



THE IMPACT OF THE NATIONAL ICT PROGRAM ON THE SCHOOL FROM THE VIEWPOINT OF THE ADMINISTRATION – A CASE STUDY

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Abstract

This study investigated the process of implementing change in the school as reflected by the implementation of the National ICT Program in Israel. The study deals with the implementation of the ICT program in school and its purpose is to examine the various levels of change that occur in the school, from the viewpoint of the administration. The study is a case study, and was conducted using the qualitative method. The study took place in Israel and included in-depth semi-structured interviews with the administrative staff of the school: the principal, vice-principal, ICT coordinator, grade coordinator and teacher. The study results indicate the importance of implementing the ICT program on three levels: the administrative level, the teacher level and the pupil level.

Introduction

Changes in the educational system

Introducing change in the educational system on the school level is both hard and complicated, and should include comprehensive attention to internal and external school components (Berger, 1997). Fuchs (1995) the essence of educational change must be clear, built well, suitable for the needs of the population of the institution and familiar to the educational staff, in addition, in order to create a change in the school there must first be a change in the mind of the one who is performing the change – the teacher. In addition the staff must feel the need for change (Berger, 1997). Studies have proven that changes that meet the educational needs are in fact adopted and succeed. The feeling that change is necessary is a very important condition for the change to be successful (Sieber, 1981). The transition from a known situation to a new unknown situation is a change that requires new behavioural patterns. Various studies have shown that difficulties exist in the process of behavioural change. Due to the natural tendency of man to preserve the status quo and prevent any undermining of his self-image that he acquired in the past, man develops a fear of the unknown that he sees as a threat, a reaction that can become a hindrance to the change process (Goodlad, Klein & Novotney, 1973)

The literature that deals with implementing change in the educational system examines the innovation process from various perspectives, for example: the organizational perspective – how does the organization prepare for the change in its structural and operational program (Sharan & Hertz-Lazerovich, 1978; Fuchs, 1995) the teacher's perspective – how do the teachers deal with the demand to change, and what are their reaction patterns to this demand (Lacey, 1977; Katz, 1959) the school administration's perspective – how does the administration operate to implement the idea in the school community (Fuchs, 1995; Chen & Edi, 1995) The personal relationship perspective – what is the dynamics that occur between members of the staff at each level that will bring to success or failure of the change (Sharan & Shachar, 1990). In addition, one can find in the literature a distinction between external variables (outside of the school) and internal ones (within the school) that affect the implementation of the change (Oz, 2000; Fuchs, 1995).

Technological innovation

The integration of the computer into all aspects of life teaches us that the schools of the future will become more and more computerized and the implementation of technological innovation in the classroom will be an integral part of the teaching, learning and training process (Halverson & Smith, 2010; Selwyn, 2010). In addition, ICT creates changes that demand a response from the educational system, to cope and even to change (Solomon, 2000; Fullan, 2001). Technological information and communication are the most relevant for the primary processes in teaching and instruction and present catalyst for changes in the educational system, and as a means of equipping the future citizen with the tools that are necessary for living in an information society (Nachmias, Myoduser, Baruch & Zozovski, 2011). The researchers (Myadosar, Nachmias, Farkash & Tubin, 2003) defined three phases of innovation, that create a gradual and continuous sequence: the implementation phase, the transition phase and the transformation phase, the assumption is that each phase is more advanced than the previous one.

The National Computerization Program

The Israeli national ICT program (also called *Adapting the Educational System to the 21st Century*) is a program that was formulated in Israel by the Ministry of Education to promote pedagogy and learning in the school using ICT and its implementation in the curriculum. The Science and Technology Department of the Ministry of Education built a long term program which was presented to the Knesset Educational Committee in April 2010. The program is a multi-year plan which was implemented gradually, starting in the peripheral areas of the country. The program is based on a computerized model of innovative pedagogy (Information and Communication Technology – ICT). The goal is to implement the best pedagogy on a systematic level in the school while teaching 21st century skills to the pupils (Ministry of Education, 2011).

The purpose of the study

The purpose of the study is to examine the process of implementing changes in the school as it is reflected in the application of the ICT program. The study examined the all levels in the school: the administrative staff, teachers and students, from the point of view of the administrative staff of the school.

Method

The research method and the interviewees

The study was conducted using the qualitative method and the paradigm of constructivist interpretation. Eight staff members from several elementary schools in Israel participated in the study. All the staff members participated in the administration of their schools. In addition, the selected interviewees had more than four years of experience in administration and were familiar with the situation before and after the integration of computers in the schools.

The process and research tools

The research tools were semi-structured in-depth interviews. The interviewees were asked questions relating to the implementation of the computer in education, such as: ICT tools, the method of implementation in teaching and the difficulties involved in its implementation. The interviews were between one hour and one and a half hours in length. The interviews were recorded and transcribed and were analyzed using Content Analysis where material is divided into content categories according to their similarity. The final stage is drawing conclusions according to the various categories.

Findings

Analysis of the interviews showed that there was a change in the school following implementation of the program.

This change was felt on several different levels: administrative, teacher and pupil.

The Administrative level

The research findings indicate that the principal is the significant figure in the implementation process of the program. The importance that the principal places on the aims of the program influences the amount of activity on behalf of the subject and on the extent of change it achieves in the teachers. It also emerged that the principal and the administrative staff have discretion how to activate the program in their school and allows for a certain amount of school autonomy in the implementation process.

The teacher level

The research clearly showed a change in the teaching process that was expressed by the teacher rethinking his teaching methods. The change is dependent upon the teacher, according to his knowledge and motivational level. The need for using discretion was emphasized along with the need for rethinking the old methods of teaching. It was also found that the program resulted in an advancement of team work, sharing learning materials and cooperation between the teachers. A subject that was brought up by the interviewees as a suggestion how to improve the program was to increase pedagogical guidance such as training programs and continued professional development as a tool for improving ICT instruction.

The pupil level

From the findings it can be said that the ICT program in school improves the pupil's learning experience and raises the motivation of the pupil. In addition, the program broadens the pupil's knowledge and allows for adaptive teaching. The ICT program narrows the gap between the media that is familiar to the pupil from home and the media found at school. Implementation of the program carries with it a message to the schools and may contribute to improving the teaching process. This work can contribute in various aspects to improving implementation of the program in the school and its successful implementation

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Egoza Wasserman, Tami Targani

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