# Virtual Effects with Virtuous Personality: A Sufi Approach to the Ethical Aspects of ICT in Education

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**Abstract**
Three discoveries of man gave revolutionary dimension to human race viz. fire, wheel and language but fourth one has changed the global face i.e. ICT. No doubt ICT played much important part in almost all the arenas for national development but its role in education should not be confined to the use of CAI or other technology to make learning mechanical process. Student is not just a 'brain' of flash and blood; he has a heart, a soul and waves of dynamic ever fresh emotions unlike the rigid computer software. Education of heart and soul is much required today. Take an extract from the paper on 'Education for Peace' by NCERT (2006). A teacher had a dream in which she saw one of her students fifty years ahead. The student was angry and asked a number of questions complaining of the irresponsible teaching and unripe education. What pinches more is the following extract. "With ever greater anger, the student shouted, 'You helped me extend my hands with incredible machines, my eyes with telescope and microscopes, my ears with telephones, radios and sonar, my brain with computers, but you did not help me extend my heart, love and concern for the human family. Teacher you gave me half a loaf." The role of new technology becomes more responsible and serious because it works sometimes as dummy teachers. There requires a collaboration of ICT and value based education, collaboration of technology and tradition and collaboration of virtual effects and virtuous personality. Increasing scenario of 'educated and technological crime' is the outcome of such disintegrated education system. This paper is a little effort to identify the need of ethical aspects of ICT in Education.

[**Keywords**: ICT, education, ethical learning, values, technology, teaching.]

*'Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it.'* --Samuel Johnson

The era of Information and communication technology is the other name of current age in which man has crossed all the boundaries of visible knowledge. In fact knowledge is such a term which is the core of every educational effort and it is widely used as the outcome of each of the success story of mankind. Knowledge is the basis of ICT which believes in the creation of knowledge in the form of information. Our pockets are full of information, our fingers know where to hit for new information and how to preserve and transmit the assembled one. Mind works in co-ordination with the speed of internet. There is no need to explain the revolutionary role of ICT in all the sectors of the national and international development including education because much is known to the masses. The consequences of ICT in the arena of humanity and spirituality are often lagged behind when we blindly use the technology to solve problems concerned with human emotions, human values and feelings.

No doubt ICT has played ground shaking role particularly to bring the education to the

 

masses through open and distance learning (ODL), to open the doors of education for those who had lost the hope to restart the process of education due to age barriers in formal education system, and of course rural education is the valuable sector where ICT contributed of in the form of educational network, Gyandarshan, Krishidarshan etc. But this is just the transmission of information through technology. We are concerned here with some core concepts which are widely used in technology. Sometimes we use such terms in a pre-decided way and thus cannot see the deeper aspect of their valuable implications. Some of the terms are 'knowledge', 'learning' and 'values' which are widely used in the process of education.

## Virtual Effect of ICT in Education

Information & Communication Technology (ICT) is a science of extracting, processing, storing, manipulating and finally communicating the desired information from one corner to another by making integrated use of computer & telecommunication. It includes:

1. Radio & Television
2. Landline Telephones and Mobile Phones
3. Digital Cameras and Video Recorder
4. Computers and Laptops
5. LCD Projector and CD/DVD's
6. Internet and Intranet
7. Educational Satellite and Channels
8. Computer Software and Hardware

According to the use of ICT, education can be classified in four main categories;

1. E-Learning (on-line learning)
2. Mobile Learning (learning anytime, anywhere, and any context – Cell Phone & Laptop)
3. Blended Learning (Hybrid Learning)
    - Face-to-face learning (Conventional Teaching)
    - Self Paced Learning (Text/CD based course)
    - On-line Collaborative Learning (Synchronous &Asynchronous interaction)
4. Distance Learning (Overcome time & distance barriers)

ICT can play the following important roles in enhancing quality and ease in higher education

### Role in Teaching Learning Process

#### *1. Easy Comprehension*

The traditional way of teaching learning process is effective and interesting by using information and communication technologies. For example, when a teacher uses audio, video, or power point presentation in his/her lectures; the whole class becomes more attentive about the lecture. Such activities also help students to understand the things easily.

