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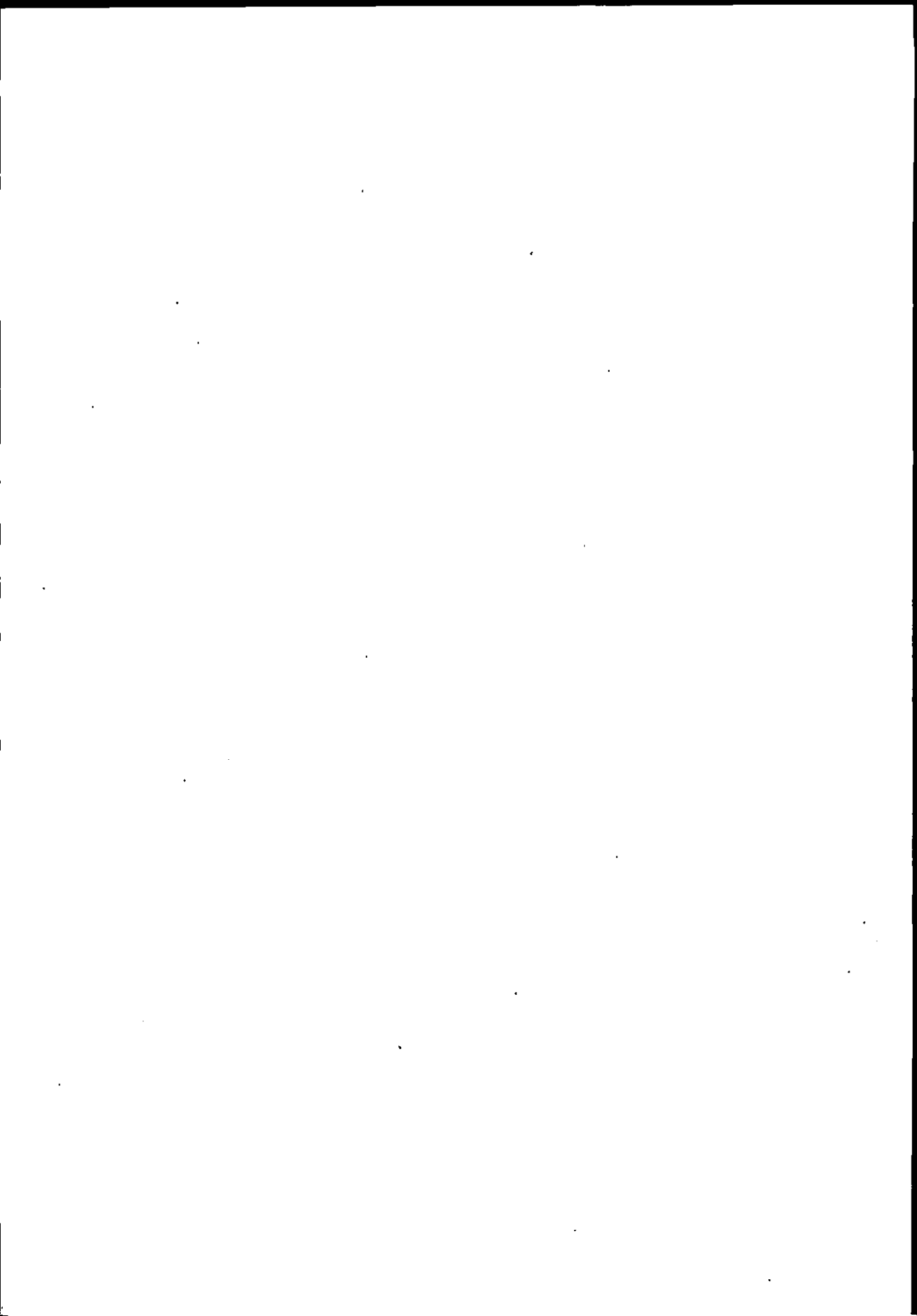
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EDITORIAL

DIGNITY OF LABOUR

Labour occupies a significant place in the sphere of human life. The process of development cannot be imagined without the concept of labour. Labour is absolutely the *Law of Nature*. Not only did the man struggle hard to save himself against the hostile forces of nature, but he has also had strived to gain his rightful place as a citizen of the world.

All the pious persons, scholars and distinguished personalities of the very old ages were fully aware of the importance and far-reaching effects of labour not even on the lives of the human beings, but its impact on earth as well. Throughout their lives, these people had inspired their followers to turn the barren earth into orchard. The history reveals that when Hazrat Adam (A.S) descended on earth, it didn't appear to be as greeny, as gorgeous, as splendid and as beautiful as it looks now. This first man, stepping on earth hundreds of thousands of years ago, was the most laborious figure who gave a good look to this world and turned this deserted globe into such a space, having gorgeousness all around. This fact reveals the theory of labour. And towards this historical aspect, Allama Iqbal has very logically indicated in his following verses:

Although I happen to be guilty,
And a figure thrown out of paradise,

But (my Lord), all your angels,
Couldn't turn this barren earth
Into a place of peace and pleasure!

Great emphasis has been laid upon the dignity of labour in Islam. The Muslims are required to act with confidence, to strive hard and to draw inspiration from prayers during hardship and toil. According to the Islamic ideology the secret of the actual bliss of life lies in *Amal*. The blessings of this world and the hereafter are achieved only by dint of hard labour. This is very nicely put down in the Holy Quran:

“Verily God will not change His gifts to men,
Till they change what is in themselves.”

According to Islam, the whole world has been created for the benefit of human being. And even the universe has been kept under the command of men. These facts cannot be understood without the concept of labour. It is absolutely the *Labour* which enables us to get benefit of the unbounded counts from the world and to maintain its command as well. For these tasks, we should adopt the concept of labour and adhere to this valuable theory in the sphere of life – whether acquiring education, teaching students, preparing for examinations or even completing assignments. These tasks require LABOUR and we shouldn't ignore it at any cost.

Dr. Mahmudur Rahman
Editor

AIMS OF EDUCATION IN THE LIGHT OF IQBAL'S PHILOSOPHY

By
Muhammad Dilshad*
and
Dr. Akhtar Ali**

Abstract

Iqbal, through his writings, has made a significant impact on the lives of Muslims of the subcontinent in particular and on the socio-political scenario of the region in general. In the development of his philosophical outlook, Iqbal has drawn from Holy Quran, and both from Eastern and Western systems of thought. This paper examines Iqbal's philosophical ideas in three main domains i.e. reality, knowledge and values. His Concept of Ego has especially been discussed. Finally, the significant aims of education that emerge from Iqbal's philosophy have been identified. It is concluded that the teacher and environment of educational institutions, besides teaching-learning contents, will play an important role in materializing these aims.

Introduction

Dr. Muhammad Iqbal (1877-1938), the poet-philosopher, had made a significant impact on the lives of Muslims of the subcontinent in particular and on the socio-political scenario of the region in general. His philosophical ideas, expressed mainly through his poetry, have won a great deal of attention and respect from the critics throughout the world. In the development of his philosophical outlook, Iqbal has drawn both from Eastern and Western systems of thought. However, the Holy Quran and the traditions of the Holy Prophet (PBUH) remain the main sources of inspiration for him. The mystic writers such as Rumi and Ghazali, pantheistic thinkers such as Ibn-e-Arabi and Al-Jili, and the scholastic theologians have also influenced the philosophical thought of Iqbal. (Kazmi, 1997: p.1). Among the Western thinkers, Vahid (1959: p.60) observes, he came under the influence of Greek philosophers, German idealists such as Kant and Fichte and the more recent European philosophers such as Nietzsche and

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Bergson. In his writings, Iqbal has reflected on a variety of problems and issues relating to religion, ethics, mysticism, philosophy, politics, education, etc.

As a matter of fact, Iqbal was not an educationist in true sense of the word. However, we can find in his writings and speeches he delivered at different occasions certain fundamental principles that may guide us to evolve a sound system of educational practices consistent with our ideology and modern needs. The teachers especially may benefit a lot from his enlightening *Theory of Self* in building their pupils' personalities and characters. This paper is an attempt to infer and highlight the aims of education in the light of philosophical thoughts of Iqbal.

Concept of Reality

Kant classifies things into two categories: (i) Noumena – things in themselves and (ii) Phenomena – things as they appear to one. To him, human reason is unable to know the noumenal world as it cannot transcend the boundaries of time and space. What human being can know are the phenomena – the physical world as it exists in time and space, whose nature is essentially subjective. Kant, therefore, believes that metaphysics-knowing the ultimate reality is impossible. Iqbal agrees with Kant in that the capacity of human reason is restricted to only things as they appear to us in this physical world. But as regard the possibility of apprehending the noumena, he contradicts Kant. Iqbal identifies another level of experience namely intuition, which reveals “the reality in itself” as it is free from spatio-temporal determinations. To Iqbal, intuition is not perception nor thought but a unique experience that makes metaphysics possible. (Kazmi, 1997 : p.9). By definition, ultimate reality is self-existent, and permanent or immortal. According to Iqbal, ultimate reality is God. (Sharif, 1983 : p.1625).

Concept of God

Iqbal, being a true Muslim, believes in the oneness of God and Prophethood of the Holy Prophet (PBUH) and presents a Quranic concept of God in his writings. According to him, God is “the ultimate ground of all experience, a rationally directed creative will which we have found reasons to describe as an ego.” (Iqbal, 1996 : p.50). To explain the individuality of God as Ultimate Ego and Perfect Ego, he (1996 : p.50) in his “Lectures” quotes the following Quranic verses:

“Say: Allah is one;
All things depend on Him;
He begetteth not, and He is not begotten
And there is none like unto Him’ (112 : 1-14)

Iqbal thus suggests that God is infinite and the most unique individual (Nicholson, 1955 : p.xix). He argues that God being super-physical and super-empirical, cannot be conceived within any given psycho-physical parameters. He can only be conceived as superior to physical entities.

To support the concept of individualistic God, Iqbal further argues that since "the real test of a self is whether it responds to the call of another self" (Ashraf, 1973 : p.107). God is ego because He responds to the desires and prayers of human being. God is not static spirit, maintains Iqbal, rather a dynamic and creative one. "God's infinity is intensive, not extensive" (Iqbal, 1996 : p.52), and comprise the infinite inner possibilities of Omniscient and Omnipresent. To Iqbal, God can be conceived only through intuition.

Concept of Universe

Despite its rich variety and diversity, Iqbal considers the whole universe to be an organic unity. (Rafiuddin, 1981 : p.92; Munawwar, 1991 : p.27). He says:

حقیقت ایک ہے ہر شے کی خاک کی ہو کہ نوری ہو
 لہو خورشید کا بچے اگر ذرے کا دل چیریں

*"The reality of all things is one, be they terrestrial or celestial,
 The blood of the sun runs through the heart of an atom, should one
 cut it open"*
 (Bang-i-Dara)

He again asserts:

زمانہ ایک ، حیات ایک کائنات بھی ایک
 دلیل کم نظری قصہ قدیم و جدید

*"Time is one, life is one and the Universe is one,
 It is the height of folly, this talk of old and new"*

(Zarb-i-Kalim)

To Iqbal, the unifying force of the universe is God, who transforms the diversities of the universe into unity. Iqbal identifies the following characteristics of the universe:

1. The universe is real: Repudiating the Platonic notion of universe, Iqbal endorses that universe with all its physical objects is real. It is neither an illusion nor an evil to be tolerated or conceived as worthless (Khan, 1977 :

p.114). He rejects the attitude of "escapism" and stresses that universe must be taken as reality to be reckoned with. To support his point, he (1996 : p.8) alludes to the Quranic verse: "Verily in the creation of the Heavens and of the earth, and in the succession of the night and of the day, are signs for men of understanding; who standing and sitting and reclining, bear God in mind and reflect on the creation of Heavens and of the earth, and say: 'Oh, our lord! Thou has not created this in vain'" (3 : 190-91).

