# A Case Study of Perceptions of Students using ICT as an Educational Tool in Private Secondary School in Famagusta, North Cyprus

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# ABSTRACT

In this research the perceptions of the students' in the secondary (Class 8) private school (Doğa College) has been investigated on the uses of ICT tools in learning and teachings contexts.

At the beginning of the research, in order to grasp the general perception of students a questionnaire had been given to them. Then for an in depth understanding, semi-structured interviews had been carried out randomly. The analysis of the questionnaire had been done with the support of an expertise and the semi-structured interviews had been analysed by using contents analysis by the researcher.

In the education field today, the uses of technology to supports all sorts of learning and teachings becoming more and more relevant because for teachers it help them to save time for the preparation of their lessons (time consuming one of the findings in this research) and for students lessons become more colorful (this is one of the findings in this research).

Finally the results from this research reflected that ICT tools are effective for learning and teaching. Further suggestions by the researcher has been made at the end of this research.

**Keywords:** students' perceptions, technology, ICT (information communication technology) tools, private school, teaching-learning.

# ÖZ

Bu araştırmanın amacı Güz dönemi (2014-15) 8. sınıf (Orta III) öğrencilerinin Bilgisayar Destekli Öğretimle ilgili görüşlerini araştırmaktır. Araştırmada öğrencilere önce anket uygulaması yapılmıştır ve daha sonrada gönüllük bazında yarı yapılandırılmış mülakat uygulanmıştır.

Bu araştırmadan elde edilen verilere göre öğrenciler Bilgisayar Destekli Öğretim Araçlarının derslerde genelde uygulanabileceğini savunmuştur. Günümüzde eğitim sistemine bakılacak olursa, teknoloji kullanımının hem öğrenimde hem de öğretimde çok önemli katkıları vardır. Örnek verecek olursak öğretmenler açısından derslerde zaman tassarufu (araştırma bulgusu), öğrenciler açısından da derslerde çeşitlilik ve motivasyonu artırma (araştırma bulgusu) bulguları verilebilir.

Sonuç olarak yapılan bu araştırmada, Bilgisayar Destekli Öğretim Araçlarının derslerde etkili olduğu öğrenci görüşleri tarafından ortaya konulmuştur ve araştırmacı tarafından ise bazı destekleyici önerilerde bu araştırmanın sonunda ortaya konulmuştur.

**Anahtar Kelimeler:** Öğrenci görüşleri, teknoloji, bilgisayar destekli öğretim araçlar, özel okul, öğretme-öğrenme.

# DEDICATION

**This thesis is dedicated to my**

**Beloved family and to**

**Asst. Prof. Dr. Bengi Sonyel**

# ACKNOWLEDGMENT

First of all I would like to thank my father who have always been with me throughout my life and gave me the chance to full fill my desire. This wasn't an easy journey for me as I had to leave all my family behind and started to live in a different place although the culture is similar. I would also like to thank my mother, brothers Qais and Qusi Maaitah, who also supported me in this difficult phase of my life. Halil Yaver who is not only my boss but also a close friend whom supported me a lot technically. My deepest gratitude goes to Assoc. Prof. Dr. Mustafa İlkan who supported me at every stage of this thesis.

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| CD-ROM | Compact Disc, read-only-memory |
| ICT | Information Communication Technology |
| IT | Information Technology |
| OECD | Organization for Economic Cooperation and Development |
| PC | Personal Computer |
| TRNC | Turkish Republic of Northern Cyprus |
| WWW | World Web Wide |

# Chapter 1

# INTRODUCTION

## 1.1 Background of the Study

In this chapter the background of the research, problem status, aim of the study, significance of the study, assumptions, limitations and definition of the terms are elaborated.

ICT stands for data and correspondences innovations and are characterized for the reasons, as different arrangement of mechanicals instruments and assets used to impart, and make, disperse, store, and oversee data. These advances incorporate however not restricted to PC, the web, TV advances (radio and TV) and telephony. ICT have turned into a vital part of life, the disclosures and creations in science and innovation have enhanced the pace of correspondence. By making utilization of accessible devices, ICT is assisting regular man with fulfilling his needs. It has gotten to be essential piece of new period.

The 21$^{st}$ Century have encountered radical changes in the coordination of new ICT assets in every one of the territories of life, therefore instructive associations are not left out of this improvement, some effect of ICT in schools can be separated as underneath:

- On the educational programs
- On teaching and learning procedure
- On instructor's role

- On instructive administration
- On appraisal and evaluation

That is the reason some out of numerous analysis presumed that "The field of training has been influenced by ICT, which have without a doubt influenced instructing, learning, and research "(Yusuf, 2005). A lot of exploration has demonstrated the advantages to the nature of instruction (Al-Ansari, 2006). ICT can possibly develop, quicken, enhance, and extend abilities, to inspire and draw in students, to relate school experiences to work practices, make financial feasibility for tomorrow's specialists, and additionally fortifying showing and helping schools change (Davis and Tearle, 1999; Lemke and Coughlin, 1998; referred to by Yusuf, 2005)."

Overall exploration has likewise demonstrated that ICT can enhance students' learning and can better educating strategies. A report made by the National Institute of Multimedia Education in Japan, demonstrated that an increment in students introduction to instructive ICT through educational programs mix has a noteworthy and positive effect on students' accomplishment. Particularly regarding "Learning and Comprehension", "Handy expertise" and "Presentation aptitude". In numerous groups of knowledge, that is the reason administration of different nations are endeavoring to make accessible this new ICT assets in the school settings.

One describing highlight of ICT are their ability to transcend time and space, ICT make possible learning depicted by a period tag between the transport of bearing and its social affair by learners. On-line course materials for occurrence may be gotten to

24 hours a day, 7 days a week. ICT-based enlightening transport (e.g, informative programming broadcast over radio or TV) moreover disposes of the necessity for all learners and the instructor to be in one physical territory.

Educators and learners likewise no more need to depend exclusively on printed books and different materials in physical media housed in libraries (and accessible in constrained amounts) for their instructive need. With the web and the World Wide Web, an abundance of learning materials in each subject and in an assortment of media can now be gotten to from anyplace whenever of the day and by a boundless number of some in created nations, for example, Turkish Republic of North Cyprus (TRNC) that have constrained and obsolete library assets. ICT likewise encourage access to asset persons, coaches, specialists, scientists, experts, business pioneers, and associates everywhere throughout the world.

## 1.2 Problem Statement

A standout amongst the most usually referred to explanations behind utilizing ICT as a part of the classroom has been to better set up the present era of understudies for a working environment where PC, the web and related advancements, are turning out to be more showing up. Mechanical education, or the capacity to utilize ICT adequately and productively, is accordingly seen as speaking to an aggressive edge in an inexorably globalization occupation market. In any case, ICT would not have been so productive and not having any boundaries to its powerful utilize; in this manner obstructions of utilizing ICT can be demonstrated by the announcement made by (Hara, 2004). "Inside of the early years instructors' demeanor towards ICT can differ significantly. Some consider it to be a potential apparatus to help learning while others appear to differ with the utilization of innovation in right on time year

settings". (Blatchford and Whitebread, 2003:16), proposes that the utilization of ICT in the establishment stage is 'undesirable and thwarts learning'. Other early year instructors why should restricted offering ICT encounter inside of the instructive settings take a less amazing perspective than this and recommend that ICT is fine, yet there are other more essential encounters that youthful kids will profit by, (Blatchford and Whitebread, 2003). In principle a few individuals may have the feeling that the educators who had not experienced ICT all through their learning have a tendency to have negative mentality towards it, as they may do not have the preparation around there of the educational modules.

Another vital downside to utilizing ICT as a part of schools is the feature that PCs are costly. As indicated by the IT learning exchanger (2001), in many schools ICT will be the single biggest educational programs spending plan cost. This may be seen as something to be thankful for however then again there will be minimal expenditures left for the acquisition of other inclining assets.

There is proof from examination that ICT can assist students with learning and educators to show all the more viably. However there is not a basic message in such confirmation that ICT will have any kind of effect essentially by being utilized. Discoveries recommended that in spite of the fact that ICT can enhance realizing there are various issues that should be considered if such innovation is going to have any kind of effect. Some alert is along these lines called for at this board level of where and how ICT may have an effect. There are two fundamental issues. In the first place is the unassuming impact of ICT contrasted and other looked into intercessions, second is the practically irrelevant impact of the procurement and

utilization of ICT at a general level. There is a need to quantify how beneficial this new development in learning as helped so far on the scholastic execution of students.

### 1.2.1 Aim of the Study

The purpose of this research is; to find the perceptions of students using ICT as an educational tool in private secondary schools, and can be listed as follows:

- To reveal the perceptions of students' of regarding the use of ICT tools in the classroom settings.
- To reveal the advantages and disadvantages of the integration of ICT tools in the curriculum.
- To reveal the students' perceptions on overall effect of the use of ICT tools in their learning.
- To suggest alternative ways in using ICT tools in classroom for students.

In order to achieve these, secondary level students' perceptions in using educational ICT tools are going to be analyzed. The data gathered from this study will contribute to the improvement of the secondary schools for betterment. The study aims to address the following questions:

- How educational ICT tools affect the perceptions of students in private secondary schools?
- What are the advantages and disadvantages of educational ICT tools in private secondary schools?
- What is role of school administration in integrating educational ICT tools in the curriculum?
- What is the role of the teachers in making the effective use of educational ICT tools in class?

