

Computer Aided Psychological Counseling and Guidance (PCG) Education and its Methods of Use

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Abstract: The main purpose of this study is to put forward the contributions made by computer technologies to the field of *education*. In this sense it is specifically analyzed how to make use of computer technologies in *psychological counseling and guidance* (PCG) education. A sample system for computer aided is presented and application methods are tried to be defined. It is also emphasized in this study that in today's continuously developing world computers should be made use of in PCG education as any other field considering future the context of education's being formed in cyber space and declining importance of the terms *time* and *location* from the point of receiving information.

Key words: Psychological Counseling and Guidance (PCG) • Computer Technologies • Computer Aided Instruction (CAI)

INTRODUCTION

Computer technology is heading the list of the sectors developing most rapidly in the era we live and continuous discoveries are being made in this field. Increasing contributions of the computers, that have been appreciated as indispensable after entering human's life, to the field of education is undeniable. The methods of computer usage in psychological counseling and guidance (PCG) education, that is a peculiar domain of psychology science, have also become effective so far. It becomes inevitable to make use of favourable technological opportunities in solving educational problems, considering today's technological advancements and importance attached to PCG education. The most important and widely known means of technology in this sense is *computer*. So much so that, for a modern person knowing and using computers in field of work is regarded as *being literate*.

The need for use of computer technologies in PCG education arises from; (1) increasing needs for experts to give PCG services, (2) increase in knowledge to be taught, (3) its becoming complicated and (4) individual education's receiving more importance. Therefore, here, the

structure, functioning and applications of Computer Aided Instructions (CAI) are analyzed and the role of the instructors in this system is discussed.

Computer Aided Instruction (CAI) and Its Use in PCG Education: Rapid developments in information technologies have introduced information societies and urged them to catch up with technological developments and adapt to them. Rapid increase in students' population and knowledge, have brought some problems together and it becomes imperative for education institutes to utilize these new technologies which plays important role in developing the quality of education process [1]. One of the aforesaid new technologies is computer technology which is also described as the most effective means of communication and individual learning [2-4].

Computers are the means that effect and increase the quality of people at educational age positively, help students focus their attentions in the class during lessons, create more productive instructional environment, promote the creativeness and success level and make lessons more interesting. Computer Aided Instruction (CAI) is any application of computer technology in educational process [5].

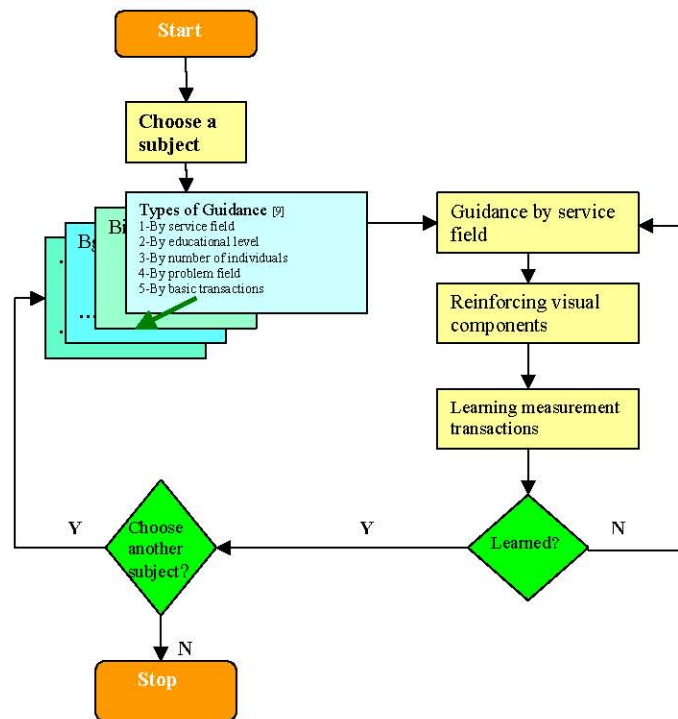


Fig. 1: A Sample System For Computer Aided Psychological Counseling and Guidance (PCG) Education

Computer Aided Instruction (CAI) is a learning process realized by means of computers [6]. CAI systems are between book-like materials of which students flip over their pages and systems suggesting smart interactive assessments. Students ask for voices, pictures, maps, diagrams, animations and humor beside textual knowledge [7]. Multimedia contains combinations of different presentation types and suggests new things for related field on how to present ideas and how to analyze. Multimedia design contains grouping of information sources and the control required to process them [8].

Computer Aided PCG education, on the other hand, *is the use of computer technologies in PCG education*. Those could be; information presentation, special education, contributing to developing a skill, realizing affinity, providing data to solve a problem and statistical evaluations.

