets to know verbal communication as a source of pleasure, fun and solving problems. 5. A child develops the language on all linguistic levels (from the phonological and morphological to the syntactic and semantic ones). 6. A child develops a linguistic ability in different functions and positions during every-day activities and in various social situations. 7. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). Within the mathematics field, there were achieved the following objectives: 1. A child classifies and sorts. 2. A child uses terms for describing the positions of objects (on, in, in front of, under, behind, at the front, at the back, above, on the left, on the right ...) and they learn orientation in the room.

In the final part, I distributed among the children a colouring book. With the closed books that they had in front of them, we talked what they saw on the cover page – the pictures of four seasons. Together, we found out the current season, and we circled the picture that showed that season with a green coloured pencil. In continuation, the children opened the book and coloured the colouring sheet that showed the current season. During colouring the colouring sheets, at the background, there were playing children’s winter songs.

The activity in the final part included the nature field, the mathematics field, the art field and the music field. Within the nature field, there were achieved the following objectives: 1. A child develops an image about when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature. Within the mathematics field, there were achieved the following objectives: 1. A child classifies and sorts. 2. A child uses terms for describing the positions of objects (on, in, in front of, under, behind, at the front, at the back, above, on the left, on the right ...) and they learn orientation in the room. Within the art field, there were achieved the following objectives: 1. Developing artistic ability to imagine things and imagination by visualising and creating. 2. Taking care of and developing individual creative potentials in the phases of experiencing, visualising, expressing, communicating and being assertive in the artistic activity field. 3. Discovering and taking care of specific artistic abilities and talents. Within the music field, there were achieved the following objectives: 1. Stimulating curiosity and joy for artistic activities, arts and variety. 2. Experiencing art as a part of sociological and cultural life. 3. Experiencing and getting to know pieces of art.

The fourth day

When the children sat in the semi-circle on the chairs prepared in advance, I put on for them a short video about seasons, from which it was clear how we dress in winter, spring, summer and autumn.

During video watching, there was in the centre the nature field, in which there were achieved the following objectives: 1. A child develops an image about when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature.
In continuation, a short conversation about the watched video followed:

- What did the video that we watched talk about?
- Who did you see in the video?

After the conversation about the subject-matter of the watched video, a starting point was the language field, in which there were achieved the following objectives: 1. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 2. A child learns to narrate independently. 3. A child develops a linguistic ability in different functions and positions during every-day activities and in various social situations. 4. A child develops the language on all linguistic levels (from the phonological and morphological to the syntactic and semantic ones). 5. A child expresses themselves creatively linguistically.18

Watching the video once again followed. I asked the children to pay attention to the boy’s and girl’s clothing.

During the video, there was in the centre the nature field, in which there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature.17

After repeated video watching, there followed a conversation about it:

- What were the boy and girl wearing in spring?
- What were the boy and girl wearing in summer?
- What were the boy and girl wearing in autumn?
- What were the boy and girl wearing in winter?

During the conversation about the subject-matter of the watched video, there was once again as a starting point the language field, in which there were achieved the following objectives: 1. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 2. A child learns to narrate independently. 3. A child develops a linguistic ability in different functions and positions during every-day activities and in various social situations. 4. A child develops the language on all linguistic levels (from the phonological and morphological to the syntactic and semantic ones). 5. A child expresses themselves creatively linguistically.18 There was also present the nature field, in which there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature.17

In the next step, I explained to the children that they were going to work in groups, which will be changing after the signal – a whistle. With the help of counting out (first – stands, second – sits, third – squats), I divided the children into three groups. The groups sat at the tables which I showed to them.

Activities at the tables:

1. **Group 1**: I showed to the children four posters and a boy puppet in underwear. During storytelling, I motivated the children to dress the boy puppet suitable to the season in which it found himself.

2. **Group 2**: By the help of a rabbit puppet and pictures prepared in advance, the children played a game called *I saw*, i.e. they were describing something they saw in the picture.

3. **Group 3**: In the colouring book, the children circled with a green pencil objects, animals, items of clothing which are typical of the current season, and they also explained why they did not choose some objects, items of clothing, animals (they told what season they are typical of).
In group work, there prevailed three fields, the nature field, the language field and the mathematics field. Within the nature field, there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature. 17 Within the language field, there were achieved the following objectives: 1. A child expresses themselves creatively linguistically. 2. A child learns to narrate independently. 3. A child develops the ability of language use in connection with thinking in forming pre-conceptual structures (a figure, quantity, weight, space, time), in mutual relationships. 4. A child experiences and gets to know verbal communication as a source of pleasure, fun and solving problems. 5. A child develops the language on all linguistic levels (from the phonological and morphological to the syntactic and semantic ones). 5. A child expresses themselves creatively linguistically. 6. A child develops a linguistic ability in different functions and positions during everyday activities and in various social situations. 7. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 18 Within the mathematics field, there were achieved the following objectives: 1. A child classifies and sorts. 2. A child uses terms for describing the positions of objects (on, in, in front of, under, behind, at the front, at the back, above, on the left, on the right ...) and they learn orientation in the room. 19

In the final part, I showed to the children a suitcase in which there were clothes typical of different seasons. We were taking one item of clothing after the other, named it and described it (How do you put it on? What part of the body do you put it on? Why do we wear it? On what occasion do we wear it?); told what season it was most typical of, and they tried to find out if it was suitable for a girl, for a boy or both sexes.