- Are ICT tools effective enough as a teaching tool?
- Do ICT tools encourage collaborative learning in class?
- Do the use of ICT tools increase students' higher order thinking skills?

The purpose of this study is to perceive the perceptions of the students' on the use of educational ICT tools in private secondary school Doğa College Famagusta, North Cyprus. In Famagusta there is only one private secondary and high school and also considering the time constraint the researcher decided to make an in depth research with this college in Famagusta. As a research methodology, case study approach is going to be used and research instrument questionnaire and semi-structured interviews will be administered among students.

The data collection instruments used in this research are questionnaire (see Appendix B) and semi-structured interviews (see appendix C). 63 questionnaires will be administered to the all students Level 8 (Orta III) for this research and 8 students[1] on voluntary basis will be interviewed.

### 1.2.2 Significance of the Study

The 21st century system of education got the use of many educational ICT tools like smart phones, iPad, laptop computers, which cannot be found in a typical secondary school. Governments of countries are investing so heavily to put in place educational ICT tools in schools, so as private-owners of school are trying hard to make available the educational ICT tools in their schools (The North Cyprus secondary school) is not left out of this new development. Therefore, in this research the perceptions of students' on the use of educational ICT tools in a private secondary school Doğa College in Famagusta, Cyprus will be examined in depth. Moreover, the result from

this research will serve as a watch-dog for private-school owners to see the loop-holes in the effectiveness of the use of educational ICT tools in their schools.

### 1.2.3 Assumptions

It was assumed by the researcher that:

- The responses from the questionnaire responses will reflect the students' perceptions.
- The participants are assumed to be straight forward in answering questionnaire and semi-structured interview.
- The semi-structured interviews are assumed to reflect the perceptions of the students.

### 1.2.4 Limitations

To apply it only to private schools in Famagusta due to time constraint. Not all students might be interested to participate. Students might not answer all the questions.

### 1.2.5 Definition of Terms

ICT: ICT full meaning (information and communication technology - or technologies) is an umbrella terms that includes any communications devices or applications, encompassing: radios, televisions, cellular phones, computers and networks hardware and software, satellites systems and so on, as well as the various services and applications associated with them, such as video-conferencing and distance learning.

Technology: is the collection of techniques, methods or processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation.

Resources:as sources of supply, support, or aid, especially one that can be read drawn upon when needed.

Educational Technology: (Educational) (technology) is a two concept joined together it is the use of technology to improve education. It is as systematic, iterative process for designing instructions or trainings used to improve performances.

# Chapter 2

# LITERATURE REVIEW

In this chapter the importance of information and communication technology, benefits and disadvantages and use of information communication technology is presented.

## 2.1 Information and Communication Technology Concept

As indicated by (Daniels, 2002) ICT (Information Communication Technology) have ended up inside of a brief timeframe, one of the essential building squares of present day society. Numerous nations now respect understanding ICT and mastering the fundamental abilities and ideas of ICT as a major aspect of the center of trainings, close by perusing, composing and numeracy. On the other hand, there gives off an impression of being a misguided judgment prompting a troublesome of bringing out one adequate meaning of ICT, Thus ICT by and large allude to PC and figuring related exercises'. This is luckily not the situations, in spite of the fact that PC and their application assume a huge part in cutting edge data administrations, different advances and/or frameworks additionally involve the wonder that is ordinarily viewed as ICT. (Levers-Duffy et al., 2005), report that a few 'instructors may take a smaller view' and are able to 'bind instructive innovation (ICT) principally to PC, PC fringe and related programming utilized for showing and learning'.

(Pelgruma and Law, 2003) state that close to the end of the 1980, the expression "PC" was supplanted by "IT" (data. innovation) meaning a movement of center from

figuring innovation to ability to store and recover data. This was trailed by the presentation of the expression "ICT" (data and correspondence innovation) around 1992, when email began to wind up accessible to the overall population (Pelgrum, W.J., Law, N., 2003). As per a United Nations report (1999) ICT spread Internet administration procurement, information transfer hardware and administrations, data innovation gear and administrations, media and TV, libraries and documentation focuses, business data suppliers, system based data administrations, and other related data and correspondence exercises.

As indicated by (UNESCO, 2002) data and correspondence innovation (computer information technology) may be viewed as the blend of 'data innovation' with other related innovation, particularly correspondence innovation. The different sorts of ICT items accessible and having significance to instruction, for example, video chatting, email, sound conferencing, TV lessons, radio telecasts, intuitive radio guiding, intelligent voice reaction framework, sound tapes and CD ROM and so forth have been utilized as a part of training for diverse reason (Sharmaz, 2003; Sanyal, 2001; Bhattacharya and Sharma, 2007).

(Kumar, in 2008) attempted to characterize Information and Communication Technology (ICT) as an umbrella term that applies to a scope of computerized specialized gadgets and applications, for example, 'advanced TV, radio, web, system equipment and programming, video conferencing, and separation learning' (p.1). Furthermore, (Kumar, 2008) also characterizes ICT as the computerized preparing and usage of data by the utilization of electronic PC. It involves the capacity, recovery, change and transmission of data.

A branch of designing managing the utilization of PC and information transfers gear to store, recover, transmit and control information. (Daintith, John, ed., 2009). Every definition shares a comparable idea that the data must be created and shared. They additionally affirm that, such data must be computerized or electronic. The definitions for the most part don't limit ICT and IT to just PC, they say information transfers gear (versatile phones, printers, scanners and so on) too.

There isn't much contrast in the definitions above. In any case, Margaret Rouse definition goes further to disclose ICT as applying to programming, and not just equipment as is by all accounts the case in alternate definitions. This distinction isn't so self-evident, as one can contend that, all together for the gear specified in alternate definitions to fill their need, programming (or a motor) is expected to run them.

The 1990, was the decade of PC interchanges and data access especially with the prevalence and availability of web based administration, for example, electronic mail and the World Web Wide (WWW). In the meantime the CD-ROM turned into the standard for appropriating bundled programming (supplementing the floppy plate).

Accordingly, teachers turned out to be more centered around the utilization of the innovation to enhance student learning as a method of reasoning for project. Any talk about the utilization of PC framework in schools is based upon a comprehension of the connection between schools, learnings and PC innovation. At the point when the potentials utilization of PC in schools was initially mooted, the dominating origination was that students would be "taught" by PC (Mevarech and Light, 1992). As it was viewed the PC would 'assume control over' the instructor's occupation similarly as robot PC may assume control overs a welder's employment. (Collis,

1989) alludes to this as 'a fairly terrible picture' where 'a little kid sits alone with a PC'. In any case, the utilization of data and correspondence innovations in the educative procedure has been isolated into two general arrange: ICT for Education and ICT in Educations. ICT for instruction alludes to the advancement of data and interchanges innovation particularly to teach/learning purposes, while the ICT in education includes the reception of general segments of: information and correspondence advances in the showing learnings procedure.

## 2.2 Benefits of ICT

### 2.2.1 Development of Practical Skills

One imperative element is that why students' achievement enhances when utilizing ICT is on account of they invest more energy at or rehearsing the abilities being examined and tried. Numerous understudies appreciate utilizing PC and one advantage of PC may likewise be the blend of such inspiration and the expanded practice at specific assignments. PC can in this manner help by expanding the measure of time students' spend on specific exercises, by expanding students' inspiration and engagement while doing these exercises and giving practice at a proper level.

### 2.2.2 Beneficiary to the Policy Makers

In approach making the improvement of students ICT abilities has been key and a methods for accomplishing the data/learning society, the substance of the fancied ICT aptitudes has been self-evident; it has been characterized diversely taking into account the perspective and on the normal needs; besides, the ICT abilities are unpredictable and time-related, and it is clear that the substance developing. Different terms have been utilized: PC aptitudes were utilized as a part of the 1980-1990 when a PC was the fundamental advancement, and it was viewed as essential to figure out

how to utilize it. Later on, data innovation abilities were utilized to cover likewise the first Internet-related aptitudes, and it was normal to incorporate showing data innovation with other subject.

Fundamental data innovation abilities were additionally anticipated that would be gained in school. In any case, these essential abilities were not characterized. It was likewise requested that data innovation was not to be taught as a different subject but rather it ought to frame a coordinated element with different subjects. Data and relational abilities have further broadened the idea towards the capacity to utilize the expanded number of distinctive correspondence applications in the web; regularly data administration aptitudes are incorporated into the definition. Presently it is regular to talk about advanced skills; these incorporate the capacity to utilize the wide assortment of innovation related apparatuses and applications. Some preparatory definitions for learning aptitudes are discovered as of now in Andersons and Plomp's drafts arrangement for the destinations examination project (as referred to in Law et al., 2002); they characterized the skills and capacities to oversee information and to manage data in the accompanying way: recover and sort out information; take care of complex issues; team up, trade learning, work with specialists; convey, give powerful presentations; develop learning items; coordinate and basically assess information; and distinguish and assess auxiliary impacts.

### 2.2.3 Digital Competences

The appropriation of essential aptitudes and capability to utilize ICT should be supplemented with the mastering of ICT. In the OECD meaning, of the key capabilities for an effective life and a well-working society, a competency was characterized as comprising of aptitudes and learning, as well as including the

capacity to meets complex request in a specific connection (The OECD Program Definition and Selection of Competencies., 2005). In the OECD structure, the abilities are characterized in three general classes) 1) use instruments intuitively, 2) interface in heterogeneous gatherings, and 3) act independently. Each of these key capabilities suggests the assembly of information, intellectual and down to earth skills, and social and behavioral segments including mentalities, feelings, qualities, and inspirations.

