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## THE EFFECTS AND THE USE OF ICT ON THE ACADEMIC PERFORMANCE OF THE STUDENTS

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### **ABSTRACT:**

The research focused on the influence that information and communication technology (ICT) has had on students at Gomal University in Dera Ismail Khan, as well as the information that those students are able to access. From among the students in the political science department at Gomal University in Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan, a sample of fifty individuals was chosen to participate in the survey. On the other hand, relevant literatures were examined, including those from textbooks, journals, and previous study. The research instruments included a questionnaire, which was statistically examined using contingency tables. Mean statistics were used to evaluate the hypotheses, and the research instruments included a questionnaire. The findings of this research revealed a wide range of reactions from the students with respect to how information and communications technologies (ICTs) affect them and the information that is available to them.

**Keywords:** *ICT, Students, performance, Information*

### **INTRODUCTION:**

Information and communication technologies are referred to by the acronym ICT. The abbreviation ICT refers to many technologies that make it possible to communicate and obtain information. It is analogous to the field of information technology (IT). "However, the primary emphasis is placed on various forms of communication technology. This covers wireless networks, mobile phones, the internet, and any other communications channel. Over the course of the last several decades, advances in information and communication technology have given society access to a huge variety of newly developed

communication possibilities. "People can communicate in real time with others in different countries using technologies such as instant messaging, voice over IP, and video conferencing. Social networking websites like Facebook allow users from all over the world to remain in contact and communicate on a regular basis." [Citation needed] The development of modern information and communication technology has resulted in the creation of a global village in which individuals are able to speak with others located on other continents as if they were neighbours. "Because of this, information and communication technologies are often investigated in the context of how contemporary communication technologies have impacted society." (tech factor, the 4th of January, 2010)

The urgency of extending educational possibilities to those rendered the most vulnerable by globalisation developing nations in general; low-income groups, girls and women, and low-skilled workers in particular coexists with concerns about the educational relevance and quality of education. "Global developments also put pressure on all groups to continually learn and utilise new abilities," according to the author. The criteria for education and training in the new global economy are defined by the International Labor Organization as "basic education for all," "core job skills for all," and "lifelong learning for everyone." It has been suggested that information and communication technologies, or ICTs, such as radio and television, as well as more recent digital technologies like computers and the Internet, might serve as potentially strong enablers of educational change and reform. "When used appropriately, various forms of information and communication technology are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among other things, helping to turn teaching and learning into an engaging, active process that is connected to real-world experiences."

#### **LITERATURE REVIEW:**

This backdrop provides a summary of the evidence basis that was used in the development of the ICT capability's introduction, organisational aspects, and learning continuum. "It relies on current research conducted both internationally and nationally, as well as on projects and programmes that concentrate on integrating ICT into curricular content." The capacity to use information and

communication technologies is predicated on a collection of pertinent knowledge, skills, behaviours, and dispositions. This capacity is often portrayed internationally in a developing manner across a variety of connected areas or aspects, with the purpose of demonstrating more advanced experiences with the technology. For instance, the information and communications technology (ICT) curriculum for England includes "lines of development" in the form of strands and substrands. "The capacity with six sets of standards is represented by the National Education Technology Standards for students, which are offered by the International Society for Technology in Education." The Statements of Learning for Information and Communication Technology (ICT) in Australia were presented as five broadly defined conceptual organisers. These organisers represented fundamental features of ICT that are applicable throughout the curriculum. According to the Australian Council for Educational Research, there has been a development in the research that is related with the National Assessment Program - ICT Literacy.

In the beginning of the field of information and communication technology (ICT) in education, scholars such as Papert (1980) and Turkle (1984) believed that pupils formed their own realities based on their experiences and past knowledge. "The student interacts with the world, and in order to deal with this environment, the student builds a conceptual framework in order to understand the interaction." Even though technology is always advancing, more modern theorists, such as Dede (2009), have continued to reiterate these previous claims. This has resulted in the development of a set of constructs upon which the ICT competence is founded. "In particular, the overarching factor addressing the personal, social, and cultural settings proposed by theorists such as Papert and Turkle is the application of social and ethical standards and practises while utilising ICT."