2. Creation of the universe is purposeful: The universe, Iqbal maintains, is not a result of the creator's creative sport, nor its creation is accidental. Rather it has meaningful purpose and serious end. Iqbal (1996 : p.8) quotes the Quranic verse:

"We have not created the Heavens and the earth and whatever is between them in sport. We have not created them but for a serious end: but the greater part of them understand it not." (44 : 38-39)

3. The universe is an unfinished entity and is capable of extension: Iqbal believes that "nothing is more alien to the Quranic outlook than the idea that the universe is the temporal working out of a pre-conceived plan." To him, universe has potential to grow further. He makes mention of the following Quranic verses:

"He (God) adds to His creation what He will" (35 : 1)

As regards the nature of the universe, Iqbal condemns the idea of block universe and finished product, which is immobile and incapable of change.

He points out:

"It is a growing universe and not an already completed product which left the hand of the maker age ago, and is now lying stretched in space as a dead mass of matter to which time does nothing, and consequently nothing;"

The same point is reflected in the following verse:

یہ کائنات ابھی نا تمام ہے شاید
کہ آ رہی ہے دمام صدائے کن فیکون !

*"This universe is perhaps 'incomplete'
As every moment comes the sound: "Be and it was." (Bal-i-Jibril)*

In the process of creation, Iqbal holds, man shares with God "inasmuch as he helps to bring order into at least a portion of the chaos" (Nicholson, 1955 : p.XVVIII).

Concept of Man

Iqbal recognizes the unique individuality of man in the universe. With reference to Quran, Iqbal (1996 : p.76) points out the following three things that make him unique human being:

1. Man is the chosen creature of God.
2. Man, with all his faults, is meant to be the representative of God on earth.
3. Man is trustee of a free personality which he accepted at his peril.

According to Iqbal, man is self-contained exclusive centre physically as well as spiritually, but he is not yet a complete and perfect individual (Kazmi, 1997 : p.14). His closeness with God determines his perfection as an individual. Iqbal's perfect man or Mo'min' as Nicholson (1955 : p.XIX) observes, is he who comes nearest to God. He does not get absorbed in God rather he absorbs God into himself. Iqbal seems to reject Nie-tzsche's concept of 'superman' or Satre's idea of man, who is condemned to be free and who has no conception of God. In contrast, Iqbal's 'perfect man' accepts God's existence, tends to proclaim his own ego and takes part in the process of creativity alongwith the ultimate creator (God). To Iqbal, man is the crown of creation for whose service God has created everything on the earth-mountains, plains, sun, moon, etc. Man as opposed to somewhat passive features of other objects, is characterized by alertness, wakefulness, creativity and motion. He says:

تسلیم کی خوگر ہے جو چیز ہے دنیا میں
انسان کی ہر قوت سرگرم تقاضا ہے

*"Everything in this world is reconciled to its fates,
Man's energies alone are intensively demanding." (Zarb-i-Kalim)*

Iqbal delineates a very comprehensive concept of man who possesses limitless divine potentialities and qualities. To Iqbal, "man is unanalyzable, unpredictable and free and is always an open possibility." (Kazmi, 1997 : p.15). The following verse explains the finite but boundless nature of man:

وہ بحر ہے آدمی کہ جس کا
ہر قطرہ ہے بحر نیکرانہ !

*"A man is ocean that is vast and free,
Its very drop is like the boundless sea." (Zarb-i-Kalim)*

Concept of Knowledge

Epistemology deals with the problem of knowledge. Iqbal's epistemology is identical with the epistemology of the Holy Quran (Anwar, 1987 : p.89). Iqbal believes that knowledge is not a deterministic nor it is limited to one or two sources. Rather, it may be yielded through a variety of sources, e.g., senses, intellect, intuition, etc. In his writings, Iqbal has shed light on the relative significance of these sources of knowledge.

Sense Perception

Iqbal defines knowledge as "sense perception elaborated by understanding" (Anwar, 1987 : p-89). Sense perception, to Iqbal, is a normal level of human experience, but is still important in capturing the observable aspect of reality. With reference to Quran, he points out that the whole nature, e.g., sun, moon, alternation of day and night, variety of human colours and tongues, etc. forms the signs of the Ultimate Reality. The human beings, who strive for maintaining their lives, can not afford to overlook the reality that dwells in the external environment. Iqbal attacks Plato who "despised sense apperception, which in his view, yielded mere opinion and no real knowledge." (Iqbal, 1996 : p.3). Iqbal considers Plato's standpoint against the Quranic teachings that 'regard hearing' and 'sight' as the most valuable Divine gifts. He also maintains that the culture of Asia and generally the whole world failed, "because they approached Reality exclusively from within and moved from within outwards." (Iqbal, 1996 : p.12).

Iqbal deems knowledge gained through sense experiences highly useful. In his letter to K. G. Saiyidain, Iqbal wrote: "I have generally used the word 'knowledge' in the sense of knowledge based on the senses. It gives man power which should be subordinated to Religion. If it is not subordinated to religion, it is a Satanic force. This knowledge is the first step to true knowledge" (Saiyidain, 1977 : p.89). He highlights the importance of sensual knowledge in the following verse:

علمِ حقیقی اول حواسِ آخرِ حضورِ
آخرِ ادوی کلنجیدِ درشعورِ

"The knowledge of Truth is gained first through the senses and then through direct realization,

Its ultimate stages cannot be encompassed with consciousness:

(Javed Namah)

Knowledge (ILM), according to Iqbal, is of immense value if it is combined with religion. He asserts: "A Mulsim should try to convert such

knowledge, which is based on senses and is the source of limitless power, to Islam i.e. transform this (unbeliever), Bu Lahb, into (the perfect Momin), Ali. In other words, if the power of knowledge is inspired by religion, it is the greatest blessing for mankind." (Saiyidain, 1977 : p.90)

Thus, utility of the sense perception is not denied by Iqbal. However, he recognizes its handicappedness to perceive the ultimate truth as a whole. He says:

زندگی کچھ اور شے ہے علم ہے کچھ اور شے
 زندگی سوڑ جگر ہے علم ہے سوڑ دماغ
 علم میں دولت بھی ہے قدرت بھی ہے لذت بھی ہے
 ایک مشکل ہے کہ ہاتھ آتا نہیں اپنا سراغ

*"Life is a thing quite different from knowledge
 Life is the burning of soul, while knowledge burns the brain,
 Through knowledge one can get wealth, power and pleasure,
 But the difficulty is that through it one cannot get any clue of one's
 own self".*

(Zarb-i-Kalim)

Intellect

For intellect, Iqbal in his poetry has also used the words *Aql* and *Khiraad*. Iqbal does not deny the importance of reason in human life as Quran recognizes the superiority of man over angels for his rationalistic attitude. "Sensation being a chaotic jumble, upholds Iqbal, cannot lead to knowledge. It is reason that imparts harmony, organization and coherence to this chaotic jumble and moulds it into a knowledge yielding pattern" (Khatoon, 1960 : p-93). Iqbal asks for reflective observation, but more abstract thinking without sense experience is considered less valuable rather dangerous by him. In making comparison between intellect and love or *Ishq*, he establishes superiority of *Ishq* over intellect. At the same time, "he does not liberate *Ishq* from intellect altogether, as *Ishq* not limited by intellect may lead to chaos: (Khan, 1999 : p-30). To Iqbal, they both attempt to pursue the goal, but through different mechanisms.

ہر دو بزلے رواں ہر دو میر کارواں
 عقل پہ حیلہ سے بڑا عشق برد کشاں کشاں

*"Both move towards the goal, both are the leaders of the caravan,
 Intellect conveys through a plan, love conveys through a pull."*

As a normal level of experience or knowledge, Iqbal discerns the role of intellect in knowing the reality. Over-intellectualism or reasoning without love is violently attacked by Iqbal as it does not give full consciousness of reality. In his poetry, Iqbal repeatedly highlights the shortcomings of intellect as compared to love or intuition or heart:

خرد سے راہ روٹن بھر ہے
خرد کیا ہے؟ چراغ رہنمائی ہے

*"Reason gives sight to the wayfarer.
Reason? It is the lamp that lights the path,
But that which is going on inside the house,
What does the lamp outside know of it." (Bal-i-Jibril)*

Keeping in view the importance of intellect in worldly affairs, Iqbal points out that it dominates the whole world but the 'heart' tends to challenge it:

ہر خاک و نوری پہ حکومت ہے خرد کی
باہر نہیں کچھ عقل خداوند کی زد سے
عالم ہے غلام اس کے جلالِ ازلی کا
اک دل ہے کہ ہر لحظہ الجھتا ہے خرد سے

*"Clay-made man and angelic hosts;
All are swayed by wit and mind;
Not lies beyond the reach of wit,
Bestowed by God benign and kind.
Its lasting grandeur holds the world
In perpetual chains that do not break.
The heart alone some courage shows
And full of range at wit can shake." (Zarb-i-Kalim)*

According to Iqbal, reason is merely a light of path; it cannot guide us to the destination. He asserts:

گزر جا عقل سے آگے کہ یہ ڈر
چراغ راہ ہے منزل نہیں ہے

*"Leave reason behind; for it is the lamp
That shows the road, not marks the destination." (Bal-i-Jibril)*

Faruqi (1975 : p.21) identifies the following reasons for which Iqbal considers the knowledge yielded by intellect unsound and unreliable:

1. Intellect working with its concepts gives us an external view of things and cannot throw any light on its nature.
2. The knowledge yielded by intellect is relative since it is based on classification (identifying resemblances and dissimilarities) of object, and it is determined by our selective interest and purpose.
3. Intellectual knowledge is essentially abstract and partial.
4. Intellectual knowledge is static whereas reality is organic, living and developing.
5. Knowledge yielded by our discursive intellect is analytical: it lacks clarity.

Iqbal says:

نشانِ راہ ز عقل ہزار حیلہ پرس
بیا کہ عشق کمالے یک فنی دارد

*"Do not seek guidance from the intellect which has a thousand wiles.
Come to love which excels by the singleness of its purpose."*

(Piyam-i-Mashriq)

Intuition

Iqbal identifies intuition with love (*Ishq*) and Heart (*Qalb*). In his letter to Saiyidain (1977 : p.90), Iqbal reflects on the nature of intuition: "Knowledge which cannot be circumscribed within consciousness and which is final stage of truth, is also called love or intuition." The notion of love is elucidated by him in a letter to Prof. Nicholson. "This word is used in a very wide sense and means the desire to assimilate, to absorb. Its highest form is the creation of values and ideals and the endeavour to realize them." (Nicholson, 1955 : pp.XXV-VI). To Iqbal, knowledge through love or intuition means knowledge through the heart, wherein we have change but no succession, pure duration but no serial time.

In his "Reconstruction", Iqbal (1996 : pp1.4-18) has identified five distinctive characteristics of religious experience:

1. It is immediate because one comes directly in contact with reality without the mediation of sense or reason.
2. Intuition is an unanalyzable whole in which the ordinary distinction of subject and object does not exist.

3. The mystic in his experience comes into contact with the whole of reality in contrast to the ordinary intellectual experience wherein one only grasps a part of reality at a time.
4. The intuitive experience or state of love is incommunicable.
5. Because of his contact with the Eternal, the mystic feels that time is unreal.