#### *2. Increased time for discussion*

The concept & process of education is changing. The face of classroom is changing. In conventional Teaching, most of the time is consumed for input- output and less

time is left for processing in the classroom. But in teaching with ICT the input and output time is reduced and processing time is increased. In this left over time, some other students' activities can be performed like discussion and interaction. This will increase the quality of learning.

***3. Constructive approach to Learning***

ICT enabled teaching follow constructivist approach to learning by using hyper text and hyper-media which provides branched design of instruction rather than a linear format of instruction. This divergent exposure through multimedia is crucial for constructive learning.

***4. Self Pacing of Learning***

ICT enables the individual instruction with individual pace. Self pacing of learning is only possible through CD's/DVD's and online learning and not in class room teaching due to short duration of time.

***5. Guidance to the learners***

Remedial teaching to each and every student is not possible by the teacher in the traditional classroom. Video conferencing can provide diagnostic & remedial teaching by experts in remote places.

**Role in Constructing Quality Study Material**

In traditional learning system, students and teachers are limited to get knowledge on a particular topic through printed material only. But use of ICT facilitates them to get variety of study materials on a particular topic using internet from anywhere and anytime.

**Role in E-Learning and Quality of Education**

- Admission in a open/virtual Universities
- Getting course material for study
- Synchronous Participation (on-line chat)
- Asynchronous (email)
- Online Collaboration
- Online Discussion

**Role in Admission process**

- Applying for admission on-line
- Generating admit cards for entrance exam
- Entrance test on-line and information about admission
- Getting test mark sheet on-line

**Role in Research work**

- Collect variety of information on a particular topic
- Gather related literature concerning the topic
- Analyses the data by using software
- Generate graphs, Charts, tables etc

**Role in Using Digital Library**

- Searching the books/journals in the library through InlibNET facility.
- Accessing research articles from journals
- Searching research material like projects/ thesis etc.

**Role in Examination Process**

- Generating question paper
- Online competitive exam
- Supplying answer to questions
- Evaluating the answer
- Getting the result

**Role in Educational Management**

- Creating an institutional website for the general information of public
- Preparation of Time Table
- Sending various kinds of announcements through website
- Placing the Prospectus & syllabus on website
- On-line Communication with teaching & non-teaching staff
- Preparation of salary
- Preparing examination result

Information & Communication Technology (ICT) exemplified by interactive multimedia and internet is going to be of great significance in raising the quality of higher education. It needs to be effectively integrated into the formal class-rooms, laboratories, libraries, educational administration and management of admission and examination. It can also be used for teachers training.

## ICT and Increasing Cyber Crime

It has been noticed during last two decades that with the increase of education and information technology a new type of challenge to the development of ICT in Educational process is increasing in the form of cyber crime as.-

1. **Computer Crime*:*** The act of making damage to a computer of an individual or an organization with a wrong intention. Damaging data and hardware, stealing files, inserting virus and deleting some important files to a particular computer or computers.
2. **Computer Related Crime:** This is a broader term which is concerned with a system of technology as a whole that cover a wide range of computers, and use of computer based activities to steal or damage the data, misuse of internet for hacking the data and accounts of others etc.

Computer related crime is more serious problem with the use of ICT in Education. Students are getting easy access to them because of many facilitating factors and increasing atmosphere of irresponsibility in Higher Education. There are some more concrete examples of such immoral activities as follows:

1. Unauthorized access to the accounts of others
2. Damage to computer data or programs
10. Embezzlement
11. Computer sabotage

3. Unauthorized interception of communications
4. Cyber terrorism
5. Credit Card Fraud
6. Password Sniffers
7. Software Piracy
8. Spamming
9. Defamation
12. Misuse of Computer espionage
13. Web Jacking
14. Spoofing
15. Money Laundering
16. Phishing
17. Cyber Pornography
18. Hacking

