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Computer in the Culture of a Contemporary Pre-school Child

Abstract

Computer is used in many areas of a contemporary kindergarten's work. The article presents selected research results concerning the ways of using a computer and appropriate computer programmes in the work of the kindergarten headmaster, administrative workers and in teachers' educational and didactic work. It also presents chosen elements of the present record of educational law and the programme basis of pre-school education

Key words: *Pre-school education, child education, teacher's promotion, computer, computer programmes, programme basis, school success, effectiveness*

Introduction

In the last few years in our country we have been able to observe a significant increase in the supply and the number of different computer programmes directed to the kindergarten environment. The number of kindergartens where the computer is the most important tool in the educating process and administrative work is constantly and significantly growing. The results of the conducted research show that computers are part of everyday culture of a kindergarten. Teachers seem to need substantial knowledge concerning the proper use of communication and information technology. Moreover, teachers are now very keen on acquiring and developing computer skills and getting background knowledge about teaching children how to use educational multimedia programmes [S. Juszczuk, 2000]. The issue of computer-assisted education of children at the pre-school age has been one of the areas of empirical research conducted in Poland's neighbouring countries

and also in Norway, the United States and Japan, where communication and information technology is a natural element in teachers' work at each level of education. It is planned that the research results will be used for developing the methodology of working with little children considering the presence of computer in the educational environment – kindergarten classroom and home.

On the basis of the research that has been conducted so far we can state that computer in the pre-school environment is used in several areas, which are described below.

Computer as an element of promoting a kindergarten

For several years now the number of kindergartens all over Poland has been decreasing. There are many reasons for this, mainly economic and those connected with the birth rate drop. Many pre-school institutions have changed their structure because of the decreasing number of children applying for a kindergarten. In order to be present on the educational market many kindergartens have made some effort to promote themselves on the Internet so that parents can choose them for their children. Now, on the websites of nearly every bigger or smaller town in Poland there is information about subordinate organisational units, which in many cases include kindergartens. On the basis of the preliminary results of the research conducted in municipal and private kindergartens, and also those run by monastery congregations we can state that the information these institutions place on the Internet most often concerns the location, recruitment process, staff, teachers' qualifications, daily routine for individual age groups, additional activities (music, languages, IT classes, gym, swimming pool, aerobics, martial arts, theatre, art, horse riding, tennis, physical rehabilitation, dancing classes, etc.), kindergarten's vision and mission, list of upcoming events, parents' corner, photo gallery.

Computer in headmaster's work

On the basis of the results obtained in the research we have to state that nowadays a computer, together with proper software has become the most important tool supporting a modern kindergarten headmaster's work. The results show that 86.5% of kindergartens having computers with the access to the Internet systematically exchange information between the institution running the kindergarten (i.e. a town council unit) and the pedagogical supervision unit (i.e. a proper school inspectorate). Moreover, according to the prevailing educational law [Ustawa,

2004], kindergartens systematically work on appropriate data and input them into the Educational Information System. Before that the data is input into the staff list - EWIKAN and many other statistical sheets for the needs of GUS (statistic office) and various other entitled institutions. In the researched kindergartens the staff use a computer to compile organisational sheets, all kinds of plans, reports, class schedules, records, statutes, etc. What is extremely popular is computer programmes assisting staff with activities connected with stocktaking, keeping personal and staff data files, payments for the kindergarten's services, etc. Many of these institutions run electronic financial service and electronic planning and managing budget, which is closely related to the budget of a given town [PABS 4.0]. Such activities make it easier to work on the budget plan and enables its systematic management, prevent bad management, they are an important element in keeping budget discipline. In all the researched kindergartens the headmasters run compulsory activities of the evaluation of the quality of the kindergarten's work and prepare an appropriate report. Within these activities many headmasters use various types of specialist computer programmes, which make statistic calculations easier and enable graphical presentations of selected data. Very often the results of the evaluation of the quality of kindergartens' work are published for general use in the databases of towns and school inspectorates.

Computer in kindergarten's administrative work

At present, parents have a wide selection of pre-school education institutions: municipal nursery schools, private nursery schools, nursery schools run by monastic congregations and pre-primary forms in primary schools [Ustawa, 2003]. Only some types of nursery schools employ administrative workers, and these are mainly pursers, personnel managers or accountants. In the majority of the researched kindergartens administrative work is done exclusively by the kindergarten's headmaster or assistant headmaster. The analysis of the material collected shows that using a computer in administrative work concerns mainly managing correspondence, preparing menus for children keeping appropriate amounts of calories etc., keeping storage or purchase files. To do this, some kindergartens use specialist computer programmes or create their own easy-to-use programmes. Using a computer and appropriate computer programmes in administrative work by trained staff ensures the improvement of effectiveness of running a pre-school institution and cost optimisation.