It is important to note that Iqbal ranks intuition among the other normal levels of experience. However, he regards intuition the higher form of intellect. In his poetry, he emphatically delineates the importance of intuition or love as compared to other sources of human knowledge. He visualizes intuition as a double edged sword in man's hand. With one edge he invades the ultimate reality; with the other he invades the universe. According to Iqbal, love distinguishes man from other beings. It enlivens and strengthens the self or ego of the man.

از محبت چون خودی محکم شود
تویش فرمانده عالم شود

*"When self is fortified by love,
It becomes the law-giver to the world." (Israr-e-Khudi)*

Iqbal considers intuition superior to intellect because "intuition catches the glimpses of the ultimate reality while intellect fails to achieve that goal on account of its inherent imperfection." (Faruqi, 1975 : p.31)

Iqbal says:

ہر معنی پیچیدہ در حرف نے گنجد
یک لحظہ بدل در شو شاید کہ تو دریایی

*"Every complicated thought cannot be expressed in words,
Dip a while into the heart, thou mayst find it there."*

(Piyam-e-Mashriq)

It is important to note that in Iqbal's theory of knowledge "sense perception, reason and intuition, all are combined in an organic whole." (Khatoon, 1960 : p-91) He views these sources of knowledge complementary to each other. To see the reality as a whole, it is necessary to supplement intuition with intellect. The knowledge would remain narrow, partial and lifeless unless intellect is supplemented by intuition. (Faruqi, 1975 : p.27). Iqbal points out: "Intellect, divorced from love, is a rebel (like Satan) while intellect, wedded to love, has divine attributes" (Saiyidain, 1977 : p.90). To him, when love is accompanied by

intelligence, it has power to create new world. Although Iqbal attaches high importance to love, the great merit of his theory lies in the fact that he also gives due place to sense perception and intellect.

Concept of Ego

Concept of ego/self/individuality is the central idea of Iqbal's philosophy. It is primarily discussed in his famous poem *Asrar-i-Khudi* and is developed systematically in his lectures. The self or individuality, according to Iqbal, is real and pre-eminently significant entity which is the centre and basis of the entire organization of human life. The reality of self can be apprehended through intuitive experience. In order to prove the existence of personality or self, Iqbal considers the entire universe or material world as being composed of a combination of individual egos, isolated and separated from one another. (Kazmi, 1977 : p.13) Man is a self-contained exclusive centre physically as well as spiritually but he is not yet a complete and perfect individual. Kazmi (1977 : p.14) points out three characteristics of ego, as postulated by Iqbal:

1. It is not space-bound in the sense in which the body is.
2. True time duration belongs to it alone.
3. It is essentially private and unique.

Life of the ego lies essentially in "will attitude" and activity. According to Iqbal, there are three stages in the evolution of ego:

- i. Obedience to Divine Law.
- ii. Self-Control.
- iii. Divine Vicegerency.

The third stage is the highest form of egohood, where man acts as vicegerent of God on earth. He becomes the most complete ego with highest power and highest knowledge. But to reach this stage, he has to cross the earlier stages. He has to obey the commandments of Allah and Holy Prophet (PBUH) and exercise control over his wild instincts.

Iqbal believes that of all the living creatures, man has achieved the highest measure of individuality and is most conscious of his own reality. (Abbas, 1989 : p.134). The ego is man develops and grows when he creates new desires and ideals, and struggles hard to achieve them. The maximum growth of man's individuality is not possible in isolation. Iqbal (1996 : p.82) observes: "The life of ego is a kind of tension caused by the ego invading the environment and the environment invading the ego. The ego does not stand outside this arena of

mutual invasion." Therefore, ego has to establish connection with the outside world, society and even with the ultimate reality. It has to operate in cooperation with others for mutual interest. The greater man's distance from God, the lesser is his individuality. Various factors which according to Iqbal strengthen human personality are love, faqr, courage, tolerance, kasb-i-halal (lawful earning) and taking part in creative and original activities. The factors which weaken the ego and are to be avoided are fear, su'al (asking or beggary) slavery, and pride of one's origin or stock (Tufail, 1966 : pp.58-59).

Concept of Values

As regard Iqbal's conception of values, the following points are important:

1. There are no fixed and unchangeable values.
2. Personality or ego determines the standard of value.
3. Values are instrumental.

Tufail (1966) has discussed in detail five categories of values in the light of Iqbal's philosophy:

- i. **Religious Values:** Iqbal believes that religious truth i.e, existence of God; oneness of God; Prophethood; the reality of self; its freedom and immortality, etc are of supreme value. Belief in God is the central point of all the fundamental values of Islam, e.g, equality of mankind as the vicegerent of God on earth, social justice, liberty, tolerance, rationalism and the closest scrutiny of physical world and natural phenomena.
- ii. **Ethical Values:** A conduct or act is right or good when it is according to rule (Shariah), otherwise it is wrong or bad.
- iii. **Social Values:** According to Iqbal, the first and foremost value of the ideal society is that it is based on spiritual consideration like monotheism (unity of God). The universal brotherhood, social justice, respect for dignity of each individual, development of the communal ego or national spirit and safeguarding maternity are important social values.
- iv. **Political Values:** Iqbal looks for Islamic democracy as a social order to implement the concepts of equality, brotherhood, liberty, justice and humanitarianism. He places high value to the political wisdom of the individuals rather than numerical majority. He criticizes the Western democracy in "Bal-i-Jabril". Iqbal seems to advocate the use of *Ijtihad*-

independent judgment and interpretation of law in the light of the changed and changing circumstances.

جمہوریت ایک طرز حکومت ہے کہ جس میں
بندوں کو کرنا کرتے ہیں، تو لا نہیں کرتے

- v. **Economic Values:** In line with the tenets of Islam, Iqbal favours economic independence, widest distribution of wealth and *Kash-i-Halal* (lawful earning), and condemns *su'al* (asking, beggary), hoarding, usury, circulation of wealth only among the well-to-do, low standard of living of the masses, marked differences in economic classes, gambling, speculation, and other undesirable trade practices.

Aims of Education

Aims of education may be defined as broad intents which are meant to provide direction to the education system of any country (Hashmi, 1995). Page and Thomas (1991, p.16), in "International Dictionary of Education", define aims as "general statements of intents made by teachers and other educators." Contrasting aims with objectives in the process of curriculum development, they point out that aims are prescriptive goals for the teacher while objectives identify what the learner is intended to do at the end of the process. For educational planners, curriculum developers and educators, aims serve as general guidelines to derive educational goals (narrower than aims) and instructional objective (more specific) to be pursued by educational institutions.

Education, according to Iqbal, is not an end but a means to end. Since education is a social institution, it is responsibility of society to educate the children. The important aims of education as postulated by Iqbal are being discussed below:

1. Development of Individual and Collective Ego

According to Iqbal, "the highest aim of education is to strengthen the individuality of all persons so that they may develop their potentialities" (Faruq, 1963 : p.42). Schooling must enable the child to unfold and nourish his latent powers and faculties, and make an active use of them. Iqbal's conception of individuality conforms to the Islamic teachings. He maintains that the Quranic concept of ego emphasizes "the individuality and uniqueness of man and has a ability o self-actualization, he also calls teachers for developing in learners the collective or communal ego which is the subject of his Persian poem *Rumuz-i-Bekhudi*. Educators must instill national spirit, ideals, values and traditions in the minds of children so that they as adults are aware of national character and are

prepared to observe it. The growth of individuality, Iqbal believes, is not possible in isolation, instead individual lives, moves and exercises his norms and has his being in community (Kazmi, 1997). Depending on society for self-expression and self-realization, man gains a unique sense of power and collective purpose through active participation and living membership of community. Iqbal says:

فرد قائم ربط ملت سے ہے تنہا کچھ نہیں
موج ہے دریا میں بیرون دریا کچھ نہیں

"The individual is alive only to his relationship with the community, alone, he is nothing.

The wave's existence is in the river, outside the river, it is nothing."

(Bang-i-Dara)

At the same time, society gets strengthened by its members who tend to lose themselves in the service of community and enter into the ever lasting life. He observes in *Armaghan-i-Hijaz*.

افراد کے ہاتھوں میں ہے اقوام کی تقدیر
ہر فرد ہے ملت کے مقدر کا ستارہ

2. Preservation of Culture

Iqbal seems to give education an ideological orientation (Ahmad, 1961), and is opposed to education which is not grounded in the culture of the nation. He pleads fervently for tailoring and adopting the education system which is in line with our traditions and ideals. He asserts:

اٹھا نہ شیشہ گران فرنگ کے احسان
سفال بند سے مینا و جام پیدا کر

"Seek not the bounty of the glass-blowers of the West

Make your own world from the clay of India" (Bal-I-Jibril)

Education, to him, is a tool for preservation of cultural heritage to be transmitted from one generation to another generation through schooling. Preservation of culture ensure the survival of the society. National history, according to Iqbal, is as important for a nation as memory is vital for an individual. In this sense, Islamic history and ideology in the form of basic beliefs, values and practices constitute the essential content of education. Apart from

preserving the nation's culture, Iqbal also expects educational institutions to be instrumental in refining and re-constructing it to meet the challenges of modern times.

3. Conquest of the Natural Environment

Nature is the great source of power. Education should enable the individuals to control natural resources and use them for their benefits. Adjustment to environment, naturalists believe, is one of the important educational aims. Iqbal takes a different position compared to naturalists when he asserts that "not adjustment, but the conquest of the environment is the real aim of education" (Faruqi, 1963 : p.37). Individual should be equipped with the required knowledge, tools and techniques to master the material environment, and to reshape and re-mould it according to his own needs and desires. Knowledge of science, thus, occupies a significant place in Iqbal's scheme of education. It gives power to man, which enables him to capture the material world.

4. Development of Powers of Thinking and Action

Education traditionally focuses on the intellectual training of the individual. This educational aim is also endorsed by Iqbal. Yet, Iqbal does not agree with the philosophy of life denial and lays much emphasis on education that prepares man for the fulfillment of life. To him, life is not static rather dynamic. It demands from man the persistent struggle and action. Education must stimulate him to operate on environment actively, creatively and purposefully. Iqbal wants development of student's personality by activity, creativity and originality to prepare him for the conquest of material forces of the environment. Thus, Iqbal's theory of education becomes activists in its nature.

5. Character Building

Al-Ghazali, a renowned Muslim philosopher, holds: "Education must not only seek to fill the young mind with knowledge, but must, at the same time stimulate the child's moral character and stimulate him to the properties of social life" (Ahmad, 1961 : p.68). In line with Al-Ghazali's point of view, Iqbal endorses that unity of character supplements and complements the unity of thought. He gives expression to this point in these beautiful lines:

آہ اس راز سے واقف ہے نہ ملا نہ فقیہ
وحدت افکار کی بے وحدت کردار ہے خام

"Ah! Neither the Mulla nor the Jurist is aware of the fact that unity of thought without unity of character is incomplete and wanting"

Character formation of the learners must be given prime emphasis by educators. To Iqbal, preparation of "True Muslim" should be the prime aim of education. Ego is the central attribute of man of character. The other qualities education must cultivate in the individual are: courage, tolerance, faqr, obedience, self-control, freedom, fearlessness, sacrifice etc.

Conclusion

The aims of education that come forth from the Iqbal's philosophical standpoints on various significant issues may be classified into three broad categories (Hussain, 1982 : p.71).