Computer Aided PCG education is computer applications about its use in activities such as direct presentation of PCG lesson contents, repeating learned items by other methods, problem solving and exercising etc. Stimulus, response and reinforcement components are at the heart of the PCG education. Knowledge is presented as stimulus by a connected terminal or monitor to a student, then he is supposed to answer a question pertaining that knowledge and according to quality of his

answer he is offered a consolidation (reinforcement). This may signify accomplishment of *learning* as shown at Figure 1 below:

A student should be interested in the instructional programme in order to be successful in Computer Aided PCG education. Computer Aided Instruction (CAI) can be more attractive and enjoyable for a student compared to conventional classroom activities. In CAI systems show more interest in to the subject because the instuction is programmed in accordance with students' learning rate and because they get instant feedback. This fact, undoubtedly, will effect students' motivation which is one of the requirements of learning activities. According to researches in the field of learning it is found out that a person can remember 10% of what he reads, 20% of what he hears, 30% of what he sees, 50% of what he sees and hears, 70% of what he says and 90% of what he says and does [10]. For this reason, PCG education may take less time and be permanent with the help of visual and audial assisted CAI systems.

Methods of Computer Aided PCG Education: The methods of Computer Aided Psychological Counseling and Guidance (PCG) Education are shown at Figure 2 below:

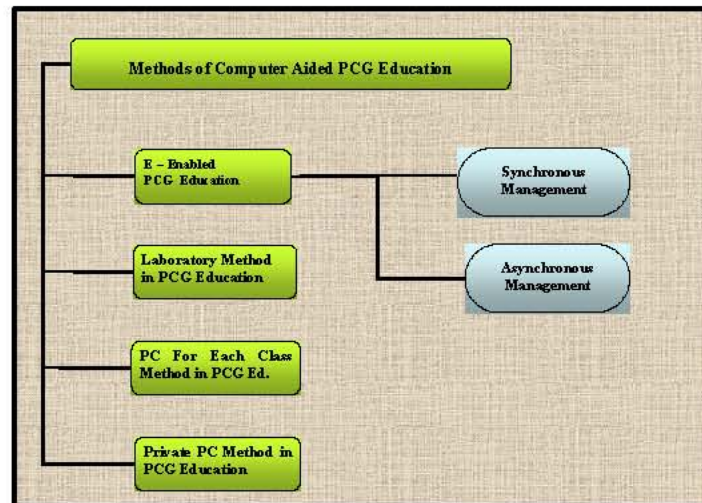


Fig. 2: The methods of Computer Aided PCG Education

E- Enabled PCG Education: Development of internet offers new opportunities in many fields one of which is *education*. Web based education has many advantages such as reducing costs and getting education without sparing home or work time [11]. On the other hand, teachers and education researchers are facing some difficulties as well as unique opportunities in order to adapt computer networks to their classroom or research field [12].

Technology has made it possible to get beyond conventional text books. There is comprehensive information under different formats in CD-ROM sources, CMC (Computer Mediated Communication) ve internet.

Remarkable developments in computer technologies occur in software field rather than the hardware. One of the important developments in software field is web programming. Web, came out in 1989 for the first time and it has made remarkable progress within internet spreadingly since 1992.

Internet is the network of computer networks. It is continously growing and including networks, schools, libraries and research centers. According to a definition, internet provides the context where people form new groups or societies, where they share information and where people sharing the same interests meet virtually [13]. Internet will make it easier to reach information all over the world and people as well.

A new phase of CAI, e-enabled education, has become known with the advancement of computer networks and its entering the classrooms. E-enabled education requires cooperative learning because all students are interacting and should cooperate in network. It was believed a while ago that CAI caused students to

become dull an deven totally anti social. However, today, there are continuous communications and relations on internet. Also electronic meetings could be arranged by interactive group technologies and provided massage systems such as *computer conferences*. Within this context there are no physical locations, no requirement for concurrence, no non-verbal oppressive behavior and no interference in any prospect.

Beyond face to face relation, new interaction and socialization types (or maybe new types of personality even) may ocur at national or international level.

Getting education from network prevents not only instructors from being isolated but also the students as well. In many websites and forum groups new information and projects can be reached and shared by e-mails and if required it is possible to join those groups. At present, there are many projects on the internet which students and instructors may actively participate. Instructors have the opportunity to reach and use curriculums, e-books, journals, databases, multimedia sources, softwares etc.

Nowadays, constructivist learning approach is adopted widely. In this case student forms schemes about what he's learned. Past experiences, new presentations, other people's pursuits etc. becomes important forming his personal thoughts. Considering learning as reorganization of person's knowledge structure, it is turned out that hypermedia connections also should be providingly pluralist and nonlinear. A student i hypermedia can be a person of self-determined, responsible and active learner. After all, in hypermedia context learning occurs more than teaching. Teachers play three main roles; namely, facilitator, leader and mentor at this time.

In web based instructions on net, an instructional environment with more freedom eventuates and some disadvantageous obstacles of conventional methods students confront would be eliminated.

E-learning has become a revolutionary style in learning field, along with the rapid advancements in communications and informatics technologies [14]. Technological innovations have made education, learning and teaching available on net with the help of the web based learning [15]. E-learning attracts more attention as an alternative for conventional face to face education in which teacher is a mentor [16].