## ICT and Learning: The Modification of Behavior Aspect

Learning is considered as change in old habits, outlooks, conduct and behaviour. Learning is also the training of certain capabilities in human behaviour as Gagne says. ICT approach to education follows this procedure based on hypothesis, observation, testing and evaluation. But all our learning through technology is not knowledge but accumulation of information, procedures and sources to get information upon a subject. We can see the consequences of such 'isolated hi-tech learning' in the involvement of highly educated class in heinous crimes as 'intellectual criminals'. Autocratic lectures are creating one way teaching in classrooms, learning activities have confined themselves just to complete syllabus and thus resulted in the disintegration of material and spiritual aspects in the presence of technology where the personality of teacher is behind the curtain. Learning outcome in this way can be shown by the following figure 1


**Figure 1. Learning Process in General**

In this process ICT plays important role. The major drawback of this simple learning is that vices are also modified and when new and valuable information added to a corrupt mind the result is destruction. The 'Cyber Terrorism' is recent example of such learning. The concept of learning therefore must be different. Simple modification of behaviour is concerned with the acquisition of new habits and gathering of information that can be used to solve only mundane aspects of life. But life has much more objectives than the accumulation of information and ways to lead the comfortable life.

## ICT and Learning: The Purification of Behavior Aspect

Knowledge as an attribute enthrones at heart. The purification is required at heart which controls all the affairs related to quality in education of the man. Why Purification? The answer is very simple. When any organ of the body becomes sick doctors provide medicines as well as put the organ under precautions such as light food, boil water, no spices etc. This is the two way

process to cope with the disease. In the same way heart is the most important organ in the body. The health of the entire system of body depends upon the working of heart. In Sufism heart is the seat where knowledge is enthroned. Behaviour is the external means through which working of heart is exposed, at the same time it is the internal tool for continuous evaluation of the knowledge gained. Our behaviour is the real test of our learning and knowledge. Behaviour is also the mirror of the heart which reflects the internal picture. Content to be learnt is the outer material while intention, need, interest & motivation are the internal conditions of learning but most important is the quality of receptor part which is behaviour. Vedantic Philosophy and Sufism both believe in positive learning because the modification of negative elements is also possible if we consider learning just the modification of behaviour. For example, learning of computer for excellence in education and human welfare is positive learning but to learn the misuse of computer as cybercrimes, is also learning. Sufism therefore avoids the evil aspects of learning simultaneously, by purifying the behaviour. The impurity of behaviour is the sign of sick heart. Sufism suggests following diseases of heart hampering learning:

| Sr. | English Term | Arabic Term | Meaning |
|---|---|---|---|
| 1 | Imposterity | *Nifaq* | To present a false picture of one's learning to befool others. |
| 2 | Blasphemy | *Kufr* | To speak in contradiction of God and His Messengers. |
| 3 | Arrogance | *Takabbur* | Pride of knowledge is harshly condemned in Sufism. |
| 4 | Prohibition | *Haraam* | Wrong deeds and doings which are prohibited by God. |
| 5 | Falsehood | *Fasik* | False hood in speech and deeds ruins the learning process. |
| 6 | Back-biting | *Gheebat* | Most common disease of heart. Hardly anyone escapes it. |
| 7 | Ill-will | *Bughz* | To have grudge against other fellows. |
| 8 | Dishonesty | *Be-Imani* | Learning with wrong intention /destructive learning |
| 9 | Jealousy | *Hasad* | To keep hateful attitude for the success of others |
| 10 | Greed | *Hirs* | Uncontrolled desires for the world and beyond necessities. |

Table 1- Diseases of Heart: A Sufi Perception

The direct implication of ICT in teaching-learning process often ignores this aspect of learning. This is like to hand over the sword to an oppressive emperor. The ICT is a tool to be transferred to clean handed and purified hearts in order to realize its fruits. Dirty hearts only produce thorny bushes with its misuse for destructive purposes. The purification of behaviour leads to acquire knowledge as attribute and finest virtue which fulfils the spiritual needs too. Following fig.4 shows the process of learning as purification of behavior from such diseases where knowledge becomes the attribute or virtue of personality.