The main key fitness, use instruments intelligently, is particularly critical when considering ICT in school. This skill implies the capacity to utilize innovation intuitively, which requires a consciousness of news courses in which an individual can utilize advancements in his/her everyday life. An individual ought to be able to make utilization of the capability of ICT to exchange the method for working, to get data, and to communicate with others. An initial step is to consolidate innovations into normal practices to create commonality with the innovation. To transform this into a commonsense definition for school, advanced fitness ought to comprise of specialized ICT skills, additionally of different capacities, for example, information creation abilities with innovation, and aptitudes for comprehension, delivering, and assessing computerized substance, and in addition aptitudes for utilizing ICT for learning. For students, it is vital to take an interest in differing inventive procedures to pick up practitioner's information, which advances office and experience of control students are not just purchaser, they are like makers, constructors. The undertaking and interest for the instructive framework is to guarantee that a student has the essential computerized ability when he/she leaves school. In the Nordic ICT study (Pedersen et al., 2006), advanced abilities are characterized as essential social

aptitudes in the Nordic nations, such as perusing and composing, at the same time, as (Erstad, 2006) writes in his article there are different and opposing perspectives about the part and substance of the computerized aptitudes in training. In his book (Erstad, 2006) augments advanced abilities to incorporate computerized proficiency and characterizes it as "aptitudes, information and demeanors in utilizing computerized media ready to ace the difficulties in the learning society" (as referred to in Erstad, 2006).

With this definition he connects the difficulties to the 'learning society', which shows a more dynamic, procedure arranged point of view on society than the terms information, data or organized society. Another case of enlarging the innovation related skills to more extensive capabilities is ISTE (International Society for Technology in Education) instructive innovation norms for students (ISTE, 2007). The primary abilities are innovativeness and development; correspondence and joint effort; exploration and data familiarity; basic considering, critical thinking, and choice making; computerized citizenship, and innovation operations and ideas.

### 2.2.4 Change in Pedagogical Practices

In classrooms some contextual analyses have particularly inspected the effect of utilizing ICT on the progressions as a part of pedagogical practices. ICT abilities were taught in a setting incorporated into the educational modules and as a major aspect of complex skills, for example, data taking care of, coordinated effort and correspondence, and were installed in a credible connection (Kozma, 2003b; Voogt and Pelgrum, 2005). Learning projects got to be student focused; they were longer, additional tedious procedures, and a significant number of the ICT-based developments included multidisciplinary and cooperative activities, for example, task

based learning and autonomous request (Kozma, 2003b; Lowther, Ross, and Morrison, 2003; Ruthven, Hennessy, and Deaney, 2005; Yuen, Fox, and Law, 2004). The extent of credible exercises expanded, and students chipped away at points important to them in view of the association with genuine and the students own encounters (Voogt and Pelgrum, 2005; Yuen et al., 2004). The instructor's part transformed from that of essential wellspring of data to one who makes structure and gives guidance to students, screens theirs advancement, evaluates their achievements, and fills in as a mentor (Condiez et al., 2007; Kozma, 2003a, 2003b; Lowther et al., 2003; Yuen1 et al., 2004).

Separately the students' part transformed, they were occupied with general and/or on-line request, and in profitable learning (Yuen et al., 2004), which added to their feeling of capacity and organization (Ruthven et al., 2005), and aggregate subjective obligation (Lakkala et al., 2007). The way of the educator's part has the most grounded effect on the students' part, and subsequently for the learnings results (Yuen et al., 2004). Further5, the learning results were reliant on whether instructors and students occupied with working with thoughts and not with assignments and exercises, in light of the thoughts of (Scardamalia, 2002), on supporting the intelligent way to deal with the learnings undertaking and on building up an engaging learnings society (Law, Lee, and Chow, 2002).

### 2.2.5 Information Searching and Processing

There additionally emerged a need to backing students' data seeking and handling aptitudes (Ruthven et al., 2005). ICT was utilized for the currents substance or to offer the current educational programs contents differently, nots in changings the substance (Kozma, 2003a; Voogts and Pelgrum, 2005; Zhao and Franks, 2003). The

utilization of the Internet gave a much more extensive scope of themes and it offered access to true sources and materials, which built up a feeling of contacts between the classrooms and the more extensive world (Ruthven et al., 2005). The PC was all the more much of the time utilized as a learning apparatus as opposed to convey direction (Lowther et al. 2003; Ruthven et al. 2005). The working air turned out to be sans more than in a customary classrooms without ICT, and the relationships in the middle of educator and student was more open and free, on the grounds that instructors had less guidelines (Schonfield, 1995); students are inspired to work with PC in light of the fact that the exercises were more testing than standard assignments, and the general learnings environments was more important (Goldman, Mayfield-Stewart, Bateman, Pellegrino, and the Cognition and Technology Group, 1998; Lowther et al., 2003).

## 2.3 Disadvantages of ICT

### 2.3.1 ICT is Expensive to Maintain

Practical ICT compromise in schools depends on upon the available sufficient physical and mechanical structure (UNESCO, 2004). A couple of researchers, for instance, (Williams et al., 2000) and (Pelgrum, 2001) had perceived that there is lacking PC in the schools which is a key issue of organizing ICT in direction. As showed by (Baskin and Williams, 2006) physical establishment fuses learning locales, for instance, classroom, PC labs, conferred ICT resource rooms and libraries; basically, most of the space and furniture required for an ICT overhauled school environment. Mechanical establishment fuses PC, broadband web access and the diverse other creative resources used as a piece of preparing (Baskin and Williams, 2006). Along these lines, schools need to give at any rate fundamental physical and mechanical base in case they have to fuse ICT satisfactorily into their indicating

methodology by their instructors. By the day's end, crucial preventions and engaging impacts of development use in the schools is structure: PC and diverse headways, PC labs and web access among others.

### 2.3.2 Misuse

In the event that ICT devices are not appropriately checked by the educator (teacher) students may abuse it for preposterous doings, such as watching uneducated movies, visiting on face-book. It is in this way in light of a legitimate concern for the educator to set guidelines for the utilization of ICT instruments before appropriately incorporating it in his lesson or before letting students grab hold of it. Strictness must be solid so youngsters don't utilize innovation for purposes other than instruction and learning. The educator must have control at all times on the route of students amid school hours. It can make them comprehend that all1 sites are not solid or adequate.

### 2.3.3 Preparation Time

It requires a considerable measure of readiness investment to successfully utilize the Net for training. Notwithstanding outlining Internet based lesson arranges, we may need to surf the Internet to download lesson arranges and adjust them to bolster the educational programs goals or visit destinations to choose those fitting for classes. We must choose between limited options however plan so as to offer your students some assistance with becoming mindful client of the Internet.

## 2.4 Use of ICT at Schools

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Other logical examinations demonstrate that schools with concentrated ICT use drove a couple bunch composed philosophies for handling the issues of using ICT especially changes of school affiliation. For example, in couple of schools, there was a development from different level of structures and upgrades in staff change through buildings (Venetzky and Davis, 2001). The usage of ICT propels teachers pedagogical composed exertion and limits as a stimulus of advancement ensuing to various informational settings in which ICT is used wound up cross-disciplinary; they incorporate far reaching wanders and process-oriented works out, and require the extraordinary capacity of a couple of educators. Teachers get the opportunity to be partners instead of self-ruling masters. Ones of the crucial conditions over the successful schools with ICT was instructors' near and dear obligation and a grateful, aggregate gathering with the sponsorship of the principals (Granger et al., 2002; Owston, 2003; Vosniadou and Ioannides, 2004).

ICT in schools has taken a few structures amid the years it has been utilized. Innovation creations did not show up out of blues into schools; all innovation is a

continuum of the past investigations and encounters of innovation, fortified by financial and social components (Basalla, 1987). PCs were utilized somewhere else as a part of society and these practices were likewise brought into instructive applications.

It is striking the amount of buildup new mechanical developments dependably excite. The appropriation of ICT was respected a critical notwithstanding for national economies, additionally different applications have been viewed as the instruments to significantly enhance learning. The most recent buildup was around learning items, as e.g. (Jaakkola and Nurmia in press) and (Parrisha, 2004) depict. (Fullan, 2001) depicts change as a three-stage process: initially, there is start, which drives the procedure, and incorporates the choice to start or receive the inventive pedagogical practices.

The current pedagogical perspective starts then encircled the structures and the demonstrations of using these applications. Consistently, a wide variety of uses have been made however only few of them have stayed in broad scales use which is to a great degree normal for all advancement related improvements (Rogers, 1995). According to (Reiser, 2001), two essential tracks developed in informational advancement toward the beginning of major ICT uses in guideline, from the 1980 on: PC supported adjusting (in like manner insinuated as PC aided learning and PC based get ready) and the use of PC as a mechanical assembly. The past included different sorts of enlightening programming, which still has a strong representation in learning things. For example, the Nordic countries collaborated in making, delineating and conveying educational programming in the midst of the years 1986-1995. (Today

collaborations around learning thing is maintained, e.g. at Europeans levels by the European Commission, in such projects as (Celebrate, 2006 and Calibrate, 2008.) Computers as gadgets were the other basic track, and the most conspicuous applications were words taking care of. Some informative gadgets were displayed, and what's more the programming tongue Logo. This track, PC as-a gadget, is still alive, and the upgraded convenience of distinctive programming has brought the same electronic applications into preparing as elsewhere in the overall population.

