COMPUTER-BASED MATHEMATICAL GAMES FOR PRESCHOOL CHILDREN

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Computer games play nowadays a significant role in the culture of children and adolescents. Given the strength of their influence, it is likely that these games may affect the knowledge children could get either from school or at home (Bruner 1985, Wark, 1994).

The spread of computer software as mediator in the development of mathematical concepts (Anderson 2001) and the Internet as a teaching tool (Pange 1998), provide an extra chance to children to play and learn mathematics using computer-based games either at home or at school, as most of these computer-based games are easily accessible to children and there are at no extra cost.

A survey was conducted amongst Greek pre-school teachers and children aged 5-6 years, to examine whether they use computer-based games in the Internet to teach mathematics.

Results revealed that very few Greek children are using the Internet and also very few Greek pre-school teachers know how to use computer-based games, in order to teach mathematics. From a group of 500 pre-school teachers only 10 knew how to use the Internet at school. These teachers found that computer games allow children maximum freedom in approaching mathematical tasks in their own manner. But, mathematics have to be the main stage of the software, the software has to encourage children to play again the computer game, all children with any learning style, can enter into the computer game, and children can explore new mathematical ideas from the game. Without these characteristics of the software, children become bored and non-enthusiastic in playing the mathematical computer game.

This study concludes that the use of Internet computer-based games from pre-school children has to be guided by an experienced teacher. All teachers have to be well acquainted with computers and also to be quite experienced with Internet in order to be able to teach mathematics to children and to evaluate the computer-based games.

References

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