- i. A spiritual interpretation of the universe: Iqbal asks Muslim to create a new world order by integrating science with religion in their education system.
- ii. Spiritual emancipation of the individual: Iqbal considers the personality of Holy Prophet (PBUH) as the source of spiritual emancipation of all the mankind of all times to come. The education system must, therefore, motivate individuals to follow the life of Holy Prophet (PBUH) as an ideal of individual spiritual emancipation.
- iii. Spiritual democracy: The education system must provide instruction and training in the Islamic concepts of equality, fraternity and freedom so that students are able to practice spiritual democracy in their practical lives.

Education, according to Iqbal, is a means not an end itself. The primary aim of education is preparation for life. Besides this, education institutions should focus on development of personal and collective individuality, promotion of cultural heritage, cultivation of critical and creative thinking and character-building of the learners. In materializing these goals, the academic environment of the institutions, apart from the formal teaching-learning contents, will play an important role. Another pertinent element in this regard is 'teacher' who may serve, to his students, as a model of intellectual, moral and academic excellence.

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PRINCIPALS' MANAGERIAL ABILITIES AS DELEGATORS IN SECONDARY SCHOOLS, NIGERIA

By

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Abstract

This study investigates the managerial abilities of principals in effective delegation of duties. It also examines the level of delegation and the benefits of delegation to teachers, principals and the school system. Delegation is assigning of duties or task to subordinates, supported by autonomy and authority, in which the delegators remain responsible. There is the need to understand delegation so as to enhance its effective use. Delegation is an empowerment and it is the mainspring of better work. The administrator who does not delegate, will not only be disorganized, but may spend many hours completing low-priority tasks, resulting in excessive working hours, and subsequently poor quality work. The results of this study show that the practice of delegation was adequate. The principals were able to manifest the ability to handle delegation effectively, with high level of integrity. It also reveals that the level of delegation was just moderate and that principals perceived delegation as more beneficial to principals than to the teachers. It is, however, recommended that principals should engage teachers in delegation in budget preparation, facilities maintenance and teachers' welfare. It is also recommended that seminars should be organized to enlighten the principals more thoroughly on the principles and benefits of the delegation.

Introduction

The *delegation* is a tool that is required in today's school organization. There are numerous tasks and challenges ahead of school principals as administrators, which deserve to be tackled with administrative strategies that can enhance effectiveness. As school organizations grow increasingly complex, duties and responsibilities across the work force can become less well defined, often it seems as though everyone is doing everyone else's job. Managerial ability is imperative in effective delegation. The delegation could be described as

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managerial tool to enhance effectiveness. According to Heller and Hindle (1998), delegation is the manager's key to efficiency and it benefits all.

The delegation as a tool and strategy to bring out results, needs to be understood for effective use. The delegation involves entrusting another person with a task for which the delegators remains ultimately responsible. Gerard is of the view that delegation is a style of management which allows staff to use and develop their skills and knowledge to the full potential. He further said that delegation is primarily about entrusting ones authority to others. Ibukun (1997) has viewed delegation as the authority barometer through which the extent of centralization is observed. The delegation is also perceived as assigning of duties or tasks to subordinates, supported by adequate autonomy and with commensurate authority in which the delegators remain responsible.

There is the need to understand the delegation to enhance its effective use. The delegation is empowerment and the mainspring of better work. The administrator who does not delegate, will not only seem disorganized but will spend many hours each week completing low-priority tasks. This can result in excessive hours worked by senior administrators, low morale among under-employed staff, basic process slowed down by bottlenecks, poor quality of work and missed deadlines. All these factors will have a detrimental effect on long-term performance. (Heller and Hindle 1998)

The delegation requires effective supervision. The level of experience of the delegate helps in deciding whether to adopt a hands-on or hands off approach when controlling a delegated assignment. According to (Heller and Hindle 1998), a person with a considerable amount of experience at handling similar tasks will require less supervision and control than someone with little or no experience. They are of opinion that learning process has to begin somewhere and inexperienced can be overcome by good leadership. The monitoring process provides an opportunity for someone to assess and extend any delegated abilities and to supply specific skill training.

Accountability is at the very heart of delegation, so before delegates are finally selected, administrator should consider whom to make responsible for a particular delegated duty. Accountability must be strictly defined so that there is no doubt over where it lies and what it covers. Within the overall structure of the responsibility, administrators ensure that each delegate is accountable for his own particular component of the task. The "single point accountability" is not only very precise, it will also greatly reduce the risk of one giving more than one delegate responsibility for the same task, or part of a task. (Heller and Hindle 1998)

Managerial ability of delegators is a manifestation of principles of delegation in the practice of delegation, the level of delegation and the appreciation and value attached to it. The ability of the administrator to have correct attitude to his staff in terms of level of trust to work with people, to provide adequate information to staff, to give enlightenment to delegates, to choose the members of staff for relevant job, to encourage initiatives and assist staff in solving emerging problems, seem imperative in the practice of delegation. Furthermore, the ability of delegators to show satisfaction and appreciations for a job well accomplished could bring success in delegation.

The observations have shown that in the school system today, the delegation is being practiced without any reference to the principles, or essential prerequisite. The practice of delegation seems haphazard without following any land down strategy or guidelines. The purpose of this study is to find out the extent to which principals engage teachers in delegation, and examine the managerial abilities of principals in the practice of delegation. It is also to find out whether the principals perceive delegation as beneficial to the teachers, principals and the school system.

Statement of the Problem

The delegation is not a new concept in administration. It seems that people are yet to understand the principles of delegation, which could enable administrators, achieve better results. It seems the school administrators are yet to adequately engaging teachers in delegation, probably because of lack of understanding of the usage, the benefit to school administration, teachers, and the principals. The observations have shown that many teachers are yet to be involved in school administration, they seem not meeting the needs for recognition and subsequent negative attitude toward the system. It appears that the problem of inadequate involvement of teachers in school administration could be addressed through adequate delegation.

Research Questions

The following research questions have been raised to solve the problem of the study:

1. What is the practice of delegation of duties among principals?
2. What is the level of delegation of duties among principals?
3. How do principals perceive delegation of duties?

Methodology

This study was carried out through a survey. The population of the study comprises all principals in public secondary schools in South West, Nigeria. Multi-

stage and simple random sampling techniques were used in selecting the sample. Multi-stage sampling technique involves selecting subjects from the population of the study in stages, which include selection of states, schools and principals. Four states were chosen with fifty principals each making a total sample of 200.

Research Instrument

A self-constructed questionnaire, titled Principals' Delegation and Administrative Effectiveness (PDAE) was used to gather informations from the respondents. The content validity of the instrument was certified by experts. The reliability of the instrument was established using test-retest method. The reliability coefficient was $r = 0.876$.

Data Analysis and Results

Research Q No. 1: What is the practice of delegation of duties among principals?

Table - 1
Practice of delegation of duties among principals

S.No.	Items	Agree		Disagree	
		N	%	N	%
1.	I trust people to work effectively because I have appointed them to do so	132	66	68	34
2.	I am loyal to my staff and I expect them to show the same loyalty to me	148	74	52	26
3.	I give my staff full and frank information whenever possible	156	78	44	22
4.	I try to do the work that must be done by me, and delegate the rest	140	70	60	30
5.	I ensure that delegates understand the extent of their accountability	136	68	64	32
6.	I am able to appoint or replace delegates quickly when required	152	76	48	24
7.	I appoint the best person for the job, irrespective of age, experience or seniority	100	50	100	50
8.	I encourage delegates to use their initiative when confronted with problems	136	68	64	32
9.	I make myself available to the staff and deal with any problems they have.	140	70	60	30
10.	I create opportunities to thank delegates for all tasks successfully completed.	104	52	96	48

Table - 1 shows the human relation and integrity in the practice of delegation among principals. As high as 66% of the respondents indicated that they trust people, to enhance effectiveness on the assignment because they appointed them. Up to 78% of the respondents indicated that they gave full and frank information wherever possible. As high as 70% agreed that they did the work that must be done by them and delegated the rest. Up to 68% of respondents encouraged delegates to use their initiatives when confronted with problems. Up to 52% indicated that they created opportunities to thank delegates for all tasks successfully completed. A large number of the respondents also ensured that delegates understand the extent of their accountability.

The practice of delegation was adequate and with high integrity, since the principals adopted principles that could enhance its effective use which include: trusting people, loyalty to one another, provision of full and frank information, understanding the extent of their accountability, encourage delegates to use initiatives, and showing of appreciation for all tasks successfully completed. Furthermore, a significant number of the respondents believed in appointing the best persons for the job as delegates irrespective of age, experience of seniority.

Research Q. No. 2: What is the level of delegation of duties among principals?

Table - 2
Level of delegation of duties among principals

S.No.	Items	Agree		Disagree	
		N	%	N	%
	I delegate				
1.	Supervisory duty	152	76	48	24
2.	Keeping of all records	40	20	160	80
3.	Keeping some of the records	132	66	68	34
4.	Budget preparation and financially involvement activities.	32	16	168	82
5.	Facility maintenance	52	26	148	74
6.	Students' discipline	120	60	80	40
7.	Teachers' welfare	64	32	136	68
8.	Co-curricular activities	172	86	28	14

Table - 2 reveals the extent to which principals engage their teachers in delegation. As many as 76% indicated that they engaged teachers in supervisory duty. Up to 86% indicated that they engaged teachers in co-curricular activities. Up to 66% agreed that they engaged teachers in keeping of some school records. As high as 60% of the respondents agreed that they delegated students' discipline.

However, a large number of item disagree on delegating keeping of all records, budgetary duty and financial involvement, facilities maintenance, and teachers' welfare.

Research Q. No. 3: How do principals perceive delegation of duties?

Table - 3
Delegation of duties as perceived y principals

S.No.	Items	Agree		Disagree	
		N	%	N	%
	I delegate to				
1.	boost morale of teachers	92	46	27	54
2	build confidence in teachers	88	44	28	56
3	reduce my stress as a principal	128	64	18	36
4	enable me focusing on area of priority	172	86	07	14
5	to avoid wasting of time on menial job	176	88	06	12
6	to develop the teachers	72	36	32	64
7	to reduce my workload	164	82	09	18

Table - 3 reveals the perception of delegation by principals. As many as 86% indicated that they delegated so as to focus on area of priority. As high as 88% of the respondents agreed that they delegated to avoid wasting of time on menial job while 64% of the respondents agreed that they wanted to reduce their stress as school administrator. Up to 82% of them also agreed that they delegated to reduce their workload. However, a large number of them disagreed that they delegated to develop the teachers, to build confidence in them and to boost their morale. Although, a significant number of respondents still agreed on these factors as important in delegation of duties.

Discussion

This study reveals that the practice of delegation was adequate since the principals manifested managerial ability in delegation with high level of integrity. The principles employed by the principals in delegation are germane to effective delegation. The principle of trusting people was adopted in as much as delegation cannot be practiced without having trust in subordinate. Heller and Hindle (1998) was of the view that managers often find delegation difficult because of the negative feelings of insecurity and distrust. They, however, said that the gain achieved through overcoming these feelings and beginning to trust will far outweigh any possible losses. Loyalty to the subordinates, and also loyalty to the super-ordinates is also essential in delegation, which also manifested in their practice of delegation. The fact still remains that delegation hardly possible without adequate information, and use of initiatives all these reflected in the practice of

delegation among the principals. The abilities of the principals to select delegates based on expertise irrespective of age, experience and seniority is commendable and should be encouraged. The school system cannot afford to rely on experience alone in the face of new ideas emerging in the system. The view point has made it necessary to imbibe the principle that old and experience teachers can learn from young teachers' expertise. Appreciating the contributions of subordinates is commendable to boost the morale and build confidence in them.