### ***Types of ICT's Used in Education:***

ICTs are a broad range of technical tools and resources that are used to communicate, as well as to produce, transmit, store, and manage information. ICT is an acronym that stands for "information and communication technologies." "Computers, the Internet, broadcasting technologies (radio and television), and telephone are all examples of these technologies," the author writes. In recent years, there has been a groundswell of interest in how

computers and the Internet can best be harnessed to improve the efficiency and effectiveness of education on all levels and in both formal and non-formal settings. This interest has been fueled by the realisation that there are numerous ways in which computers and the Internet can be used to improve education. "But information and communication technologies are more than simply these technologies. Older technologies such as the telephone, radio, and television have a longer and deeper history as educational aids, although they are presently given less attention." For example, radio and television have been utilised for open and remote learning for over forty years, despite the fact that print remains the most affordable, most accessible, and consequently most dominating delivery method in both developed and developing nations. Due to inadequate infrastructure and the associated high costs of access, the usage of computers and the Internet is still in its infancy in developing nations, if these technologies are employed at all (Aribamikan, 2007).

### ***What is e-learning?***

E-learning encompasses learning at all levels, both formal and non-formal, that makes use of an information network—the Internet, an intranet (LAN) or extranet (WAN)—either wholly or in part, for course delivery, interaction, evaluation, and/or facilitation. Although it is most commonly associated with higher education and corporate training, e-learning encompasses learning at all levels. "Some people like to use the phrase online education. Learning that takes place primarily via the use of a web browser, such Chrome, Firefox, or Internet Explorer, is referred to as "web-based learning." Web-based learning is a subset of e-learning. One more way to look at it is as education accomplished via the use of various digital tools.

### ***What is blended learning?***

The concept of blended learning is another one that is gaining popularity. "This is in reference to learning models that blend the tried-and-true methods of the classroom with various e-learning options." Students in a typical classroom, for instance, may be given print-based as well as online resources to study, may participate in online mentorship sessions with their instructor via chat, and may be included to a class email list. "Alternatively, a Web-based training programme may benefit from supplementing it with occasional in-person teaching." The

realisation that not all learning can be accomplished most effectively in an environment mediated by electronic means, and more specifically in one that dispenses entirely with the presence of a live teacher, was the impetus for the development of blended learning. "Instead, in order to arrive at the most effective combination of instructional and delivery modalities, attention must be given to the subject matter, the learning goals and outcomes, the characteristics of the learners, and the learning setting" (Asiabeka, 2010).

***What is open and distance learning:***

"According to the Commonwealth of Learning, open and distance learning is defined as a method of providing learning opportunities that is characterised by the separation of teacher and learner in time or place, or both time and place; learning that is certified in some way by an institution or agency; the use of a variety of media, including print and electronic; two-way communications that allow learners and tutors to interact; the possibility of occasional face-to-face meetings; and" "Open and distance learning is characterised by the separation of teacher.

**ADVANTAGES OF ICT:**

In recent years, there has been a rise in interest about information and communication technologies. For a great number of researchers all around the world, this is an important field for study. "The very nature of them has fundamentally altered the landscape of education over the course of the last several decades. During the course of the previous ten years, the use of information and communications technology (ICT) in educational settings and vocational programmes has evolved into a primary concern for the majority of European nations. "However, only a small minority have been able to make progress. In point of fact, only a tiny fraction of schools in some nations have achieved high levels of effective use of information and communications technology (ICT) to assist and transform the teaching and learning process in a wide variety of subject areas. Others have not even moved beyond the first stages of implementing information and communication technologies.

Many educators make use of information and communication technologies (ICT) to supplement more conventional instructional strategies, such as

information retrieval, in which pupils are "passive consumers of knowledge" rather than "active producers able to take part in the learning process."

Galea (2002) details the ways in which information and communication technology might enhance teaching and learning in a paper titled "teaching and learning with ICT." According to her, there are two primary motivations driving the growing usage of information and communication technologies in educational settings in the UK. She noted that students in current society need to have adequate potentials and skills that allow them to take full benefit from the new chances that ICT give. First, information and communications technology has the ability to alter the speed at which lessons are delivered. "Second, there is a surge of interest among academic scholars in the United Kingdom in how technology tools might increase the quality of teaching and learning in schools, and thus aid learners to achieve better results." In addition, it has been shown that the kids may get a great deal of advantage from the new technology (Lawsent & Vincent, 1995).