The second stage is execution, the method of putting the improvement into practices. Third, continuation is the stages in which the imaginative practice develops itself as a noteworthy part of the typical practices within the classrooms or the schools. In the beginning ICT into school, the system has consistently been compelled; it has not considered, for occasion, these three stages. It was a general craving that PC would understand a change in solitude, especially in the midst of the first years of the genuine excitement for using ICT as a piece of guideline. A couple of theoretical and exploratory authorities have underscored, regardless, that ICT improves nothing accordingly with the exception of it is the pedagogical technique and the course in which it is used that have the impact (Dextero, Anderson, and Becker, 1999; Lehtinen et al., 2001; Salomon, 2002; Venetzky and Davis, 2001; Windschit and Sah, 2002). The game plan talk has been on a general level, and the sensible utilization of ICT has been established on a few particular perspectives, which have been seen as key segments, for instance, change of specific resources or (particular) instructor get ready.

Exactly when standing out the ICT execution from (Mäkinen's, 2006:48) once-over of crucial lessons and norms of advancement, it is clear that there has been a nonattendance of a "significant understanding of the structures, systems and social orders of the informational establishment being alluded to, and of the greater monetary and political open air theater in which it exists" so that the change should and could be proficient intentionally. This has comes about for all intents and purposes: for occasion, (Fullan, 2001) makes that the nonattendance out of enthusiasm for learning sharing and creation makes the attempts to share and use new data enormously troublesome. ICT use is consistently, and especially on a boundless scale, disconnected from the "customary" school change works out, while the system has been chiefly development driven.

This supplement on progression is sensible toward the start of the execution approach: school bosses did not have the sort of power that was required for acknowledging PC and structure into schools. The arrangement was as a rule to set up excellent progression master get-together to facilitate the execution process. In routine schools, ICT use has from time to time been a top-down system, in which schools or instructors can't control or influence the occasions in any essential way. The weight to utilize ICT in showing practice has been distinctly delineated as starting from outside the schools, and similarly due to the usage sharpens (Pouts-Lajus, 2004).

This is disregarding the investigation revelations that for convincing determination and productive usage of ICT a widely inclusive system is required, and that in the change set up the best course is too have an inside methodology, with school as the

point of convergence of advancement and teachers as an inborn bit of the change process. (Harris, 2002b) underscored the centrality of appearing and learning in the journey for oversaw school change. In the UK, the results showed that schools in which ICT was successfully completed, had a well altogether considered approach to manage attracting students as learners (Office for Standards in Education ICT in schools, 2004). At the point when real issues of instructional technique and learning were perceived was the spot of ICT recognized and set up. In Northern Cyprus, similar attempts like the UK government have been grasped by Turkish Cypriot government however nonappearance of financing and cognizance of the benefits of ICT in direction are keeping the joining of advancement into all schools.

In like manner, (Erstad's, 2007) results from Norwegian schools} show that schools working effectively in particular regions, with- a definitive structure, versatile schedules and focus on learning, succeeded best in the educational use of ICT. Correspondingly, (Mäkinen, 2006) focuses- out that in the change prepare, the significance of pondering the methods as well as the closures in instructive organizations learning results.

Numerous exact studies look at the part of educators in embracing ICT in school. Educators are crucial for an effective change process; they are the specialists of progress and the fundamental impetus for change, as (Dexter et al., 1999) underline. Educators should be focused on the change process, which will include them in analyzing and changing their own practice (Harris, 2002 see additionally Newman et. al., 2000).

Instructors' coordinated effort is critical (Erstad, 2007), as it gives common backing, and also backing to expound basic understandings and works on concerning how and when to utilize PC, and to set shared objectives for ICT utilization (Granger et al., 2002; Vosniadou and Ioannides, 2004). The instructor group ought to tune in choosing and planning the down to earth usage of ICT, e.g. where the PC are situated, for what purposes students are permitted to utilize them, or how the ICT-related pedagogical and specialized backing is sorted out. In a fruitful ICT usage, the primary and the school board are likewise key on-screen characters (Erstad, 2007; Nachmias, Mioduser, Cohen, Tubin, and Forkosh-Baruch, 2004, Nachmias et al. 2007) likewise stress the ICT facilitator's part. Issues of ICT usage are liable to develop, if the PC are situated in PC labs, if the educators have low skill in ICT, if there is an absence of instructor collaboration, and[1] if the ICT facilitator does not have unmistakably determined obligations and status (Vosniadou and Ioannides, 2004). We can with great reasons ask whether ICT execution is a change by any means, and, further, what is change, and what is advancement? Diverse ideal models clarify the school change (as far as ICT) in an unexpected way, at times even conflictingly.

(Mäkinen , 2006) calls these clarifications "sociological convictions", affecting how we see instructive organizations, the relationship in the middle of them and society, and the part of educators communicating with these social structures. (Rasmussen and Ludvigsen, 2007) think about Larry Cuban's and Yrjö Engeström's ways to deal with clarify the instructive change procedure joined with ICT: they specify Larry Cuban as a scientist who researches one marvel (ICT) over others, focused. Yrjö Engeström's form of the socio-social action hypothesis speaks to for the creators a

multi-leveled approach, which they see as a superior instrument to break down the adjustment as far as ICT. Both these two can be utilized; Cuban's methodology has been the real worldview, both in exploration and in reasonable ICT usage. This is reasonable as ICT has been a noteworthy (new) consider society, at all levels and in all zones. In training, this implied, sadly, the accentuation of innovation over instructional method. Since ICT is regular and acknowledged, a more extensive methodology ought to be utilized, considering the wonders from a few viewpoints and as far as different elements with ICT as one and only of the powerful components.

(Cuban et al., 2001) propose two distinct clarifications for the changing instructive practices connected with ICT: the "moderate unrest" (which appears to speak to advance), in which little changes aggregate after some time and make a moderate movement change. This clarification is secured in the idea of slack time between the creation of another innovation, the appropriation of developments and the moderate spread of its ethics through the overall public. As indicated by this clarification, the reception of innovation is an unavoidable result which will come to fruition in any case. The second clarification tries to represent the managing of educator focused practices. The utilization of innovation has proceeded with routine instructional practices due to the relevant components as opposed to individual variables. As indicated by this clarification, history and connection are crucial components, implanted and complex.

To acquire change through innovation, we ought to focus on significant changes, for example, how schools are sorted out, how time is distributed and how educators are prepared.

# Chapter 3

# RESEARCH METHODOLOGY

## 3.1 Presentation

This chapter focuses on the philosophical stance of the researcher, research design, data collection instrument, data collection period and data analysis.

## 3.2 The Philosophical Stance of the Researcher

It is believed that ICT equipment's have brought some drastic change in the educational sectors in nations. Turkish Republic of Northern Cyprus is not left out of this wing of change. Researchers (Trucano 2005, Cox and Marshall, 2007, Empirica, 2006, Kirkpatrick and Cuban, 1998) believe that ICT has helped many nations in advancing their educational goal. For example one the major advancements that we can refer to is that, through learning by doing students in ICT classes are encouraged to collaborate and work with each other. Students are no longer spoon fed by their teachers. Teachers act like a guider in class and scaffolds learning.

With regard to this belief stated above, this research falls into positivist paradigm because positivism is a position that holds the goal of knowledge to simply describe the phenomena that we experience. The major aim of science is simply to stick to what we can observe and measure. As indicated by positivist, information of anything past that is incomprehensible. In a positivist perspective of the world, science was seen as the best approach to achieve truth, to comprehend the world alright so we may foresee and control it. The world and the universe were

deterministic in a way which they are worked by laws of circumstances and end results that we could perceive in the event that we connected the one of a kind methodology of the logical strategy. Science was generally seen as a mechanical issue. We utilize deductive thinking to hypothesize speculations that we can test. In light of the consequences of our studies, we may discover that our hypothesis doesn't fit the actualities well in this way we have to amend our hypothesis keeping in mind the end goal to have the capacity to better foresee the truth. The positivist had confidence in experimentation which is the way to go that perception and estimation was the heart of the exploratory try. The key methodology of the exploratory system is the analysis, the endeavor to perceive regular laws through direct control and perception.

## 3.3 Research Methods

In this research mixed approach' both qualitative and quantitative approaches are used. In the following part briefly qualitative and quantitative approaches will be presented.

### 3.3.1 Quantitative Research

Quantitative examination is established in numerical methodologies. The accentuation is on objectivity and the utilization of measurements or information assembled through surveys, polls or reviews. With quantitative exploration systems, numerical information are assembled and afterward summed up crosswise over gatherings of individuals to clarify patterns or wonders. These strategies start from inquiries, for example, "what number of?" "how frequently?" "when?" and "where?". With the utilization of quantitative examination techniques, individual predisposition can be kept away from in concentrating on exploration issues in the sociologies. It's less demanding with these apparatuses to sum up the outcomes, and in addition to

concentrate extensively. These exploration routines deliver hard numbers that can be transformed into insights.