The level of delegation is moderate as revealed in the study. The principals engaged teachers in delegation in various sectors of the school system. The principals engaged teachers in delegation in supervision, records keeping, students' discipline and school co-curricular activities. It is noteworthy that the principals did not pay much attention to delegation of duties in budgeting, facilities maintenance and there was little delegation in teachers' welfare. The principals, being the accounting officers, are not willing to delegate activities involving fund or financial activities. Little attention to delegation of facilities maintenance calls for attention because the work seems cumbersome to manage all alone.

The principals perceived delegation as beneficial to the administration of the school system, most especially to their personal desire and subsequently their position as the administrators. They perceived delegation as important and beneficial. They believed delegation enables them to focus on area of priority. They also perceived it as a strategy to avoid waste of time on menial job, to reduce the workload, and also to reduce the stress of the school principals. The focus of delegation as beneficial mostly to administrative performance of the principals is not unconnected with their understanding of delegation. According to Gerard, delegation is a skill the people have been hearing about, but which few understand. He says people have been writing about it for nearly a millennium yet few actually understand it.

The study revealed that the principals' perception of delegation as of little benefit to teachers, but rather more beneficial to administration in particular. The principals perceived delegation as not important in boosting the morale of teachers, building confidence in teachers, and also developing teachers. The number of principals subscribing to the fact that delegation is germane in bringing positive development to teachers in the performance of their job was low. Akomolafe (2004), identifies delegation of duties as one of ways in which teachers participated in staff development activities. The principals should realize that delegation could boost the morale of teachers, because the teachers are given the recognition to participate. According to Herzberg (1968), in this two-factor theory, he perceives recognition as one of the motivator factors and this was also

supported by Maslow (1970) that recognition enhances motivation. In the school system however, delegation is important in building confidence in teachers through participation, giving position of responsibilities and supported by required authority.

Conclusion

The delegation today is the extent to which teachers participate in school activities to bring out result, and enables the teachers to participate in school administration. The delegation has enabled the teachers to participate in supervision of school activities, keeping of records, discipline of students, and co-curricular activities. Further more teacher were able to have at least little exposure in teachers welfare activities, facilities maintenance and budget preparation.

The principals were able to manifest abilities for effective delegation, which include, trusting people, loyalty to staff, administrators and organization. The provision of adequate informations ensures delegates understand the extent of their accountability, encourage initiative, accessibility to delegators and appreciating delegates efforts for tasks successfully completed.

It is noteworthy that the ability of the principals to select delegates based, on expertise irrespective of age experience and seniority, is a new development in a good direction and it is a good omen for understanding of delegation. This development does not only bring efficiency, but it is goal oriented. The principals should strive to understand delegation. They should not only perceive delegation as important in reducing stress of principals, enable them focusing on area of priority, avoid waste of time, and reducing the work load, but also as a strategy to boost the, morale of teachers, build confidence in them and also develop them on the job.

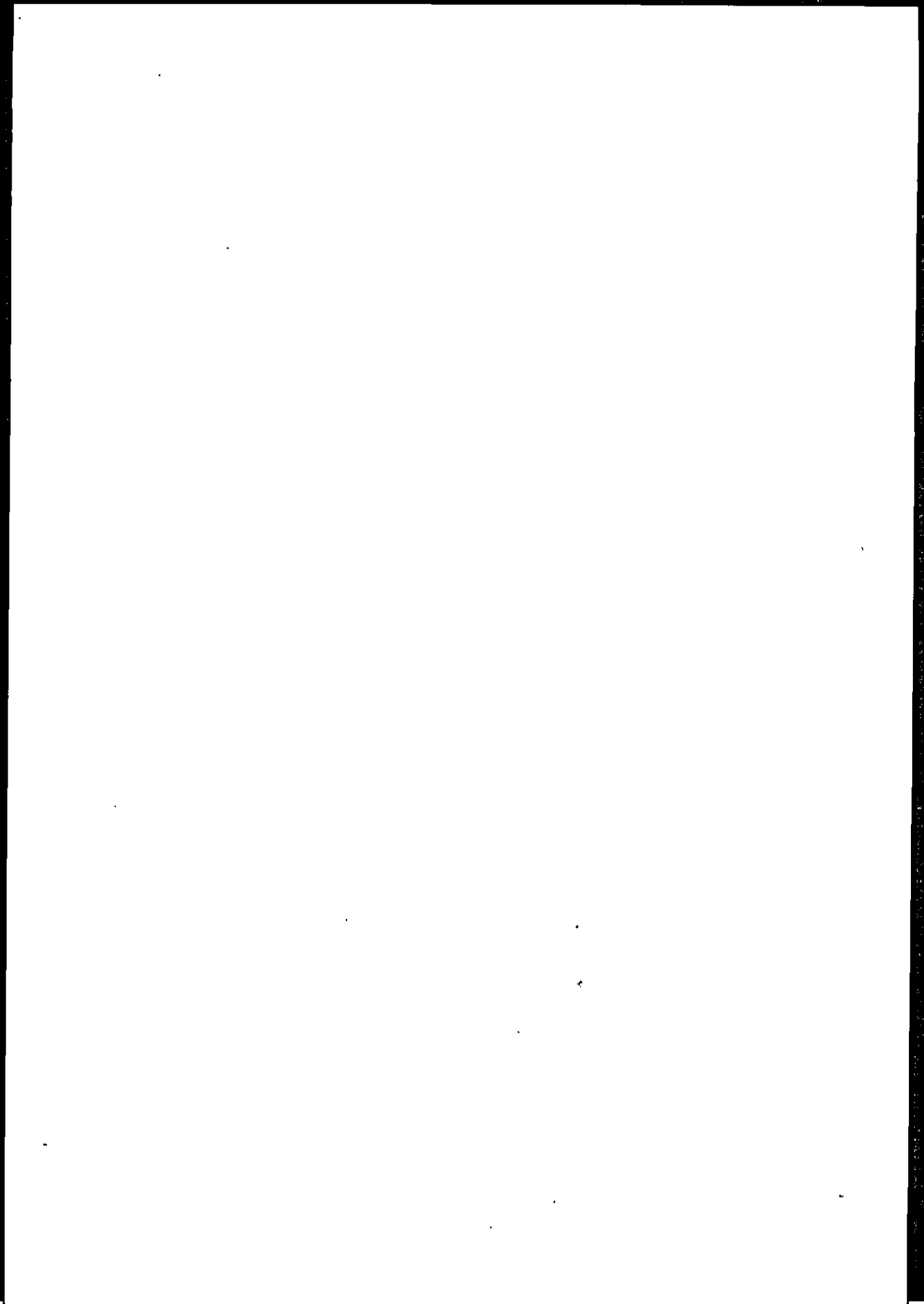
Recommendation

Based on the results of this study, the following recommendations are made to enhance effective delegation and subsequently teachers' performance and administrative effectiveness.

1. *The principals should engage teachers in delegation in budget preparation, facilities maintenance and teachers' welfare so as to develop them along these lines, and then to reduce the load and stress of the principals.*
2. *The school authority should organize seminars and workshops on "Understanding Delegation as a management tool", so that the principals understand more the principles of effective delegation and the benefits of delegation to teachers, principals and the school system.*

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EFFECTIVENESS OF NON-FORMAL EDUCATION THROUGH THE USE OF INSTRUCTIONAL MEDIA

By

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Abstract

The use of instructional media in non-formal education is appreciated all over the world. Non-formal education as an alternate of formal system is the demand of developing countries. To make its use more effective, various instructional media are used. Some of the different roles of instructional media are highlighted in this paper. It was pointed out how to make the use of instructional media in non-formal education more effective.

Introduction

It is a fact that to neglect the functional non-formal educational programmes is a greatest mistake done by a nation. Such mistake has been identified by countries who had fallen victim to it as being grievous and costly. For instance, it was observed by several educators such as Dave.R.H.et.al., (eds.) (1986, p.4) in considering learning strategies for post-literacy and continuing education in China, India, Indonesia, Nepal, Thailand, Vietnam and Pakistan that,

".... for a long time non-formal approaches to adult education have been neglected, as well as informal education. As a consequence of this neglect, it has been very difficult in recent years to organize the education of the working people into a widespread mass movement."

Non-formal education covers every aspect of our educational enterprise which is neither confined to a classroom situation nor subject to organized strategies, curricula, etc. It is the type of education that is free from rigidity with regards to curriculum, learning materials, methodology, venue, duration or the length an individual takes to complete a particular instructional session.

Because of its non-formality, non-formal education is very necessary in the Third World countries where the level of illiteracy is still very high, and the high rate of school drop-out is prevalent as a result of poverty, wars, ignorance, cultural values, carelessness, etc.

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Besides the fact that the negligence is grievous, the approach used for conveying what is taught also matters. Even in formal education, the strategy and instructional materials used for teaching are extremely important. For instance, Kindler (1973) asserts that learners comprehend and retain more of what they are taught when adequate and appropriate instructional media is employed. Learners are said to remember ninety per cent of what they say as they do a thing as against only twenty percent of what they hear. If this assertion is correct and if instructional materials play a great role in making learning effective in formal education, then it is more needful and inevitable for non-formal education because non-formal education covers a wider range of people who are more delicate or complex to handle while teaching. For instance, the following are usually the target groups:

- 1) **Unschooling children**
The children of school age who are unfortunate because they cannot be enlisted in a formal educational system due to poverty, ignorance, inability to cope with formal education as a result of drop-out, etc.
- 2) **Illiterate youths and adults**
These are the people who have never had the opportunity of formal education or its equivalent.
- 3) **Rural dwellers**
The majority of the Nigerian populace who live far away from urban areas or locations where formal education is accessible.
- 4) **Nomads**
The people who have to move from place to place in search of "greener pastures" either for their herds or farmlands. As a result, a meaningful and consistent formal education is not usually considered necessary.

The achievements of the non-formal education as stated in the National Policy of Education will also be better enhanced through the utilization of instructional media as it is done in the formal educational system. The following are the objectives of the National Policy (1998-2010, p.20):

1. *To achieve the global objective of Education for All and All for Education.*
2. *To complement and supplement the formal system to achieve the target of Universal Primary Education (UPE) through community involvement in the shortest possible time.*
3. *To impart functional literacy for adolescents (10-14) who missed out the chance of primary education.*

4. *To provide lasting functional literacy and income generation skills for rural women of 15 to 25 age group.*
5. *To provide the basic educational facilities of working children and reduce child labour.*
6. *To expend the facilities and services of middle level education through community involvement and non-formal means.*

From the above policy statements on education, it is certain that both formal and informal educational systems have a common aim of making learners literate and thereby helping them to be fruitful citizens of the country so that they can contribute meaningfully to the social, economic, political sectors of public at large. The ultimate achievement of these goals is largely anchored on the technological advancement of the society and the application of technological and scientific approaches to all our educational enterprises. The main focus of this paper, therefore, is to bring to the limelight the needed emphasis on the importance of instructional media in making non-formal education functional and more effective.

General Background

According to Dave et al. eds. (1986, p.63). "illiteracy is a serious impediment to the individuals' growth and the country's socio-economic progress." This is a true statement of any country whose illiteracy level remains high. When the level of illiteracy is high in any society, that society will remain backward, antisocial with all barbaric behaviors and actions.