Computer in a teacher's work

In 2000 the Minister of Education introduced a regulation which opened new possibilities of promoting teachers [Rozporządzenie, 2000], and in 2004 there was another regulation [Rozporządzenie, 2004] which, together with the record in the Teachers' Charter [Ustawa, 1982], defined the requirements the educational law places before a teacher to be promoted. These documents include a record pertaining information and communication technology. A teacher who applies for a nominated teacher degree, apart from many other requirements, should prove their skills in using information and communication technology in their work, and a teacher who wants to get the degree of board certified teacher is obliged to prove such skills. The law records mentioned made many pre-school teachers take up activities connected with acquainting with, and then using selected elements of information and communication technology in their work. A lot of teachers, independently of the introduced educational law, have used information and communication technology in their work. For those teachers, the new law acts have confirmed the fact that they chose the right direction in their educating and didactic activities, as information technology is one of the means that must be used by every teacher [J. Zaucha, 2006]. In 2004 the Minister of Education and Sport introduced another law concerning the standards of educating teachers, which includes issues connected with information technology [Rozporządzenie, 2004]. Thus, it is certain that in our country's educational policy the subject of information and communication technology is substantial for both already active teachers and those training to become teachers, that is students of pedagogy. The research conducted shows [A. Watola, 2001] that pre-school education teachers use a computer in many areas of their educating, didactic and administrative work.

Computer in the child's education – computer classes, an element of individual work using educational computer programmes, using electronic mail and the Internet.

On the basis of the empirical studies [A. Watola, 2002], we can state that for several years now in pre-school education computer has been one of the more significant didactic media. The number of pre-school institutions equipped with computers is growing systematically and fast. Many kindergartens succeeded in replacing their old computers with better and more modern ones. Within the conducted research, a ranking has been conducted for several years, concerning the most popular educational computer programmes used in the researched kindergartens. The most popular programmes are those supporting the beginnings of learning to read and write, mathematics, art, music, foreign languages, speech

therapy and also those supporting the child in all developmental areas. Many kindergartens run teacher programmes and innovations within the computer-assisted process of shaping school readiness, eliminating different kinds of developmental disturbances and disharmonies. Computer, together with appropriate educational software, has become useful in education and didactics while working with both talented children and those needing special and individual methods and forms of teaching – learning [E. Nowicka, 2005]. At the moment a lot of kindergartens are trying to qualify for the IBM KidSmart programme held under the auspices of the Polish Prime Minister. The idea of the teaching programme is based on helping children to get used to communicating with the computer world; it also helps teachers to raise their technical qualifications. Such computer classes seem to be great fun for the children taking part. Kindergarten teachers from other European pre-school institutions are convinced that the colourful KidSmart pre-school centres provided by IBM, equipped with excellent educational software are of great educational quality. This programme makes it possible for pre-school children to have access to technology that is another medium useful in acquiring important skills and making school beginnings easier. The possibility of taking part in the programme gives many children from families with a low income greater chances of development and enables school success.

At the moment work connected with conducting detailed empirical research in kindergartens taking part in the IBM programme has been undertaken.

1. **Computer in pedagogising parents and the co-operation with the local environment.** Electronic mail that enables fast and efficient correspondence mainly with parents, kindergarten teachers, teachers from other kindergartens, creating websites for parents and other interested people, editing a newsletter, preparing news and announcements for parents thanks to which the communication between the kindergarten and parents has become better, writing articles pedagogising parents.
2. **Computer in the process of promoting teachers.** Compiling documents for the next degree of promotion; keeping evidence of accomplishments [Rozporządzenie, 2004].
3. **Computer as a tool in preparing didactic aids.** Creating multimedia presentations, preparing materials for competitions, designing and making diplomas, invitations, thank you letters for parents and other institutions, creating a picture-word dictionary, counting cards, scrambled words, syllables, items for didactic games, working on individual working sheets for children, preparing materials for the observation and diagnosis of a child's development, making decorations, creating databases of different kinds, such as speech therapy activities, etc., lesson plans.

4. **Computer as a tool in the process of teachers' self-education.** Using the Internet as a source of interesting pedagogic materials, being in touch with teachers from other pre-school institutions in Poland and abroad, acquiring specialist knowledge in order to solve problems, the possibility of quick contact with specialists assisting the work of a present educator and pre-school teacher, following the opportunities and trying to obtain EU funds for professional skill upgrading from all the areas of the teacher's work.
5. **Computer in the process of evaluating the quality of kindergarten's work.** Creating research tools to evaluate the quality of work in the kindergarten, graphic preparation of research results from the studied areas of the kindergarten's work, preparing reports, regulations, evaluating sheets of different kinds.

Strategic concept of a contemporary pre-school

The strategic concept of contemporary pre-school education is in accord with the conclusions from the report prepared under the leadership of Jacques Delors for UNESCO, The International Committee for Education in the 21st century, called *Education there's a treasure inside*. The authors formulated the tasks placed before education for the development of man. The most important task is to enable people to steer their own development. Education should make it possible for everyone to decide about their own life, so that they can contribute to the society's progress, in which they live. The authors of the report state that education should be organised around four aspects which will be the person's pillar of knowledge for the whole life:

“learn in order to know
 learn in order to act
 learn in order to live together
 learn in order to be”

[UNESCO, 1998]

The rules and proposed solutions are the direction of a pre-school education programme basis. The assumption has been made that pre-school education should be a link between family upbringing and school teaching, which would be reflected in both form and content. The strategic concept, according to the philosophy of the '21st century education' comprises tasks for the pre-school education stage, which is the beginning of a path to a person's perfecting, included in the four sections, being the consequence of the 'person's four pillars of knowledge'.