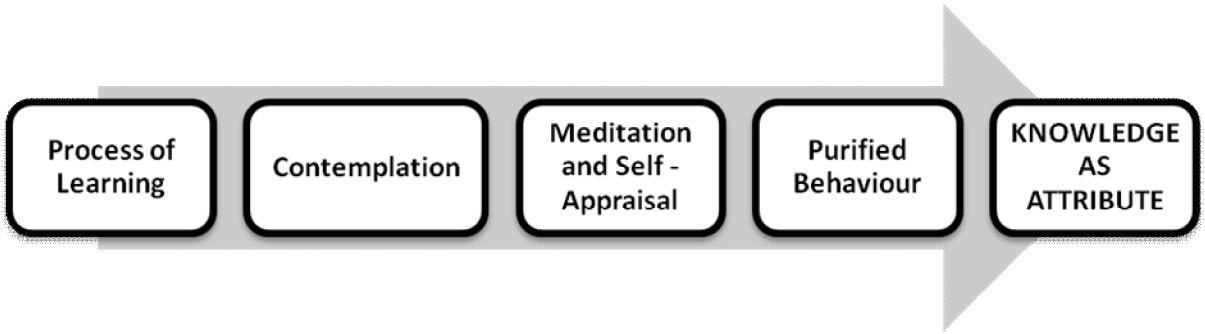


Figure 2. Spiritualistic Approach to Learning

## Virtual Effects and Virtuous Personality

No doubt ICT has changed the concept of knowledge, learning, teacher and school. There are now virtual universities and virtual teachers but the risk of misuse is an unavoidable peril until we think over the meaning of quality in education. As it is already said that knowledge

is more than information, it is the blessed virtue and attribute of man. The place of knowledge is heart in the body, not the brain. Brain is the storehouse of information. Heart tells the pros and cons of an action, it makes distinction between right and wrong. Thus the quality of education depends on the receptive part. As the finest rice cannot be converted into aromatic 'biryani' if we cook in a dirty pot in the same way the finest fruits of knowledge cannot be acquired until we purify the pot of heart. ICT provides us the virtual effect to make the educational process dynamic, effective and expendable but in the absence of virtuous personality it is misused for destructive purposes. ICT developments have made possible a transition in information storage, processing, and dissemination, from paper to virtual, new standards of speed, efficiency, and accuracy in human activities. Computerized databases are extensively used to store all sorts of confidential data of political, social, economic or personal nature to support human activities and bringing various benefits to the society. "However, the rapid development of ICT globally also has led to the growth of new forms of national and transnational crimes. These crimes have virtually no boundaries and may affect any country across the globe." Now-a-days we have made ethics for every profession and activity. Ethics can be viewed from two angles, normative and prescriptive. First, ethics refer to well-based standards of right and wrong that prescribe what humans ought to do, usually in terms of rights, obligations, benefits to society, fairness, and specific virtues. Ethics, for example, refers to those standards that impose the reasonable obligations to refrain from rape, stealing, murder, assault, slander, and fraud they also include the virtues of honesty, compassion, and loyalty.

"*Ethics are moral standards that help guide behaviour, actions, and choices*. Ethics involves the sense of responsibility and accountability for an action. ICT ethics is not exceptional from the above-mentioned view of ethics. In a world where information and communication technology has come to define how people live and work, and has critically affected culture and values, it is important for us to review ethical issues, as well as social responsibility. The responsibility and utility concerned with the use of ICT in education can be better understood in the light of educational objectives and virtues attached with virtual effects in teaching-learning process. Thus first task of the educational process is to develop the virtues. Some of the virtues which should be developed both by teacher and student are given below. They are based on the educational philosophies of Sufism and Vedanta.

| Sr. | Essential Virtues |
|---|---|
| 1 | Trust in Almighty God. |
| 2 | Self Purification and contemplation. |
| 3 | Patience: Tolerance and no prompt & show of knowledge. |
| 4 | Humility and softness in conduct. |
| 5 | Abstinence or asceticism from wrong thinking and deeds. |
| 6 | Fear of God in doing prohibited deeds. |
| 7 | Hospitality and fraternity towards everyone without distinction. |
| 8 | Repentance over self- weaknesses and sins. |
| 9 | Far away from debates and arguments in useless affairs, seclusion. |
| 10 | Shame on wrong doings, falsehood and arrogance |
| 11 | Wisdom and power of comprehension. |
| 12 | Application of knowledge in deeds |