The non-formal education dates back to the colonial era when colonial masters exposed their "servants" or "maids" to some basic non-formal learning. For instance, cooking, dress making or knitting, handwork, housekeeping and the teaching of English language for easy communication were among the common features of informal ways the colonial masters used. This type of education was successful and indirectly executed informally during the free or leisure periods of the colonial house helps or maids;

Advantages of Non-Formal Education

The non-formal education, in general, is an effective way of liberating the individuals in any society from ignorance, poverty, antisocial activities, etc. According to Visocchi (1978, p.3), education is seen as "that process of liberation whereby man frees himself from whatever obstructs him from thinking capacity....." Liberating the individual is the main focus of any form of education. Non-formal education, therefore, helps the rural man to become more human, more of a person and to acquire a higher level in his thinking ability that provides the liberation he truly needs. This type of freedom which a man needs cannot be

acquired for him by others no matter how intelligent they are. Man's liberation actually comes from the continued development and evolution of his ability that can enable him to think or reflect and question what goes on in his environment as opposed to total submission to authority and human exploitation.

The non-formal education also provides alternatives to complement or supplement the incompleteness or inadequacies of the formal educational system. Non-formal education further helps the learners to develop and practice self-help activities rather than mere theories. Research confirms that positive results from non-formal education (especially adult education) come as a result of practice of professional skills (Knowles, 1980; Freire, 1985; Freire and Macedo, 1987; etc). The acquisition and practice of skills boost the self-image self-reliance and confidence of the individual. This is very necessary especially for those who had dropped out from formal education or schooling.

The roles of Instructional Media in Non-Formal Education

The application of instructional media in non-formal education is extremely essential for effectiveness. Besides helping students to comprehend, retain and recall concepts, principles or theories, instructional media also helps them to acquire professional skills which is the main core of the non-formal education. The use of instructional media increases flexibility in learning. For instance, learning programmes which are highly individualized and self-evaluated (such as programmed instruction) increase capacities for self-learning and also opportunities for inter-learning. According to Dave, ed. (1982, p.314) "Technology also provides multiple learning opportunities through a variety of places at a variety of times". This according to him, helps to save cost in the long run.

The following are the examples of specific contribution of instructional materials or media to non-formal education:

a) Eradication of illiteracy

The use of instructional media in non-formal education reduces and or totally eradicates illiteracy when the participants are adequately and appropriately exposed. For instance, developed countries such as the U.S., U.K., etc.. where about 80-85 per cent population is said to be literate, it is largely due to their technological advancement which helps them to be able to make use of educational technology or instructional media such as television, satellite, slides, film strips, audio materials, etc. Actually, the use of instructional materials is the surest means of combating illiteracy especially at the rural level and for bridging the gap between the formal and non-formal learning.

b) Change in social and cultural biases

The application of instructional media in teaching has the potential of breaking social as well as cultural barriers. It is possible for a group of learners to detest certain people or some of their teachers on the ground that they are not from their locality. But, most people especially within the brackets of fully illiterates and semi illiterates) regard instructional materials such as the television, radio, films, etc as mere independent and innocent channels of information. As a result, some undesirable cultural habits and antisocial behaviors can be modified without necessarily hurting the people involved. Negative or wrong views about education can also be corrected with the utilization of instructional media.

c) Equal opportunities to education

The use of instructional materials will bridge the gap between the formal and non-formal systems of education. The use of instructional materials help learners whether rich or poor normal or handicapped, from rural or urban areas to be equally exposed to about the same learning experiences. This can be possible if the same instructional materials such as flip charts, posters, flash cards, television, etc are used for imparting education. Technological advancement has also made instructional materials accessible and has removed all limitations that could hamper this through mobility and portability. Instructional Media take technologically or scientifically based instruction experienced in formal system of education to non-formal system of education as well.

d) Individualized instruction

The application of instructional media provides enough varieties of resources, which are capable of helping learners proceed according to their abilities, interest, speed and convenience, etc. This is particularly significant when considering the fact that non-formal education should be made relevant to the individual's aspirations, interest, convenience, abilities and timing. The individuals can learn at their own speed and ability while avoiding unnecessary rushing or speed that normally occur in formal education. It is further possible to do self-appraisal or assessment with the use of instructional materials such as programmed instruction, slides, teaching machines, etc. For instance, after teaching the primer, the learner can have further drilling with whatever instructional media is made available and to be able to assess his own mastery of what he is learning.

e) Scientifically based instruction

There is a tendency to want to believe that non-formal education does not have to be scientifically based. This is a great error that needs to be corrected. Since the success of the nation's literacy programme is anchored largely on how effective every facet of the nation's educational system including the non-formal

system of education is, it is necessary to make non-formal education scientifically based through the use of instructional media. When this is done, learners will be more creative, innovative and generally successful in their learning.

f) Flexibility in learning

The use of instructional media makes learning programmes and strategies flexible in that they can be adapted to suit individual needs, capabilities, convenience, etc. Flexibility in learning is particularly important in non-formal education. All confinements, restrictions, and formalities experienced in the formal education may not work in non-formal education. Thus flexibility, which is capable of making learners feel at home, while learning is made more desirable. Flexibility makes non-formal learning truly formal and this is desirable because of the learners' specific needs.

g) Mass education

Instructional materials such as films, television, radio and posters are effective means for mass literacy campaign. They help to bring proper awareness to the public on the importance of education, where and when they can attend literacy classes, etc. Many of the instructional materials can also be used to teach or give information to a large group, especially where there is shortage of instructors.

Instructional Media and Acquisition of some Specific Skills

The acquisition of skills requires a step-by-step teaching, demonstrating and exposing the learners to such skills. Even though the learners are often taught Urdu language, the knowledge of many of the participants is not usually adequate to help them understand the instructions given on the procedures necessary for acquiring some skills. While it is desirable and unavoidable that learners are taught the basic rudiments of reading and writing, the use of instructional media provides an alternative or solution to learners who are not yet capable of handling the written instructions or procedures for acquiring a particular skill.

Utilization of Instructional Media in Non-Formal Education

a) Instructional radio and television programmes

Radio

The importance of radio in these days of education and technology can hardly be over-stressed. It is a powerful audio-aid. Pupils of remote places have been benefited by radio lessons. Lectures by educationists are broadcast for imparting useful information. The headmaster and concerned teachers must have

beforehand information about such lesson programmes. There are two types of radio broadcasts i.e. ordinary broadcast and educational broadcast.

Use of Radio in Teaching

- a) First of all, (ie teacher must gather information about radio lessons and study the same. This type of study includes time table and list of programmes.
- b) He should carefully plan on the basis of information collected earlier and by establishing its relevance for the subject to be taught.
- c) He should motivate the pupils mentally so that they learn to listen attentively.
- d) Physical conditions i.e. seating arrangement, light and air, silence, etc., should be well-organized.
- e) Follow-up should also be done after listening to the radio. Discussion should be held on the radio-lesson. Pupils should get opportunity to remove their doubts. They should take note's while listening to the broadcast lesson and thereafter they should get time to complete their notes. They should be asked not to put questions during the broadcast lesson. They should be instructed to note down all (he questions they want to ask when the broadcast is over.

Advantages of Radio

- Radio gives opportunity for listening to lectures of famous educationists and thinkers which is otherwise not possible for each and every pupil and teacher.
- Radio broadcast helps the teacher in achievement of teaching objectives.
- They also provide entertainment in addition to serious learning.
- Radio is very helpful for remote areas where teaching facilities are not adequately available.
- It is less costly and even common people can make use of it.
- The teacher also learns much about latest concepts and principles.
- In view of the increasing population, radio broadcasts have acquired much importance.

Educational Television

Through a television programme, the audience not only hears, but also sees an event taking place. Television is both audio and visual. It is a great improvement upon radio broadcast. It is fast becoming an integral part of school education; invention of television has brought a great revolution in the world of education. Today it is considered to be really an important means for effective

education. It is a powerful medium of communication through auditory as well as visual channels. It helps the students to listen and directly see the lesson on the television screen ensuring teaching learning to be durable and everlasting. (Das, R.C. 1993, p.24)

Role of Television in Education

Use of television has fascinating and tremendous opportunities for the world of education. Television as an instructional tool, is being used in a variety of ways: for direct teaching, for supplementary or enriching the work of schools and colleges, for eradicating illiteracy, for adult education and teacher training etc. At school level, different countries are using this powerful medium in different ways in solving their immediate problems. For instance, Italy made use of it to meet lack of middle school facilities in rural areas by imparting complete course of instruction normally given in middle schools. In France television has been greatly utilized as part of a vast effort to modernize teaching techniques.

- a) Television teaching provides greater equality of opportunities of receiving education for all pupils. We know education is the most important single factor in achieving rapid economic development and for creating a democratic order. Television acts as a mass medium of education and is really a very powerful tool to provide qualitative expansion of education at all levels.
- b) Television teaching creates initiative and inquisitiveness in students. Tele-lessons open a lot of avenues for the students for new creative activities by encouraging model making, experimenting with home made apparatus and becoming keen observers.
- c) The impact of television on teachers is in no way less. It is evident that tele-lessons put greater demands upon teacher's time because they have to make intensive preparations for these lessons. Naturally this pressure for better preparation will result in better classroom teaching. Thus, television is of great help in professional in developing a teacher's capacities.
- d) Through television, the whole teaching process is undergoing a change for the better. Teachers are giving more thought to what topics needed to be included in the syllabus. Television programmes prove helpful in upgrading the curriculum and enriching the educational programme more easily and economically. Students are learning better with television.
- e) Television can display the world of reality and students can see a host of other things in the classroom through its screen which

serves to widen the horizons of children, something that is not within the reach of a common student.

- f) Television as a medium of education has helped in making school a centre for community welfare and education.
- g) Television can help the teachers and the students in the realization of various teaching and learning objectives, its use has improved attendance in high schools. In two shift schools, in view of less time at the disposal of teachers, television helps in completing the prescribed course in time. As an educational device it has helped in overcoming problems of shortage of good teachers, classrooms, audio and visual aids and other resources.
- h) Television can serve as a vehicle of excellence to the students. They can view and hear about the works and thoughts of eminent educationists, renowned teachers and scholars, creative scientists and excellent musicians and artists. Various discussions, which are shown on television, are based on the latest researches and innovations, and by listening to these and by seeing these experts on the television screen students and teachers get due inspiration and motivation and enrich their knowledge. By viewing the visit to Pakistan of foreign Presidents and other dignitaries and foreign visits of our national leaders and their welcome in foreign countries, children feel excited and it gives them the feeling as if they are also visiting foreign countries with their national leaders.
- i) Television has played perhaps the greatest role in promoting international understanding. Recently, all over the world a great emphasis has been laid on education in international understanding.
- j) The usefulness of television for social education cannot be underestimated. Various programmes covering topics like traffic and road sense, community health, adulteration in food, child marriage, good manners and encroachment of public property relating to social education can be put out for the welfare of the people. Experience shows that television teaching has greatly spread social education in underdeveloped countries having high illiteracy rates.
- k) Television is a very useful device and not a means of luxury. Things that are listened are not as effective as the things seen by one's own eyes. The younger generation feels more impressed by seeing a person on T.V. The main reason for the popularity of dramas and films is due to their hold on growing minds.
- l) With the help of television celebration of various national days, for example Independence Day, Birthday of Quaid-i-Azam, Pakistan Day, Army Parade, Eids, Muharram etc, can be shown. Thus,

- television helps in inculcating in students feelings of nationalism, patriotism and brotherhood.
- m) With the help of television, the students can be made aware of the progress and events of the nation and of foreign countries. While in school they can see the events taking place in any part of the world. They can also know about the educational system and structure of different countries.
 - n) Television's contribution in the field of sports too is appreciable. Telecast of various games and matches of cricket, hockey, badminton, table tennis, etc, which are played the world over, created interest among children for games and sports. It also motivates children to participate in sporting activities;
 - o) Television teaching can contribute a great deal in promoting general education like art, humanities, science, music, agriculture languages, health education, yoga, home administration, etc. These programmes help children in learning the modern techniques used in above-mentioned disciplines. These programmes will develop basic skills and stimulate the students' interest in a variety of subjects. Such programmes can also introduce the students to Pakistan crafts and rich cultural background, the meaning of citizenship and the interpretation of current affairs.