#### **IMPACT OF ICT'S ON LEARNING & ACHIEVEMENT:**

- "There is a widespread belief that information and communication technologies (ICTs) can and will empower teachers and learners, transforming teaching and learning processes from being highly teacher-dominated to student-centered, and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills, and other higher-order thinking skills." [Citation needed] "There is a widespread belief that information and communication technologies (ICTs) However, as of right now, there is a very little amount of evidence that is indisputably persuasive to support this notion.
- ICTs are almost never considered as being at the centre of the whole learning process. Even at the most technologically equipped schools in OECD countries, information and communication technologies are often not regarded to be an essential component of the teaching and learning process. Many projects using information and communication technologies in education in LDCs aim (at least in their language) to position ICTs as being at the centre of teaching and learning.

**IMPACT ON STUDENT ACHIEVEMENT:**

- The use of ICT in educational settings has not been shown to have a good effect. "In general, and despite the hundreds of impact studies that have been conducted, it is still impossible to assess the influence that the usage of information and communication technologies has on student accomplishment,"
- When connected to pedagogy, the likelihood of a positive influence increases. "It is considered that some applications of information and communications technology may have good impacts on student accomplishment when ICTs are applied effectively to complement a teacher's current pedagogical beliefs,"
- Computer Aided (Assisted) Instruction (CAI), which refers generally to student self-study or tutorials on PCs, has been shown to slightly improve student test scores on some reading and math skills. However, it is debatable as to whether or not such an improvement correlates to a genuine improvement in student learning.
- Standardized examinations are a significant source of friction between conventional and so-called "innovative" teaching methods. Traditional, transmission-type pedagogies are considered to be more effective in preparing students for standardised testing, which tends to measure the results of such teaching practises, than are more "constructivist" pedagogical styles. This is because standardised testing tends to measure the results of such teaching practises.

**ICT'S IMPACT ON ENVIRONMENTAL SUSTAINABILITY:**

According to the findings of recent investigations into the effects that information and communication technologies (ICTs) might have on the long-term viability of the natural environment, these technologies might either have a positive or a negative impact, depending on the policies that are put in place to support them. "The future effect of ICTs on environmental sustainability" was the title of the research that was commissioned by the Institute for Prospective Technological Studies at the Joint Research Centre (JRC) of the European Commission. The purpose of the study was to determine how telecommunications and information technologies would influence the

environmental performance of Europe between now and the year 2020 according to several key indicators, such as the volume of transport relative to GDP; energy consumption; the share of renewables; and the management of municipal waste.

The conclusion of the investigation was that, in general, "ICTs might either help the situation by reinforcing good effects in the environment or they may make the situation worse."

This indicates that environmental regulations need to be developed to guarantee that uses of information and communication technology make a good contribution to environmental outcomes while at the same time suppressing rebound effects. According to the report, one industry that exemplifies this phenomenon to a tee is the transportation industry. In that sector, it is stated that "Time reduction and network capacity increases by intelligent transport systems will pave the way for more demand for transportation, unless measures are taken to limit growth." This is a perfect illustration of the phenomenon. Internalizing the cost of environmental externalities, in particular through boosting the costs of electricity and fuel, is what the authors say may drive down demand to a level where transportation is no longer tied to economic development.

## **CONCLUSION:**

Many students at University believe that the ICT tools are extremely beneficial since it assists them in completing their tasks. Furthermore, professors recognise that the ICT tools allow students with special requirements or challenges. As a result of the fact that students collaborate in groups to complete assignments, it also helps to lessen the social gaps that exist between them. When students utilise information and communications technology (ICT) to organise their work, whether via digital portfolios or projects, they take on additional obligations. In addition, the findings of the research demonstrated that information and communications technology (ICT) has a major influence on students and the learning processes. Students are motivated via the use of ICT tools thanks to the administration of the institution and training seminars provided in this respect. Students at Gomal University report using information and communications technology (ICT) to complete a variety of duties, including preparing assignments and organising events in the classroom. Because of this,

pupils are better able to organise their own classes. Students are able to collaborate in groups and discuss topics that are relevant to the curriculum with the assistance of ICT. There is additional evidence to suggest that broadband internet and interactive whiteboards play a significant part in the process of promoting students' communication and enhancing instructors' ability to collaborate with one another.

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