Money related examiners frequently utilize quantitative exploration to accumulate data about the execution of stocks or securities. Economic analyzed s behavior reviews to find out about the demographics of their clients, including age, sex, instruction and financial status. Since quantitative examination systems create principally numerical portrayals, they don't yield rich insights about conduct, demeanors or feelings. Frequently, in light of the fact that the exploration is did in sterile or counterfeit situations, for example, labs, the outcomes don't precisely reflect true circumstances. The information for a quantitative study are typically accumulated in a genuinely inflexible manner and hence don't motivate disclosure. Auxiliary inclination can worm in when inquiries utilized as a part of exploration are standard or have a tendency to mirror the encounters or perspectives of specialists rather than those of members. At the point when individuals should be seen in their day by day schedules, for instance, quantitative examination is not the most ideal approach to catch those information.

Quantitative methodologies are best when the need is to think about information efficiently, for example, an examination between gatherings or nations. Quantitative research likewise fits taking a gander at the general elements of a populace. Before undertaking a study, analyze need to consider their particular objectives. In the event that they're principally intrigued by summing up the discoveries to the bigger populace, for instance, quantitative strategies are best. Be that as it may, if there is more grounded enthusiasm for profound implications than in numbers, quantitative

methodologies are not best. Subjective techniques, which depict and utilize rich point of interest or perception, are a decent different option for quantitative strategies for a few studies. At the point when analysts are occupied with deciding the impacts of a hand-washing project on a gathering of evaluation school youngsters, quantitative routines are perfect. This is on account of quantitative exploration tests hypothesis and circumstances and end results connections. Subjective techniques create hypothesis, as opposed to quantitative methodologies, through the utilization of top to bottom meetings or perception. They are not scientific in nature, but rather account.

### 3.3.2 Qualitative Research

Subjective examination is a noteworthy field of scholastic exploration study, and the premise for recompensing postulations and papers (i.e., the making of a Doctorate) in the US and around the world. The point of a subjective examination may change with the disciplinary foundation, for example, a therapist trying to assemble an inside and out comprehension of human conduct and the reasons that oversee such conduct. The subjective technique researches the why and how of choice making, not exactly what, where, when, or "who", and has a solid premise in the field of humanism to comprehend government and social projects, and is prominent among political science, social work, and custom curriculum and instruction majors. Subjective exploration ought not be mistaken for quantitative examination methods—the last depend on an investigation of an adequately substantial arbitrary example of a populace of enthusiasm utilizing traditional factual techniques.

In the traditional perspective by analysts, subjective routines produce data just on the specific cases concentrated on (e.g., ethnographies paid for by legislative assets

which may include examination groups), and any more broad conclusions are considered suggestions (educated assertions. Quantitative techniques can then be utilized to look for exact backing for such research theories. Conversely, a subjective analyst holds that understanding originates from investigating the totality of the circumstance (e.g., phenomenology, typical interactionism), frequently has admittance to expansive reams of "hard information", and starts with recommendations continuing in an experimental and exact route all through the examination process (e.g., Bogdan and Taylor, 1990).

A well-known technique for subjective examination is the contextual investigation (e.g., Yin, 1989) which looks at inside and out "purposive examples" to better comprehend a marvel (e.g., backings to families; Racino, 1999); henceforth, smaller yet engaged specimens are more frequently utilized than substantial examples which might likewise be led by the same or related scientists or exploration focuses (e.g., Braddock, et al., 1995).

Subjective exploration is intended to uncover an intended interest group's scope of conduct and the observations that drive it with reference to particular points or issues. It utilizes as a part of profundity investigations of small groups of individuals to guide and backing the development of theories. The consequences of subjective exploration are distinct as opposed to prescient. Subjective exploration strategies began in the social and behavioral sciences: human science, humanities and brain research. Today, subjective systems in the field of showcasing examination incorporate into profundity interviews with people, group exchanges (from two to ten members is average); journal and diary works out; and in-setting perceptions.

Sessions may be led in individual, by phone, by means of videoconferencing and by means of the Internet.

Several unique aspects of qualitative research contribute to rich, insightful results:

- Synergy among respondents, as they expand on one another's remarks and thoughts.

- The dynamic nature of the meeting or group exchange process, which connects with respondents more effectively than is conceivable in more organized study.

- The chance to test ("Help me comprehend why you feel that way") empowering the analyst to reach past beginning reactions and reasons.

- The chance to watch, record and translate non-verbal correspondence (i.e., non-verbal communication, voice inflection) as a major aspect of a respondent's criticism, which is important amid meetings or dialogs, and amid investigation.

- The chance to draw in respondents in "play, for example, projective strategies and activities, beating the reluctance that can repress unconstrained responses and comments.

## 3.4 Research Design

An exploration outline is the "blue print" of the study. The outline of a study characterizes the study sort (elucidating, correlational, semi-exploratory, trial, audit, meta-investigative) and sub-sort (e.g., illustrative longitudinal contextual investigation), examination question, speculations, autonomous and subordinate

variables, test plan, and, if relevant, information accumulation techniques and a measurable examination arrangement. Exploration outline is the system that has been made to look for answers to research questions. To a layman" "an examination" is only a composed and methodical method for discovering answers to addresses. So by what means would we be able to get answers to required inquiries? To Business Dictionary "research technique" essentially implies the procedure used to gather data and information with the end goal of settling on business choices. The philosophy may incorporate out of numerous production examination, meetings, studies, contextual analysis and other exploration systems, and could incorporate both present and recorded data.

### 3.4.1 Case Study

The contextual analysis is one of the few methods for doing sociology research. Different ways incorporate trials, studies, histories, and the examination of archival information (as in financial studies). Every study has curious preferences and burdens, contingent on three conditions as takes after:

- The kind of exploration inquiry
- The control an agent has over real behavioral occasions
- The concentrate on contemporary instead of recorded marvels.

By and large, contextual analyses are the favored procedure when1 «how» or «why» inquiries are being postured, when the agent has little control over occasions, and when the attention is on a contemporary wonder inside of some genuine connection. Such «explanatory» contextual analyses likewise can be supplemented by two different sorts "exploratory" and "expressive" contextual investigations. Despite the kind of contextual analysis, agents must practice awesome consideration in planning and doing contextual investigations to beat the conventional reactions of the

technique. As an exploration try, the contextual analysis contributes particularly as far as anyone is concerned of individual, hierarchical, social, and political wonders.

Not surprisingly, the contextual investigation has been a typical technique in brain research, humanism, political science, business, social work, and arranging. Contextual investigations are even found in financial matters, in which the structure of1 a given industry, or the economy of a city or a district, may be examined by utilizing a contextual analysis plan. In these circumstances, the unmistakable requirement for contextual analyses emerges out of the craving to comprehend complex social marvels. To whole up, the contextual analysis permits an examination to hold the all-encompassing and significant qualities of genuine occasions, for example, singular life cycles, authoritative and administrative procedures, neighborhood change, global relations, and the development of commercial enterprises. In this examination additionally the fundamental intention is to get an all-encompassing view of the students on the utilization of ICT as an educational apparatus through exploring them poll and semi-structured interviews.

This exploration make utilization of both subjective (semi-organized meetings) and quantitative research systems in information gathering. The survey will be steered with one third of the level 8 (Orta III) students and afterward connected to the entire levels. Once the poll is controlled, then arbitrarily semi-organized inquiries will be requested face to face to the participants.

## 3.5 Data Collection Instrument

### 3.5.1 Questionnaire

To an agriculturist, developing instruments could be cutlass, scraper, and different instruments for development, so additionally instruments is required in any given occupation in completing everyday exercises. Information can be gathered through different means and instrument (questionnaire, group surveys, and interviews).

A questionnaire is an examination instrument comprising of a progression of inquiries and different prompts with the end goal of social event data from respondents. In spite of the fact that they are regularly intended for measurable examination of the reactions, this is not generally the situation. The survey was designed by the Statistical Society of London in 1838. Questionnaires have favorable circumstances over some different sorts of reviews in that they are modest, don't require as much exertion from the examiner as verbal or phone overviews, and regularly have institutionalized answers that make it easy to aggregate information. Questionnaires frequently appear an intelligent and simple alternative as a method for gathering data from individuals.

They are quite hard to plan and on account of the recurrence of their utilization in all connections in the cutting edge world, the reaction rate is almost continually going to be an issue (low) unless you have methods for making individuals complete them and hand them in on the spot (and this obviously restrains your example, to what extent the poll can be and the sorts of inquiries inquired. Analyst need to take master guidance in setting up a questionnaire, guarantee that all the data about the respondents which you need is incorporated and filled in, and guarantee that you

really get them returned. Anticipating that individuals should pay to return postal questionnaires is sheer indiscretion, and drawing up a truly protracted survey will likewise repress reaction rates. Scientist should guarantee that inquiries are clear, and that you have solid methods for gathering and dealing with the information. Setting up a survey that can be perused by an optical imprint perused is a fabulous thought in the event that you wish to gather vast quantities of reactions and break down them measurably as opposed to perusing every questionnaire and entering information physically.

### 3.5.2 Semi-Structured Interviews

Interviews by and large empower up close and personal dialog with human subjects. In the event that you are going to utilize interviews you will need to choose whether you will take notes (diverting), tape the meeting (precise yet tedious) depend on your memory (absurd) or write in their answers (can prompt shut addressing for time's purpose). On the off chance that you choose to meeting you should draw up a meeting calendar of inquiries which can be either shut or open inquiries, or a blend of these. Shut inquiries have a tendency to be utilized for requesting and accepting answers about settled realities, for example, name, numbers, etc.