Consequently, we can say that television holds vast opportunities and great potentialities for the world of education.

Record Players

The oldest form of recorder player was the hand operated gramophones. It played discs. The electric version was used to play discs which taught correct pronunciation of languages called lingua phone records. English teachers of good schools still use these records in their day-to-day teaching. At times, records are also available about sound effects.

Teachers can use these records in various teaching learning situations. Records of speeches of leaders can be well integrated with classroom teaching activities.

Tape Recorder

This equipment records the sound. It has got three parts:

- a) Implement for sound input called microphone.
- b) Amplifier
- c) Reproducer.

There are two main functions of this equipment. Recording and reproducing. An ordinary person can operate it. There are clear-cut instructions on every button of all the tape recorders regarding its operation. For example, the word 'Play' is written on the button meant for starting the operation of the tape recorder. In the same way 'stop' is written on the button required for halting the recorder.

According to Romiszowski, A.J. (1974, p.163). Tape recorder is useful for imparting training of music, language, drama, etc. It can also be used to correct defects of speech and pronunciation. It is also useful in microteaching, reinforcement of general teaching and its evaluation, in preparing commentary with film slides. Lectures for educational importance and other programmes can also be recorded and reproduced at any time.

Video Cassette Recorder

The audio-video technology has emerged as an important tool in imparting knowledge for a distance learner. Unlike traditional student, the distance learner need not travel to school or college. The audio-video cassettes can be played and replayed at his own will he can stop a particular tape at a point where more details are necessary and can play on slow motion to understand a difficult point. He need not get up early in the morning or late in the night for radio and TV broadcasts. Audio-video cassettes produced for each course by AIOU are kept at all Study Centres and Regional Centres situated all over the country.

The potential exists for providing the basis for learning a wide range of motor, intellectual and cognitive and interpersonal skills, as well as affective aspects. These are important aspects which primed materials cannot deal with adequately.

In some countries as a way of regionalizing a centrally produced programme, video cassette programmes are being built round the study centre concept, a location where several video machines are available to which students bring their study notes. The students run the programmes as individuals. Sometimes study centre provides for groups sessions during which videocassettes are played. (Samanta, R.K. 1991, p.37)

In other countries some institutions assume that students can gain access to such equipment and make programmes which will be used on an individual basis as either supplementary learning material of integral to the teaching programme.

Video Discs

Videodiscs are capable of sorting up to 55,500 individually numbered pictures. This gives about 37 minutes of continuous playing. However, the advantage of the disc lies in its capacity to permit immediate access to any one of the 55,500 individual pictures and its ability to hold that picture on the screen.

The disadvantages of videodiscs are: (i) the high cost of producing the master laser disc (this is in addition to producing a videotape master); (ii) the high cost of players; and (iii) the fact that it is a 'play only' device that cannot record.

While a great deal of research and money have gone into video discs in equipment and software development it is fair to say that as yet it is in its infancy. (Rashid, M. 1998, p.109)

Language Laboratory

The purpose of the language laboratory is to develop listening and speaking skills in foreign languages. The system employs individual study carrels (booths) and the use of audiotape equipment and headphones in combination with other materials. For reasons of convenience, these facilities are housed in one place, as opposed to being portable or mobile. The maintenance of the complicated electronic components is a highly skilled job, requiring an appropriately skilled staff.

Printed Media

The printed materials are instructions or information written down for the benefit of the learner or reader. They are various types but the ones specifically recommended for non-formal education are as pointed out by Lalit Kishore (1989, p.101).

- i. Books - printed books such as the primer and other available texts
- ii. Newspapers, magazines, journals or periodicals. These are educative and have been used to reach the neo-literates or semi literates in particular.
- iii. Generally, textbooks are not easy to come by these days because of their exorbitant cost. Besides, illiterates place little or no value on the purchase of textbooks.
- iv. Handouts/handbills - Even though these are not widely used for non-formal education, there is a need to use handouts to teach.

Integration of Instructional Media into Non-formal Education System

It is very imperative to fully integrate instructional media into the non-formal educational system, especially considering the above-mentioned roles

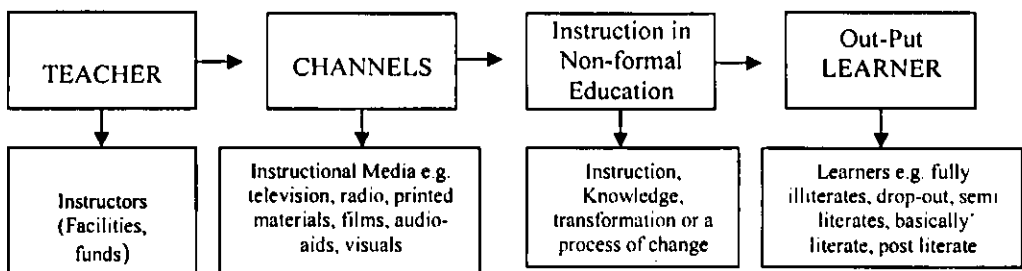
instructional media have been playing and can play in making teaching more effective even in non-formal education. There are possible hurdles, as listed below that need to be removed before full integration can be achieved.

- 1) Ignorance and lack of knowledge in the design, production and utilization of instructional media
- 2) Assumption by instructors that learners can assimilate fully without employing all the senses in the process of learning
- 3) Technological backwardness and insensitivity. such as failure to follow technological advancement or computer based instructions like other nations
- 4) Lack of conscious efforts by instructors to integrate instructional media into their instruction
- 5) Non-availability of funds
- 6) Lack of expertise to assist instructors where possible
- 7) Lack of innovation and creativity on the part of the instructors
- 8) Non availability of basic instructional materials to be provided by the government
- 9) Lack of incentives and proper remuneration by the various forms of government

Despite all the problems enumerated above, the teachers-of non-formal education should have been convinced by now that they will be more effective when they consciously design, produce and utilize instructional media while teaching.

A step towards aiding the instructors or teachers in integrating instructional media into the non-formal education system is summarized in the table below:

Table I
Integration of Instructional Media into the
Non-formal Education system



The table represents an approach through which instructional media can be integrated into the non-formal education system. The instructor, (with adequate facilities and funds) is the traditional transmitter of knowledge. If the teacher must succeed, the transition, instruction or information should go through appropriate channels such as television, radio, films, books, etc. This results in an effective or functional education that gives the learner the necessary knowledge or instruction that brings a desirable change or transformation.

The more appropriate and adequate the channel (or instructional media) for transmitting information would be the more effective the learning is likely to be. The channel enables the teacher to concretely establish a dialogue with the learner. This sharpens the ability of the learner to assimilate and comprehend the information given, and to analyze and interpret the information in terms of the learners' social, environmental or societal dispositions. The integration of instructional media is not only desirable in the formal education as always heralded by educators but much more desirable for non-formal education, considering the caliber of learners.

Conclusion

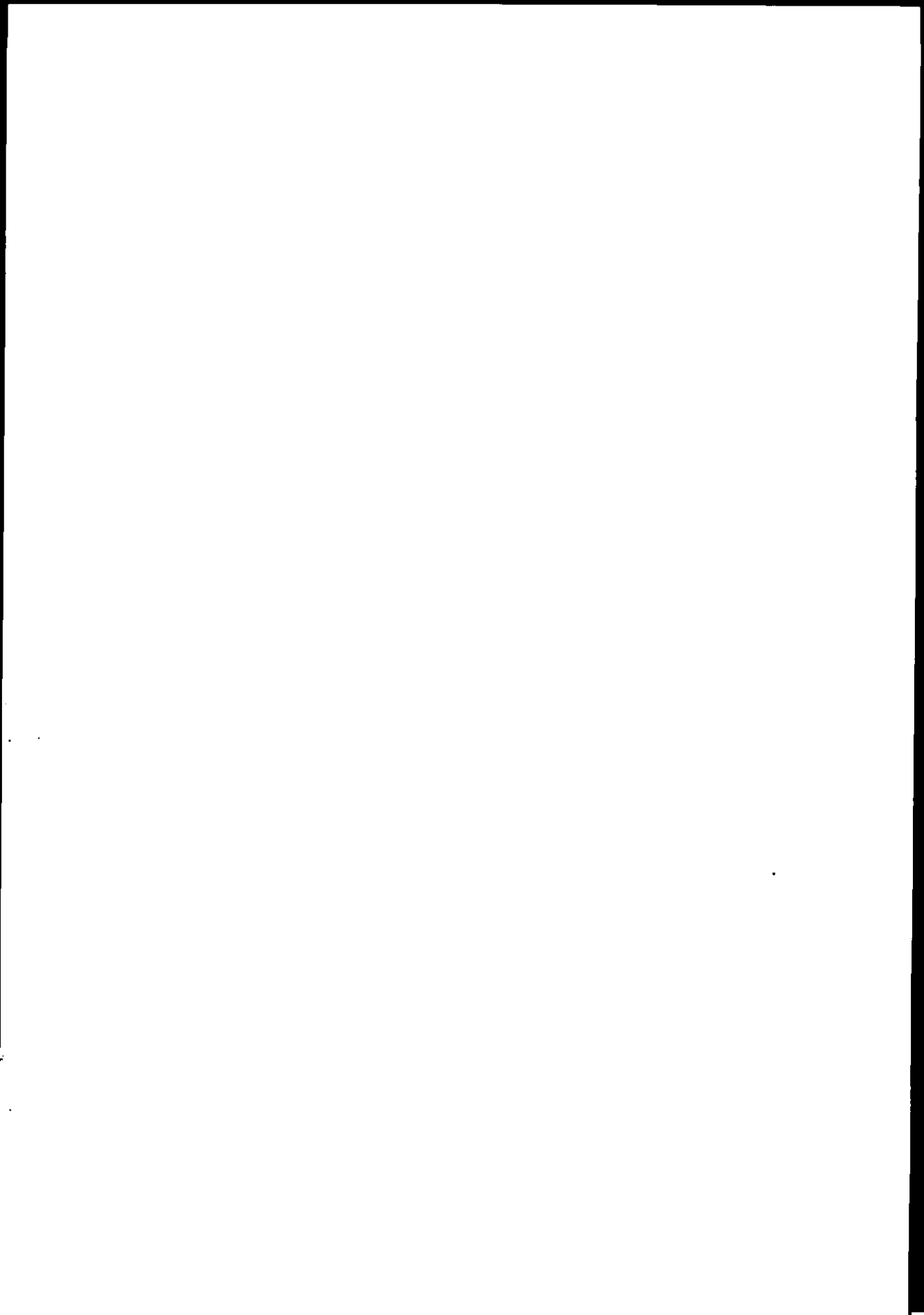
The instructional media is a channel through which instructors or teachers in non-formal education can make their instruction more scientifically based and more effective. It is capable of increasing the effectiveness of their communication skills and hence resulting an effective teaching and learning process. The need to improve the effectiveness of non-formal education has been the emphasis in this paper. Pakistan is currently passing through an important stage of her educational development, a stage in which one can safely conclude that the nation's formal educational system is inadequate. This stage is also witnessing a rather increasing rate of children's dropout from the formal educational systems. More and more adults are withdrawing from formal education into business and professional skills because of dissatisfaction and the craze for wealth. All these (inexhaustible) reasons place a strong force behind the need for integrating instructional media into the non-formal educational system which, in turn, will make non-formal education more effective. To achieve this a deliberate plan to design, produce, utilize and integrate instructional media in the learning and teaching processes should be employed.