With the conferences on net and other computer networks, one can reach any information in any part of the world and can establish online interactive communication. In conventional context talks and discussions take place in the same location at the same time. However, talks and discussions may take place at different locations and at different times on net [17].

- **Synchronous Management:** Instructors and students can perform PCG instructions regardless of the location at certain hours as if in class along with the applications such as, real time video conferences and chatting.
- **Asynchronous Management:** Lesson content is transferred to internet context where students can study PCG lessons online independently of location and time. This method can also be used in distance education programmes.

Laboratory Method in PCG Education: The most simple and classical method of using computer technologies in education is to set up laboratory in an educational institution for PCG lessons. The main purpose of this method is to make target group gain computer literacy and to present lessons interactively in the lab.

The number of students making use of the laboratory may outnumber that of the computers in the laboratory. In this case, students may use computers by turns. Consequently, students could get less opportunity to study with computers in this method.

PC For Each Class Method in PCG Education: In this method each classroom is provided with a computer (PC), an overhead projection and related implements. Besides, the school can integrate with a network. Ultimately, each lesson would be integrated with technology.

The main purpose of this method is to promote the quality of learning by integrating it with computer technologies beyond making students gain computer

literacy skill. Instructor prepares all necessary materials within the context of computer and transfer it to the students using computer systems. Thus, students would learn each lesson visually.

Private PC Method in PCG Education: In this method every student and instructor has a laptop (or notebook). Also, education environment is connected to a network. Student prepare necessary class materials, homeworks and other preparations for PCG class with his laptop. As soon as he enters the class he connects his laptop to school network and attain lesson. Likewise, the instructor also makes all preparations with his laptop and before he begins teaching he also makes the connection of his laptop with the network. All communication activities between student and instructor take place in electronic context. Instructors and students have the opportunity to attain the lesson from home in this method. It is the most ideal but also the most expensive method.

Advantages of Computer Aided PCG Education: Computer aided PCG education may place a burden to instruction process at the beginning and requires use of more tools and takes more time. It may require to spend more time for students at first, but after the system begins running smoothly, everything becomes easier than of classic education. Moreover this type of education has many advantages from the aspect of students. Some of those advantages are stated below:

- Education becomes enjoyable and students feel the pleasure of learning,
- Recalling the learned subjects becomes easier and learning becomes permanent,
- New concepts are learned easily, students stand for less need of other in latter learnings and self-learning becomes easier,
- Problem solving skill develops and success prevails in this field,
- Anxiety for PCG declines and positive attitude is developed,
- Facilitates learning with instant feedback,
- Authentic environment established through computer programmes and simulations,
- Students get the opportunity to expand to outer world through networks,
- Computer Aided PCG education software can be used to realize activities which cannot be done or risky to be done in class,
- Instructor can make use of the available time effectively by means of computer aided PCG education,

- Time wasting board-written lectures can be given by means of computers without causing a waste of time,
- A student who misses any class may study the lessons he's missed by means of computers without bothering his friends and instructor,
- Exams could be done without using pencil or paper and evaluation could be done much easier by computers,
- Promising leader students can come forward easier in CAI,
- Each student can be educated in accordance with his learning skills and personality, to be more general, by means of smart teaching systems (STS) that are formed by artificial intelligent programmes identify who, what, when and how to teach[18].

DISCUSSION AND CONCLUSION

In future the context of education might be formed in cyber space. Along with the advancement of computer networks, a cyber culture is developing. There are *hypermedia* and *pubnetting*, which means electronic publication, as alternatives for conventional publishing activities. Hypertext are more widely used in those days instead of linear texts inside the books. There are accessible, dynamic and often renewed publication throughout the world. Actually, librarians are among the leading groups that adapt themselves early and actively to computer and web technologies. All libraries in the world want to open themselves up to the world and each of them wants to become an *e-library*. Considering PCG education, accessing to any of those e-libraries would be easier. Inside the computer network, setting virtual PCG classes and laboratories is possible where virtual meetings and lessons can be held in any of them.

The terms time and location are declining in importance from the point of receiving information. As a matter of fact, borders, in terms of schools and countries, are being removed by means of technology. All the classes in the world now can connect to each other. Considering the new emerging *on-line classrooms* in this sense, instructor can share his lesson plans and studies with his colleagues in other parts of the world. They metaphorically pull down the walls of the actual class by putting all the projects they study in the web. Students can see (and virtually visit) all the museums and parkland in any part of the world by means of internet. Guests can visit the classes or discussion groups and thus, attain lessons or projects virtually again by means of internet. From this point of view it can be said that all world is becoming one single school.

In the internet context, students find the opportunity to promote problem solving, writing, communicating and critical thinking skills. Differences in terms of age, class, gender, nationality and special requirements are being removed to a remarkable extent.

New educational context has made guidance attributes and job satisfaction level of instructors promoted. Conventional dominant approach of instructors has been replaced by guiding and facilitating approaches. Consequently, above mentioned and explained technological opportunities can be made use of in PCG education as well. Thus, jobs of instructors, teachers and students would be simplified accordingly and they can focus on the core of the education process.

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