They don't require hypothesis and they tend to create short replies. With shut inquiries you could even give your interviewees a little choice of conceivable answers from which to pick. On the off chance that you do this you will have the capacity to deal with the information and measure the reactions effortlessly. A semi-organized meeting is relative new in information accumulation as analyst are slope to survey before now, in this manner a semi-organized is a system for examination utilized as a part of the sociologies. While an organized meeting has a thorough

arrangement of inquiries which does not permit one to redirect, a semi-organized meeting is open, permitting new thoughts to be raised amid the meeting as a consequence of what the interviewee says. The questioner in a semi-organized meeting by and large has a structure of topics to be investigated.

In any case, the particular subject or points that the questioner needs to investigate amid the meeting ought to as a rule be pondered well ahead of time (particularly amid meetings for exploration projects). It is by and large valuable for questioners to have a meeting arranged, which is a casual group of subjects and inquiries that the questioner can approach in distinctive courses, for diverse members. Meeting aides help scientists to center a meeting on the current points without compelling them to a specific organization. This opportunity can help questioners to tailor their inquiries to the meeting connection/circumstance, and to the general population they are talking.

Semi-organized meetings are generally utilized as a part of subjective exploration; for instance in family unit examination, for example, couple talks with, this sort of meeting is the most widely recognized. A semi-organized meeting including for instance two mates can bring about "the creation of rich information, including observational information."

The instruments that will be utilized as a part of social occasion required data in this examination work are poll, semi-organized meeting focused at the member in the study. The analyst significantly accumulated his data by drawing out data from articles identified with ICT in schools, diaries of PC instruction, related course readings. Survey will be utilized as a part of getting a handle on the general outline of students' discernments with respect to ICT. At that point, for a top to bottom

information semi-organized meetings will be completed arbitrarily with chose level 8 (Orta III) students from Doğa Koleji Cyprus keeping in mind the end goal to reveal insight to the discoveries.

## 3.6 Population

The sample group for the questionnaire compose of 150 students from the private school Doğa College in Famagusta 2014-15 academic year.

Table 1: Sample Population for Semi-Structured Interviews

| | |
|---|---|
| 8A | 18 |
| 8B | 19 |
| 8C | 16 |
| 8D | 17 |

## 3.7 Data Collection Period

The researcher in order to carry out this research study has written a formal letter (see appendix) to the Ministry of Education in North Cyprus. With the letter a copy of questionnaire and semi-structured interviews were also attached for their examination. After a very short while, the permission to apply the research for level 8 Orta (III) students in Doğa College, Famagusta has been approved by the Ministry. Within 3 months' time (till February) the researcher has to complete the studies at Doğa College.

## 3.8 Data Analysis

Data derived from the questionnaire will be analyzed by using SPSS. SPSS is the latest mathematical computation used in research these days. It simply means Statistical Package for the Social Sciences. SPSS is commonly used in the Social Sciences and in the business world (Field, 2009). The researcher with the guidance

of an expertise will use SPSS program to analysis the data gathered from the questionnaire. Considering the semi-structured interviews, content analysis will be used for the analysis of the data. Researcher according to the research questions will deduce codes and categories the answers of the participants according to the codes derived from the research questions. The method of content analysis enables the researcher to include large amounts of textual information and systematically identify its properties, such as the frequencies of most used keywords by locating the more important structures of its communication content. Such amounts of textual information must be categorized to provide a meaningful reading of content under scrutiny.

Since the 1980, content analysis has become an increasingly important tool in the measurement of success in public relations (notably media relations) programs and the assessment of media profiles. In these circumstances, content analysis is an element of media evaluation or media analysis. In analyses of this type, data from content analysis is usually combined with media data (circulation, readership, number of viewers and listeners, frequency of publication). It has also been used by futurists to identify trends.

The production of coding casings is characteristically identified with an imaginative way to deal with variables that apply an impact over printed content. For example, in political investigation these variables could be political embarrassments, the effect of popular supposition surveys, sudden occasions in outer governmental issues, swelling and so forth. Mimetic Convergence, made by Fátima Carvalho for the near investigation of constituent decrees on allowed to-air TV, is a case of imaginative

explanation of variables in substance analysis. The strategy portrays the development of gathering personalities amid long haul party rivalries on TV, from a dynamic point of view, administered by the rationale of the unforeseen. This strategy intends to catch the unforeseen rationale saw in constituent battles by concentrating on the reiteration and development of subjects managed in gathering telecasts. As per such post-structuralist point of view from which constituent rivalry is broke down, the gathering personalities, 'the genuine' can't talk without interventions in light of the fact that there is not a characteristic focus settling the importance of a gathering structure, it rather relies on upon specially appointed explanations. There is no exact reality outside verbalizations of significance. The truth is a result of force battles that bind together thoughts of social structure as a consequence of unforeseen intercessions.

Hence, groups are not taken as the immaculate articulation of contentions for the representation of hobbies (of distinctive classes, religions, ethnic groups) however endeavors to recompose and re-articulate thoughts of a missing totality around signifiers picking up inspiration.

# Chapter 4

# FINDINGS

In this part, the quantitative and qualitative data analysis will be presented with their interpretations. The table below represents the quantitative research results on the perceptions of students' regarding the use of ICT (Information Communication Technology) tools in private secondary school, Doğa College, Famagusta. All of the secondary level (Class 8) students (63) in total participated in the research. In the questionnaire, the analysis was carried out by using the SPPS program with the help of an expertise and taking the standard deviation of each question. According to the findings of both questionnaire and semi-structured interviews, students demonstrated positive and negative views regarding the use of ICT at private secondary schools. The original copy of the questionnaire and semi-structured interviews can be found in appendices B and C. The findings of the questionnaire results are as follows:

Table 2: Findings of the Questionnaire

| VALUE | ANSWERS |
|---|---|
| 5 | Neutral |
| 4 | Strongly agree |
| 3 | Agree |
| 2 | Disagree |
| 1 | Strongly disagree |

## 4.1 Interpretation of the Findings of the Quantitative Data

According to the questionnaire results for questions from 1 till 5: 44% of the students in the research stated that ICT is an effective tool for teaching and learning and maximizes students' learning in lessons. 46% students said through the use of ICT traditional way of teaching is replaced with non-traditional teaching and also ICT increases students' motivation in lessons. For question 5, 32% of students were neutral in the issues that not all ICT tools are suitable for lessons. However, for this question 27% students agree that it is suitable. As a researcher it can be said that there is not a significant difference between the two values.

According to the result of the questionnaire for question 6, students answers revealed once again equal percentages in strongly agree and neutral 32% (for both) regarding the needs of the students when ICT tools was first introduced to them before they are asked to be used.

According to the result of the questionnaire for question 7, 33% of students were neutral on the issue that ICT on its own is not an effective teaching tool.

According to the result of the questionnaire for question 8, 30% students agreed that use of ICT tools in classes have a lot of advantages rather than disadvantages.

According to the result of the questionnaire for questions 9, 11, 12, 14, 15, 16 students were neutral in the issues concerning the training of the teachers before they use ICT tools in their lessons 40%, use of ICT increases cooperation between them 29%, ICT increases creativity 33%, ICT can cause huge budget for schools 35%,

delivery of the lesson might be boring 31% and students' perceptions may vary in the use of ICT in lessons 38%.

According to the result of the questionnaire for questions 10 and 13, according to the students' replies for Q.10 "students' think that use of ICT makes learning easier in lessons" 27% were neutral and 25% agreed. For Q.13 32% of the students think that use of ICT tools in lessons can be time consuming. Similarly, 30% students were neutral on this issue. On one hand most of the students were supporting the idea of using ICT is time consuming and at the same time the same percentage of students were neutral about it.

According to the result of the questionnaire for question 17, 27% of students are neutral about the fact that online ICT exams are challenging for students. 25% of them strongly agreed that online exams are challenging for them.

According to the result of the questionnaire for question 18, 33% students strongly agreed that schools should provide all sorts of ICT tools for students. 29% of them replied to this question as agreed and neutral.

According to the result of the questionnaire for question 19, 37% students agreed that through the use of ICT students can improve themselves academically.

According to the result of the questionnaire for question 20, 43% of the students replied as neutral that ICT should be among the major subjects of the curriculum at schools.

To sum up, in order to interpret the quantitative data the standard deviation of each question was taken as shown in the table 2 below. Taking into consideration the five likert scale in the questionnaire, the researcher divided 5 into 4, which is the gap between the scale, and got the average 0.8 for each gap. Then on the number line the value of each gap was written such as 1 - 1.8 - 2.6 - 3.4 - 4.2 and 5 and each question was analyzed according to this scale.