Table 2. Virtues to be developed by Teacher and Student

## The Role of Teacher and ICT in Education

Teacher has to play the central role in the management of Teaching-learning process because ICT is a tool to be used for effective teaching as well as learning but it should not be

used to make educational process just 'mechanical' at the cost of human factors. A student can learn at his own pace of learning by the use of ICT skills, he knows how to learn but it is the task of teacher to guide what to learn and how to apply in life the acquired knowledge. The most important aspect of the learner as well as teacher is the behavioral part which needs attention. Thus virtues are the guiding and shaping elements which prevent the learner from misuse of technological skills and going to wrong ways. A teacher should be well versed in following five essential aspects of teaching technology including virtual traits. Here spiritual qualities are at centre for the assurance of quality of personality and four other skills indicate the quality of teaching and learning. The collaboration of the both aspects ensures the quality of education.

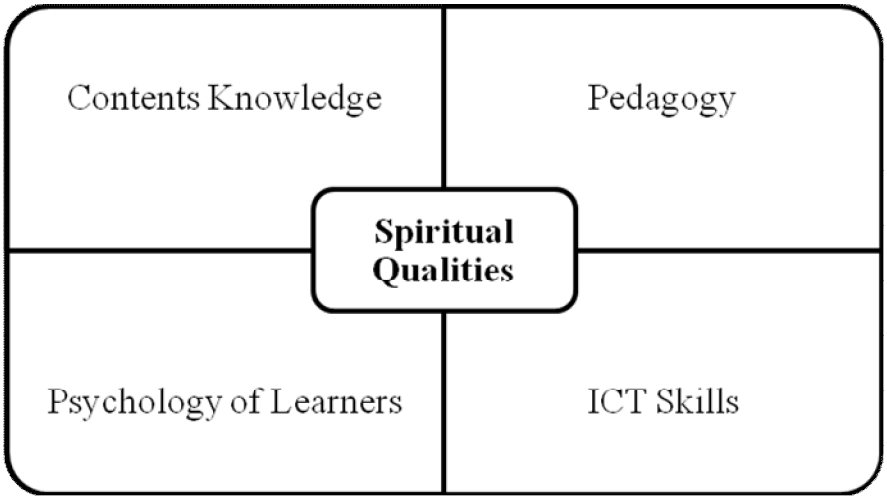


**Fig. 3. Essentials for an Effective Teacher**

If we take effectiveness as an output of ICT then the educational activity can be denoted in the form of a functional process as given below-

**EFFECTIVENESS = f (Human Skills, Educational Technology, Human Behavior)**

## Conclusion

No doubt ICT has played more important part in the three aspects of educational process viz. creation, preservation and transmission of knowledge. It has expanded the sources of knowledge to the masses in the present era. But do not neglect the cry of a child after 50 years from today for love, sympathy, human relations and emotional intelligence.

> "With ever greater anger, the student shouted, 'You helped me extend my hands with incredible machines, my eyes with telescope and microscopes, my ears with telephones, radios and sonar, my brain with computers, but you did not help me extend my heart, love and concern for the human family. Teacher you gave me half a loaf**."** (NCF2005).

If students do not find a refined, soothing and fresh mental environment in the schools and colleges, they will not find any difference between outside world of hatred, communal feelings, and national disintegration and inside world of love, fraternity, affection, intimacy and national integration. No doubts educational institutions are the production houses of qualitative

human resources as national assets and promoters of peace, love, fraternity, knowledge and national integration. The role of new technology becomes more responsible and serious because it works sometimes as dummy teachers. There requires a collaboration of ICT and value based education, collaboration of technology and tradition and collaboration of virtual effects and virtuous personality.

All these concerns are demanding spiritual virtues which can bear the fruits of humanity. After all man is a machine which has a heart, a soul and a system of meditation created by God but man has made a number of machines without heart, soul and emotions. Man should Plan, organize, lead and control the process of education by the use of human skills. ICT is the outcome of human skills so it should not master the man. The knowledge is bestowed only to man and virtues are the gems and jewels to a really learned man. ICT can flow the information in human brain but virtues can convert this information into knowledge (as attribute) by various ways. Spiritual concerns cannot be ignored if we have to build a knowledge based society where virtual aspects of education may be integrated with virtuous personality.

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