In the suitcase activity, there were present the following fields: a) the nature field, in which there were achieved the following objectives: 1. A child develops an image about that when something happened and about the sequence of events. 2. A child experiences time as the duration of some activity and gets to know time measurement. 3. A child discovers, gets to know and compares animate and non-animate nature; 17 b) the language field, in which there were achieved the following objectives: 1. A child expresses themselves creatively linguistically. 2. A child learns to narrate independently. 3. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness); 18 c) the society field, in which there were achieved the following objectives: 1. A child has a possibility to develop abilities and ways of starting, maintaining and enjoying in friendly relations with one or more people (which includes solving problems, negotiating and making agreements, understanding and accepting view-points, behaviours and feelings of other people, politeness in mutual communication etc.). 24

When we put out of the suitcase all the clothes, we put them back in it and started a game called Putting into the suitcase, in which we had to find out what we put into the suitcase.

In the game called Putting into the suitcase, there was present the language field, in which there were achieved the following objectives: 1. A child expresses themselves creatively linguistically. 2. A child learns to narrate independently. 3. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness). 18 There could be also traced the society field, in which there were achieved the following objectives: 1. A child has a possibility to develop abilities and ways of starting, maintaining and enjoying in friendly relations with one or more people (which includes solving problems, negotiating and making agreements, understanding and accepting view-points, behaviours and feelings of other people, politeness in mutual communication etc.). 24
The fifth day

I showed to the children who were sitting in a circle on the thin mattresses the boy puppet in underwear, and I told them that we were going to dress our boy in such a way that he would not be cold.

I asked them:
- What are we going to put him on, so that he’s not in his underwear?

The items of clothing that the children mentioned I showed – colourless white trousers, a pullover, boots, gloves, a cap, a scarf, a jacket, socks.

When we mentioned all the items of clothing which I had ready, I asked the children:
- What are the boy’s clothes like?

When we found out that they were white, colourless, boring, I told the children that we were going to colour the boy’s clothes by the help of potato printing.

I showed to the children a palette with a colour and stamps made of potatoes. During explaining how we were going to change the boy’s clothes, I was showing the process of printing:
1. we put the potatoes in the colour
2. we print the potatoes with the colour on an item of clothing

By the help of explanation and demonstration, I printed with the potatoes a couple of times, then I showed to the children the final product, which was, of course, not connected with the items of clothing which we had – a necklace.

After I demonstrated printing, the children sat at the tables, on which there was already prepared the surface, the palette with colours and stamps of potatoes.

I divided to them the items of clothing which they changed by the help of printing:

Group 1 – the trousers and socks
Group 2 – the pullover and cap
Group 3 – the scarf and boots
Group 4 – the gloves and jacket

By the help of transformed clothes we got dressed our boy, whom we fastened on the door of the play room.

In creating the winter clothes for the boy, there prevailed the art field, in which there were achieved the following objectives: 1. Developing artistic ability to imagine things and imagination by visualising and creating. 2. Taking care of and developing individual creative potentials in the phases of experiencing, visualising, expressing, communicating and being assertive in the artistic activity field. 3. Discovering and taking care of specific artistic abilities and talents. There was also present the language field, in which there were achieved the following objectives: 1. A child expresses themselves creatively linguistically. 2. A child learns to narrate independently. 3. A child listens to the language in every-day communication and they are involved in communicational processes with children and adults (non-verbal and verbal communication, the culture of communication, the styles of communication, politeness).

CONCLUSION

A pre-school teacher has got a very difficult task each time they enter the play room, in which there are waiting for them children in need of attention, play and knowledge. Because of that, it is extremely important that pre-school teachers, especially an inexperienced pre-school education student,
continually educate themselves by studying various professional literature, in which they find answers to the questions that are connected to:

- planning and carrying out cross-curricular connections, sensical ones and non-sensical ones (sensical ones serve them as an example, non-sensical ones serve them to recognise and omit mistakes that frequently arise),
- knowing the development of a pre-school child and considering it in organising an every-day educational process,
- the use of the most adequate methods of passing knowledge to the pre-school children of different ages,
- knowing different methods and techniques of work with pre-school children,
- a really good theoretical knowledge of the subject-matters, which they want to present to children etc.

The broader the knowledge spectre that a pre-school teacher possesses, the easier will be their every-day work with children, as they will know how to respond to their needs, wishes, interests, special traits etc.

The cross-curricular connection presented in this paper, in which there was as the starting and central field the nature field, and which was analysed together with the students, in order to teach them to recognise the connections among the fields by the help of the Pre-school Institutions Curriculum, was designed on the basis of knowing:

- the Pre-school Institutions Curriculum, i. e. on the basis of knowing general objectives and principles which are deriving from them, on the basis of knowing individual activity fields and global objectives and objectives which derive from the global objectives and are written within individual fields,
- different theories of the brain functioning, which talk about the fact that the brain functions best when it connects acquired pieces of information into a whole,
- the importance of a child’s holistic, mental and emotional, active involvement in the process of learning,
- the law of transfer from the known to the unknown,
- the importance of fairy-tales and cartoons in a child’s life.

The knowledge that was necessary in designing this quality cross-curricular connection was acquired on the basis of independent education, in the wish to learn as much as possible, so that the work with children is easier, more pleasant, more successful, for themselves and for an adult. Without studying the professional literature, the cross-curricular connection carried out would certainly not be designed and carried out as professionally as it was.

That is why it is extremely important that it raises the awareness of the importance of continual professional improvement in different fields in students, future pre-school teachers. Sometimes, it is best to do it by the help of own examples, as it was done in this example, as students see an example first in the one who passes the knowledge to them in a lecture room. And if the one who passes them certain knowledge can show and prove them in a concrete way what they are talking about, it is a great privilege for students, as they can prevent them to make certain mistakes.

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