Table 3: Descriptive Statistics

| | N | MIN | MAX | M | SD |
|---|---|---|---|---|---|
| VAR00001 | 63 | 2,00 | 5,00 | 3,7143 | 1,00689 |
| VAR00002 | 63 | 1,00 | 5,00 | 3,6984 | 1,37530 |
| VAR00003 | 63 | 1,00 | 5,00 | 3,4762 | 1,20292 |
| VAR00004 | 63 | 1,00 | 5,00 | 3,1746 | 1,39746 |
| VAR00005 | 63 | 1,00 | 5,00 | 3,4127 | 1,31535 |
| VAR00006 | 63 | 1,00 | 5,00 | 3,6349 | 1,31126 |
| VAR00007 | 63 | 1,00 | 5,00 | 3,6032 | 1,27684 |
| VAR00008 | 63 | 1,00 | 5,00 | 3,5238 | 1,16199 |
| VAR00009 | 63 | 1,00 | 5,00 | 3,8730 | 1,14289 |
| VAR00010 | 63 | 1,00 | 5,00 | 3,2857 | 1,40768 |
| VAR00011 | 63 | 1,00 | 5,00 | 3,4444 | 1,34137 |
| VAR00012 | 63 | 1,00 | 5,00 | 3,8095 | 1,09039 |
| VAR00013 | 63 | 1,00 | 5,00 | 2,8889 | 1,68591 |
| VAR00014 | 63 | 1,00 | 5,00 | 3,5079 | 1,30598 |

| | | | | | |
|---|---|---|---|---|---|
| VAR00015 | 63 | 1,00 | 5,00 | 3,2857 | 1,43041 |
| VAR00016 | 63 | 1,00 | 5,00 | 3,8413 | 1,24701 |
| VAR00017 | 63 | 1,00 | 5,00 | 3,3016 | 1,43274 |
| VAR00018 | 63 | 1,00 | 5,00 | 3,7619 | 1,07335 |
| VAR00019 | 63 | 1,00 | 5,00 | 3,4921 | 1,26839 |
| VAR00020 | 63 | 1,00 | 5,00 | 3,5714 | 1,46699 |
| Valid N (listwise) | 63 | | | | |

The overall results show that, 75% of students strongly agreed that ICT is an effectivetool for teaching and learning. They think that ICT replaced traditional way of teaching to contemporary way of teaching however, teachers need to go through in-service training. What is more, students supported the idea that ICT increases cooperation between them and academically improve themselves. Therefore, ICT should be part of curriculum. On the other hand, they also stressed the fact that ICT on its own is not an effective tool and it can cause a huge budget for schools. 25% of students agreed that ICT increases the motivation of the students and can be time consuming. On the contrary, they said that delivery of the lessons only with ICT can be boring and exams can be challenging for them as well.

## 4.2 Findings of the Qualitative Data

For the semi-structured interviews, as a sample group total number of 8 students were chosen randomly from the secondary level (Class 8) on voluntary basis from Doğa College, Famagusta.

### 4.2.1 Codes which derived from the Research Questions in order to interpret the Qualitative Research Results

Table 4: Codes derived from the Research Questions

| CODES | DEFINITIONS |
|---|---|
| Percepts. S's ICT | Perceptions of students on ICT |
| ICT adv. | Advantages of ICT |
| ICT disadv. | Disadvantages of ICT |
| Role of curriculum on ICT | Role of the school integrating the curriculum into ICT |
| Role of teacher on ICT | The role of the teachers in order to increase the effectiveness of the lessons by using ICT tools |
| ICT teach. tool | ICT as an effective teaching tool |
| ICT collaborative learn | ICT encourages collaborative learning |
| ICT higher order thinking | Use of ICT increases higher order thinking skills of students |

### 4.2.2 Abstracted Quotations derived from the Semi-Structured Interviews

Table 5: S1 interview analysis

| Codes | Student Response |
|---|---|
| Que.1 ICT disadv. Percep. ICT | Not much because it is not a really important subject. |
| Que.2 ICT disadv. | No, because they help them in education only. |
| Que.3 Percep. ICT | I don't know because I don't use ICT much in my education. |
| Que.4 ICT adv. | Yes, because these days children like using ICT in education because it's more fun. |
| Que.5 ICT collaborative learn | The international system helps you to contact people in many ways. |

Table 6: S2 interview analysis

| Codes | Student Response |
|---|---|
| Que.1 ICT adv. | Yes, because we learn better and more enjoyable. |
| Que.2 ICT adv. | Yes, because we see lesson about technology. |
| Que.3 ICT disadv. Percep. ICT | No, because it is not related to the subject that I am planning to do. |
| Que.4 ICT adv. | Yes, because it makes the lesson more enjoyable. |
| Que.5 ICT disadv. | No, because I don't know. In my belief it doesn't. |

Table 7: S3 interview analysis

| Codes | Student Response |
|---|---|
| Que.1ICTadv.Role of curriculum on ICT | Yes, because students love technology. Teaching with technology is more effective than traditional teaching. |
| Que.2 ICT adv. Percep. ICT | Yes, I think it is true. ICT increase more interest of students therefore it increases their learning. |
| Que.3 ICT disadv. | No, because it is technology and it limits students learning. At the same time it gives them to play games all the time so it puts a barrier and keeps it at the same learning time. |
| Que.4 ICT adv. Percep. ICT | Yes, because I don't know why it is enjoyable. |
| Que.5 ICT collaborative learn | Yes, because you are in a group with people work together and search the net so students work more cooperatively. |

Table 8: S4 interview analysis

| Codes | Student Response |
|---|---|
| Que.1 ICT adv.<br>Percep. ICT<br>ICT teach tool | Yes, because I think ICT can be a great teaching way to teach something. More easy to carry ipad laptops rather than huge books. |
| Que.2 ICT disadv. | No, it doesn't. There is something different with books. When you read on the screen it kills your eyes but with books you can keep it 24 hrs. |
| Que.3 Percep. ICT<br>ICT higher order thinking | Yes, it is an effective tool. You can present project on slides, voice records and it is effective on academic performance. |
| Que.4 ICT adv.<br>ICT teach tool | I would chose ICT tools because you can use videos, special notes from internet. You can watch a video from you tube if you don't understand something. |
| Que.5 ICT collaborative learn<br>Percep. ICT<br>ICT adv. | Yes, I think especially for little children because colors attract their attention. When I was a little kid I never read books but now kids read books because of computers. I believe it increases cooperation and communication. |

Table 9: S5 interview analysis

| Codes | Student Response |
|---|---|
| Que.1 ICT adv. Percep. ICT | Yes, of course because all people need to understand about ICT because if someone wants to be a business man in the future they need to use computers. Everyday we use computers to search, play and work. |

| | |
|---|---|
| Que.2 ICT adv.<br>Percep. ICT<br>ICT teach tool | Yes, it is better not only in books or teacher telling us, we can use ICT tools normally for example smart boards and it is good for students to use it. |
| Que.3 Perc. ICT<br>ICT adv. | When you study in the university and for example my sister is studying in the university, they give us HW on the computer it is better for you to develop yourself. So when we go to university we need to use computers. |
| Que.4 ICT adv. | Yes, because computer is like "life" to use it. Now all people use it and need to use it. |
| Que.5 ICT collaborative learn | Yes, when we do something in groups on ICT it is better in work because you work together and make a project. |

Table 10: S6 interview analysis

| Codes | Student Response |
|---|---|
| Que. 1 ICT adv.<br>ICT teach tool | Yes, for example we use smart boards in our classes. They are more useful more than white boards. We can also see the pictures of the things we learn. |
| Que.2 Percep. ICT | Neutral, it increases and also not. |
| Que.3 Percep. ICT<br>ICT disadv. | Not much, because for example I don't use computers a lot but I am a good students. |
| Que.4 ICT adv. | Yes, they are enjoyable because watch movies about that subject or play games. |
| Que.5 ICT collaborative learn<br>Percep. ICT | Yes, with computers we can do power point projects and share the work with others. It teaches us responsibility. |

Table 11: S7 interview analysis

| Codes | Student Response |
|---|---|
| Que.1 ICT adv.<br>Role of teacher on ICT | Yes, because there are a lot of topics and learning by doing is more effective. |
| Que.2 ICT adv.<br>ICT teach tool | Yes, because in order to understand if we students apply we learn better. |
| Que.3 ICT disadv.<br>Percep. ICT | No, because it has no relation like in Maths and Turkish. Not in all countries ICT is effective. |
| Que.4 Role of teacher on ICT | Sometimes because teacher takes us to lab and sometimes we do it in class. |
| Que.5 ICT disadv.<br>Percep. ICT | No, because in ICT you have to learn on your own. |

Table 12: S8 interview analysis

| Codes | Student Response |
|---|---|
| Que.1 ICT adv. | Yes, because to learn by seeing something is more effective and stays on your mind. |
| Que.2 ICT adv. | Yes, because if we use normal white boards it would take more time but with the technology it is more time consuming. |
| Que.3 Perc. ICT | Yes, but at the same time it depends on the carrier we are going to choose and if it is not related to ICT of what we are going to study we don't need to use ICT. |
| Que.4 Role of teacher on ICT | Yes, because it depends on the teachers. If teachers are strict he/she will do boring things. If it is enjoyable we do fun things. |
| Que.5 ICT collaborative learn ICT disadv. Percep. ICT | No, because if it is over internet cooperation can be unsuccessful. So, I don't support this. |

## 4.3 Interpretation of the Findings of the Qualitative Data

According to the qualitative data results, all of the 8 participants stated that ICT has got disadvantages in learning and teaching. For instance, (S 1):

> Not much because it is not a really important subject.

(S 2):

> No, because it is not related to the subject that I am planning to do.

16 of them expressed their opinion regarding ICT such as (S 3):

> ICT increase more interest in students and it can be a great teaching way to teach something, attracts attention and useful for future life.

(S 5):

> If someone wants to be a business man in the future they need to use computers. Everyday we use computers to search, play and work.

20 students supported the view that ICT has got advantages like (S 1):

> These days children like using ICT in education because it is more fun.

They also said ICT makes lessons more enjoyable and computer is like ‘life’ to use

for them Livingstone (2012) said that:

> ICT can improve the quality of teaching, learning and management in schools and so help raise standards. That's why ICT is at the heart of the DCSF's commitment to improving learning for all children. (ICT in Schools website, Department for Children, Schools and Families, 2010).