In appointed sections of the programme basis there is room for both the child's and the teacher's actions. In every educational area the teacher's tasks are the reaction to the needs and developmental expectations of a child, who acts in an active and creative way in favour of its own development. The programme basis [Rozporządzenie, 2000] is characterised by great openness, which enables the construction of different programmes of pre-school education. A pre-school teacher conducts tasks resulting from the pre-school education programme basis, which are suited to the needs and developmental capabilities. The following educational areas have been defined:

I. Knowing and understanding oneself and the surrounding world

1. Arousing interest in the surrounding world through leading questions and providing the satisfaction of discovery.
2. Organising activities making it possible to know the multidimensional aspect of man (I perceive, think, feel, act).
3. Creating situations letting a child know its own and other people's possibilities, e.g. ones resulting from a different sex, age, state of health and experience.
4. Creating situations improving memory, ability of association, ability of focusing on things and people.
5. Spotting and describing differences, similarities and relations between objects and phenomena. Creating opportunities for ordering, classifying and counting.
6. Understanding the sense and purpose of things .
7. Arousing interest in a picture (illustration) and text.
8. Getting to know, using, creating symbols and signs.
9. Creating conditions for language experiments within the range of the representative and communicative function of language (especially taking into account acquiring and developing the ability to read and write).
10. Passing on knowledge about a healthy lifestyle, evaluating behaviours contributing to and threatening health.
11. Using and creating opportunities for getting to know the reality of:
 - a) natural environment through observing, experimenting, discovering,
 - b) culture and society through getting to know the rules of organising social life, family, region, national traditions, and works of culture,
 - c) technology through observing, manipulating and reshaping objects or changing their position in space and time.

II. Acquiring skills through action

1. Supporting a child's own actions.
2. Making it possible for a child to make its own choices and experience the effects of its own actions.
3. Helping a child to see problems, to plan and realise tasks.
4. Making it possible for a child to acquaint itself with and use different kinds of solving tasks.
5. Shaping habits connected with hygiene and health- and ecology-friendly behaviours.
6. Teaching behaviour rules determining a child's safety.
7. Creating conditions promoting spontaneous and organised physical activity. Making it possible for a child to take part in games and physical activities.
8. Making it possible for a child to express its observations, experiences, feelings in various kinds of activity using verbal and non-verbal means of communication.
9. Supporting creative activities in various kinds of activity.

III. Finding one's place in a group of peers, society

1. Teaching to come into close, hearty contact with other people.
2. Helping a child to build a positive picture of its own 'self' and a satisfying sense of security.
3. Identifying and naming various emotional states.
4. Teaching the ways to cope with a child's own emotions, reacting in a proper way to other people's expressing emotions and controlling behaviour.
5. Introducing to behaviours that are socially acceptable, teaching good manners.
6. Making it possible for a child to discover the meaning of communicating in a non-verbal way.
7. Making it possible for a child to gain experience in speaking, listening and being listened to.
8. Creating opportunities for information exchange, teaching to discuss and reach a compromise.
9. Creating opportunities for fulfilling different roles in interpersonal relations, while paying attention to a child's role in the family.
10. Creating opportunities for collective taking up and conducting different tasks, solving problems.
11. Providing examples and experiencing solving conflicts, by reaching compromise and accepting other people's needs.

IV. Building the system of values

1. Introducing a child into the world of universal values, e.g. goodness, truth, love and beauty, through:
 - a) Teacher's personal message,
 - b) Creating the surroundings that enable understanding and experiencing these values.
2. Helping a child to acquaint itself with different attitudes of literary or film characters, attempting to evaluate them and justifying opinions.
3. Using everyday situations to attempt at self-evaluation and evaluating other people's behaviour.
4. Creating opportunities for making choices and realising their consequences.
5. Developing a sense of responsibility through independent, thorough and solid fulfilment of undertaken tasks, respecting a child's own and other people's work.

The content included in the programme basis, realised in kindergartens, is the grounds for further education, and a good start at school decides about the child's further educational sphere and its school success [MENiS, 2005]. Proper use of computer together with educational computer programmes creates great possibilities in raising educational and didactic effectiveness.

Conclusion

For the last few years computer has become a substantial element of the culture of a contemporary kindergarten. For this reason, the vital thing is a purposeful and systematic conduct of activities connected with popularising the tasks of media education as early as pre-school I. Samborska, 2005]. An appropriately used computer together with properly chosen educational programmes can assist the process of educating children in kindergarten effectively. Computer and appropriate programmes are the medium that itself give wide possibilities of individualising the teaching-learning process, taking into account specific developmental predisposition of every child [A. Watoła, 2006]. A pre-school teacher using a computer in a professional way is able to create conditions where a child will be willing to act fully discovering and developing its creative capabilities.

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