It's our ambition to create a more exciting, rewarding and successful experience for learners of all ages and abilities enabling them to achieve their (S 5). 6 of them believe ICT increases collaboration between students (S 3):

> …. You are in a group with people work together and search the net so students work more cooperatively.

Similarly (S 6) said:

> Yes, with computers we can do power point projects and share the work with others. It teaches us responsibility.

Northfield and Gunstone in (1993) stated that:

> Learning about teaching is a collaborative activity and teacher education is best conducted in small groups and networks with ideas and experiences being shared and discussed.

5 students agreed that ICT is an effective teaching tool. (S 7) said that:

> Yes, because in order to understand if we students apply we learn better.

(S 4): Yes, because I think ICT can be a great teaching way to teach something. More easy to carry ipad, laptops rather than huge books.

3 of them emphasized the role of the teachers in order to increase the effectiveness of the lessons by using ICT tools. (S 8) said:

> Yes, because it depends on the teachers. If teachers are strict he/she will do boring things. If is enjoyable we do fun things.

One of them only stressed the significance of the role of the school integrating the curriculum into ICT and the other only emphasized the use of ICT in order to increase higher order thinking skills of students.

# Chapter 5

# RESULTS AND DISCUSSIONS

In this part, results, discussions and suggestions related to the use of ICT at secondary level private schools from the perceptions of the students' are going to be presented.

Demand for ICT and life-long learning as well as competition among private and public institutions has been the latest issues discussed among the scholars (Collis and van Der Wende 2002; James 2008). This rapid migration into the digital world for the adoption of ICT by higher educational institutions is because of the effect of the educational, social and economic dynamics. Integration of ICT in the functions of any organization is a complex process that needs to be fully conceptualized and defined from the beginning. In this research also, the results showed that according to the perceptions of the private secondary school students the effect of ICT concerning learning and teaching processes is mostly positive however, there certain concerns like not applicable in every lesson or using solely ICT tools for each lesson can be boring and dull for students.

According to the quantitative data results and research question 1, students' perceptions revealed that ICT is an effective tool for teaching and learning. They believe that through the use of ICT traditional way of teaching is replaced with students centered teaching. Information and Communications Technology (ICT) are

a diverse set of technological tools and resources used for creating, storing, managing and communicating information and to support teaching and learning and research activities (Vajargah, Jahani, and Azadmanesh, 2010). For the 1st question in the questionnaire related to this issue and considering research question 2, 46% of the students stated that use of ICT replaced traditional teaching and additionally increases students' motivation. For teachers use of ICT is time consuming in their lessons (research q.4). (Fisser, 2001 and Pelliccione, 2001) emphasized the same issue that: "Both trainers and learners can choose more appropriate applications which are flexible in time, in place, personalized, reusable, adapted to specific domains and more cost-efficient." Results also showed that p.45 (research q.3) ICT increases cooperation between students 40% supported this view) therefore it can be integrated into the curriculum 43%. However, students perceptions also emphasized the issue that ICT on its own is not an effective teaching tool for teachers (research q.5) and for students lessons can be dull because of the use of single method of teaching.

Similarly to the quantitative research results, qualitative data shows that ICT increases interest in students and it is a great teaching way for teachers. Owing to students' perceptions ICT can be a great teaching way to teach something.

S5 said:

> If someone wants to be a business man in the future they need to be able to use computers.

S1 stated that:

> ICT makes lessons more enjoyable and computer is like life.

According to (Woodrow, 1992) to hold a positive attitude towards ICT is widely recognized as a necessary condition for their effective implementation. Furthermore, students' responses from the semi-structured interviews emphasized that ICT increases collaboration between them. S6 said:

> You are in a group with people work together and search the net so we work more cooperatively.

Similarly S 7 expressed:

> If we students apply together we learn better.

On the other hand according to the perception of some of the students, ICT is not an important subject, it is not related to the job that they are planning to do in the future, and there is something different with books. When you read books, it is much better than using ICT because books are always there, not in all courses ICT is effective p.50 For instance, students might feel lazy to attend the class if they can easily get the study material from the web or teacher's website. It will change their behavior to become more irresponsible towards their courses. Besides, the technological reliability is also important and yet the students could respond negatively to a resource, both of teaching and technology as stressed above.

## 5.1 Reflections of the Researcher

According to this research results, as a reflective practitioner it can be said that in private secondary schools like Doğa College students' perceptions on the use of ICT tools for learning and teaching approaches are positive. Students support the idea that ICT tools have got advantages such as increase in motivation, collaboration, opportunity to search for the net, more enjoyable lessons etc. On the other hand, some students stated that ICT tools has got negative impacts on learning and teaching

because when they read something from books, it is more effective for them and also for their future lives ICT might not contribute that much. These are the perceptions of the students from the questionnaire and semi-structured interviews.

# Chapter 6

# CONCLUSION AND FUTURE TRENDS

- According to this research, results show that in private secondary schools like Doğa College students' perceptions on the use of ICT tools for learning and teaching approaches are positive.

- Students support the idea that ICT tools have got advantages such as increase in motivation, collaboration, and opportunity to search for the net, more enjoyable lessons.

- On the other hand, some students stated that ICT tools has got negative impacts on learning and teaching because when they read something from books, it is more effective for them and also for their future lives ICT might not contribute that much. These are the perceptions of the students from the questionnaire and semi-structured interviews.

## 6.1 Future Trends

- Students should always be encouraged to use ICT tools in their learning processes by their teachers.
- There should be collaboration between teachers and stakeholders at private secondary schools in order to integrate ICT tools in teaching.
- Teachers need to go through in-service training
- Students need to go through a short period of in-service training.
- ICT should be integrated into the private secondary schools' curriculum.

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# APPENDICES

## Appendix A: Permission Letter for the Department in order to carry out the Research

Date: 15.10.15

**To**: The Head of Computer and Instructional Technology Teacher Education Assoc.Prof.Dr.Ersun Iscioglu

**From**: Mohammad Maaitah (M.A Student)

**Subject**: Permission for the application of research

I would like to inform you that due to my research studies I need to apply questionnaire and semi-structured interviews with students Doğa College in October 2015. The questionnaire and semi-structured interviews are attached for your consideration. If you consider my application at your earliest convenience, I would appreciate a lot.

## Appendix B: Questionnaire

Mohammad Maaitah
Computer and Instructional
Technology in Teacher Education
05338465069
almaaitah27@gmail.com

**Questionnaire**

Dear Students,

The purpose of this questionnaire is to collect data related to the perceptions of students' on the use of educational ICT (Information Communication Technology) tools in private secondary schools. The purpose of the research can be listed as follows:

To reveal the perceptions of students' regarding the use of ICT tools in classroom settings.

- To reveal the benefits of ICT tools for students.
- To reveal the advantages and disadvantages of the integration of ICT tools in the curriculum.
- To reveal students' perceptions on overall effect of the use of ICT tools in their learning.
- To suggest alternative ways in using ICT tools in class for students.

As a researcher I would appreciate a lot if you could fill in the questionnaire, which will only take 15 minutes, objectively and hand it in to your teachers. If you have any questions about any aspects of the questionnaire, please do not hesitate to contact me.

The results that will be obtained from the questionnaire will be highly confidential and will not be used for any other research.

I would kindly appreciate your invaluable contributions to my research.

In the following questions, please mark your answers by putting a tick (✓) in the ❑ that corresponds to the extent you agree or disagree with each proposal.

*Degree of agreement:*

1 = Strongly disagree, 2 = disagree, 3 = agree, 4 = Strongly agree 5= Neutral

| | Issues concerning ICT ⇩ | | | | | |
|---|---|---|---|---|---|---|
| | | Strongly disagree | disagree | agree | Strongly agree | |
| | ICT is an effective tool for teaching and learning. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Through ICT traditional way of teaching is replaced with non traditional teaching. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Use of ICT tools in lessons maximizes students' learning. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students think ICT increases their motivation in lessons. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Students think that not all ICT tools are suitable for each lesson. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students need to be introduced with ICT tools before they are asked to be used. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students believe that ICT on its own is not an enough teaching tool. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students think that use of ICT tools in classes have a lot of advantages rather than disadvantages. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Teachers should go under in-service training before they use ICT tools in their lessons. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students think that use of ICT makes learning easier in lessons. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students believe that the use of ICT increases cooperation in between them. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students think that use of ICT tools increases their creativity. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Students think that use of ICT tools in lessons can be time consuming. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | ICT tools sometimes can cause schools' budget huge expenses. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students may find the delivery of the lessons with ICT tools boring. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students perceptions may vary in the use of ICT tools in lessons. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Students think that online ICT exams are challenging for students. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Schools should provide all sorts of ICT tools for students. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | Through the use of ICT students can improve themselves academically. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |
| | ICT should be among the major subjects of the curriculum at schools. | ❑1 | ❑2 | ❑3 | ❑4 | ❑5 |

## Appendix C: Semi-Structured Interviews

**Semi-Structured Interviews with Students**

Q.1 Do you think ICT is an effective (teaching) tool in lessons? Why? Why not?

Q.2 Do you think ICT maximizes students' learning? Why? Why not?

Q.3 Do you think using ICT is an effective tool on students' academic performance? Why? Why not?

Q.4 Do you think lessons with ICT are more enjoyable? Why? Why not?

Q.5 Does using ICT increase student cooperation? How?