Finally, and according to Quane (1989, p.32), since it is not conclusive that education can be acquired only through the formal system of education, but also through non-formal education, informal learning opportunities should be provided through instructional media, both modern and traditional, so that the total learning continuum is integrated into the learners' social and vocational

domains of life. Non-formal education programmes embody a great richness of experience corresponding at least partially to the idea of basic education. Thus, the emphasis in this paper is that non-formal education can be made as effective as the formal system of education, if the media used in teaching can be as scientifically oriented as those used in formal education.

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PROJECT APPROACH: AN ANSWER TO FOSTER CREATIVITY IN PRIMARY SCHOOL EDUCATION

By
Alia Jawad*

*There can be no task nobler than giving every child a better future
(World Declaration on the Survival, Protection and Development of Children,
UNICEF 1990: 165)*

Abstract

After a short experience of teaching to the college and university students, I personally feel that our students lack the basic and vital skills, i.e., reading comprehension, creative writing skills, critical thinking, problem solving and last but not least, producing an authentic and significant research product; which they are supposed to learn at primary levels of education. Without that head start in the early grades the students become handicapped in the higher education, as well in personal and professional life. The central challenge for our education system is to find ways of embedding learning in a range of meaning for contexts, where students can use their knowledge and skills creatively to make an impact on the world around them.

At the time of independence, Pakistan had a poorly educated population and a few educational institutes. Although education system in Pakistan has greatly expanded, still, our education system is grossly inadequate in meeting the standards of education that many other countries have developed in a shorter period of time. It has resulted our nation to fall behind the rapidly growing competitive market in the world with regard to education. Our education standards have continuously been slipping, which has caused an extreme intellectual poverty in the country. We are incapable of providing quality education, even to our university graduates. There is a near unanimity among general opinion that the nation's public higher education is a disaster (Coffma, 1997). If a graduate is asked to write an application, he may find it an arduous task (Pak. Observer, 2005). Academy for Educational Development (1999) reports that the quality of learning and competency level of students and teachers in Pakistan is among the poorest in South Asia. The principals from elite private schools frequently complaint that the graduates from Pakistani universities,

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including those with Ph.D degrees, are generally unable to solve even 'A' level questions of the Cambridge or London Examination Boards. The conceptual questions pose serious difficulties to those who have grown up on a system based on rote learning method (Dawn).

Education is now merely seen as a mean to getting degrees from a top university of the country, in order to make comfortable living; and not a basic tool to teach man how to live a civilized and intellectual life. The scarce resources, high demands of a material driven society, and the resulting chaos and dissatisfaction among the Pakistani youth have changed the students basic concepts of the total educational enterprise. The universities have been conceptualized as merely degree/diploma distributing bodies. Sadly, the teacher's attitude has additionally contributed to this erroneous impact. Teaching seems to have been stripped off its traditional image of a noble profession, and lost its idealism. It has tended to become a commercial pursuit for many individuals. Even at a university level, most teachers do not bother to consult the latest information, or even the library material; they rather choose to dictate from notes saved from the time when they were students in the same department. Students want instant success and teachers also want a shortcut. Even at university level, substandard help books are made use of profusely, where neither teachers nor students have to work hard (Pak. Observer, 2005). It hurts the basic purpose of a university. To thrive in a modern world economy, our youth needs the innovative application of knowledge. It is no longer enough for the students to show that they are capable of passing Public Examinations. The education system should enable them to do more than absorb and feedback information. They should be able to apply what they have learned in new and creative ways.

Creativity and scientific research is a critical activity to compete with a scientific world, which is moving very fast (Seltzer, 1999). People need to be creative to survive in the 21st century. So far so, that the provision of creative education has become a national agenda in the advanced countries of the world. However, the paucity of research activity in our education system is obvious. There is an immediate need for training our people in the scientific and technical education in order to build up our future economic life.

No society has prospered without significant and sustained investment in higher education. Today as the world becomes increasingly interconnected, higher education is considered critical for the achievements of the economic progress, political stability and peace. However, in Pakistan, the higher education ill prepares the society for the challenges that lie ahead of course. Nonetheless, it must be acknowledged that the effectiveness or ineffectiveness of higher

education cannot be determined independently of the state of education as a whole. The product of our secondary and intermediate education system is poorly prepared for the rigors and demands of higher education and also ill equipped for employment and career development through learning and from experiences and self directed study (Taskforce, 2002).

The basic drawback, therefore, lies in our primary and secondary school education. Without sufficient money to send their children to private schools (which is not always the answer either), many parents are stuck with the public schools in their neighborhood. Autocratic teaching styles, and rote memorization remains the dominant teaching style in Pakistan. A subject-matter curriculum, which emphasizes on acquisition of knowledge, with little consideration for creative and critical thinking, remains the core curriculum in our education system. Typically, a subject matter curriculum requires that students listen intently as the teacher delivers lecture, providing information that has been handed down for generations (Farris, 1996). Farris (1996) quotes that in 1800s the students were kept busy in the classrooms by writing spellings ten times, correcting the errors of incorrect sentences, and calculating twenty-five math problems to demonstrate a single math concept: activities that merely filled time, and did little to teach students. Unfortunately, we still possess the same scheme of studies in our schools. The nature of the syllabi, textbooks and the examination system force teachers, to follow the traditional methods of teaching. The classroom activities are teacher-centered. The teacher speaks all the time. The students are passive listeners because the tasks in the classroom are non-communicative in nature. The teacher commands for a continuous attention of the students by writing bits of information on the blackboard, and calls on a succession of students with upraised hands, who take turns responding to their teacher's queries. One of the reasons for seatwork and lectures being so common in Pakistan is the large class size. The number of students in the classrooms is so large that the teachers schedule activities in which every one in the class participates in the same way' at the same time.

Our education system mainly requires and examines the memorization rather than understanding and application of knowledge. The students have to depend upon printed pages only, and memorize the details, which they have to reproduce in the form of answers. This repetition often becomes a cause of demotivation for the students. Moreover, this method inhibits the critical and independent thinking, the spirit of inquiry and problem solving skills, needed for societal growth. Sotto (2002) maintains that these students learn like a parrot. What they have learnt was the rote application of a rule. Enright (1988, pp. 94-95) compares these students with 'bottles of soda pop', who are just the 'compilation

of certain ingredients', having some skills added to them rather than adding sugar and carbonates. Whereas soda pop bottles are 'willing' to sit still for the washing and filling and capping that is their destiny, many children find it quite difficult to sit still for the lecture and drill that they are destined to receive in a conventional method of teaching. Therefore, they turn to disruptive behavior.

The rote method is the oldest, traditional way of teaching which follows the "Law of Repetition". The dictionary definition for the term rote memorization is: "A memorizing process using routine or repetition, often without full attention or comprehension". Therefore, rote memorization is repeating information again and again until it gets pushed into our long-term memory. The rote drill learning by its very nature makes fewer cognitive demands and therefore fewer demands on our brain's integration of previous experience and knowledge. For this reason it requires less intellectual involvement.

Hence, rote memorization has been given a bad name in spite of its clear advantage in some situations. What is now favored is the integrated understanding of the teaching material. Both research and development in modern education have led to instructional innovations designed to make the classroom into a learning environment, which is more responsive to the varying learning needs and interests of the individual children. Children learn in different ways, have different styles, and build on very different backgrounds of experiences. Classrooms increasingly contain groups of children with a wide range of individual differences. Different children require a provision, which is responsive to their special individual needs within the regular classrooms. It is also being increasingly realized that the children have a much wider range of capabilities than they have usually been permitted to show in the regular classroom. In order to show these capabilities, however, they need learning environment, which are responsive to individual differences, which influence learning. The project approach provides one way to introduce a wider range of learning opportunities into the classroom.

A project is defined as an in-depth investigation of a real world topic worthy of children attention and effort. Project based learning motivates students in a unique way by engaging them in their own learning activities. Project approach provides students opportunities to pursue their own interests and questions and make their own decisions about the way they will find answers and solve problems. The amount of information available on project approach is quickly growing. Research as well as text is now increasingly available to help educators understand how to implement these learning strategies. The project based-learning fosters creativity and experimental activity. Most of the teachers teach by 'telling', while

the students learn by 'experimenting' their knowledge in a real or a simulated situation. The students should be encouraged to innovate and not merely to imitate. Teaching is not the transmission of ready-made knowledge; it is rather the creation of a new condition of knowledge- the creation of an original learning disposition. Creative activity is possible in all subjects and all areas of life. Children enjoy being creative and learn by 'doing'. What a child has invented, created or discovered himself, he will remember and value (Todd, 1997).

Planning and implementing the project activities take a lot of teacher's time and energy. Nonetheless, the energy and time which the teacher spends in planning exciting, interactive, purposeful activities is much less and more productive than what they spend on continuous managing and controlling the class. If the teacher is committed, all he/she needs is a little planning and imagination. For example, rather than teaching a story in a conventional style, the teacher could sometimes, divide the students in small groups to discuss the main theme of the story to be later on presented before the class. Sometimes, the students like to draw and sketch the main theme of the story. The students can write journals on main characters or situations of a story, etc. This arrangement requires the same amount of time, the same curriculum and the same material as may be used in the structured class. Integrated activities should be planned carefully, to achieve maximum learning output in the minimum teaching time. Teaching and learning time is a precious commodity of an academic year, which needs serious consideration: Activity periods may only be arranged once in a week or once in a month. In any case, their non-frequency does not affect their educational significance. Students learn lifelong skills from these activities, which may be accommodated further due to the repetitive nature of the academic as well as actual life situations.

Flexibility and responsiveness are the centerpiece of activity/project approach, because teachers, who take initiatives for innovative work, face multi-dimensional tensions. The innovative teacher should be ready to accommodate any changes suggested by the higher authorities, colleagues or the parents. Moreover, the teacher should be prepared to justify the significance of the efforts for not wasting the 'precious' instructional/curriculum time. In any case, teachers are the ones who should change the pedagogical practices, not the politicians or the bureaucrats (Craft, 2001). The onus rests on teachers, individually and collectively, to promote opportunities for creative teaching and learning in their classrooms and schools.

No doubt, many skills are best acquired systematically under the direct instruction of the teacher. Whole class direct instruction is economical and likely

to be the most frequent kind of instruction children will experience in the school. Nonetheless, the project work and the systematic instruction can be seen as providing complementary learning opportunities. In systematic instruction the children acquire the skills and in project work they apply these skills in a meaningful context. The project work can be seen as the part of the curriculum, which supports and extends the more formal and teacher directed instructional elements.

Project work allows the teachers to create tasks whose complexity and openness mimic problems in real world (Blumenfeld, 1991). Students enjoy learning when it is according to their experiential background and makes sense to them. The activities should provide a range of opportunities for students to practice and use the content given in the lesson with a wide range of context in diverse ways. In planning the project activities, those should be selected which the students would most likely enjoy to do, and also meet the learning goals of the curriculum. For example, presenting the real object/models in the classroom, i.e., looking at the globe, designing questions on different parts of the world, or classroom visitors, i.e., planning a visit of the school gardener before starting a lesson on gardening, or field trips, i.e., taking occasional walks around the school grounds (Enright, 1988). Students can see the interdisciplinary nature of these tasks, and see that each task may have more than one solution. If students are given a freedom to choose from different strategies and approaches they are more engaged in learning process and these students will be more likely to approach other problems with an open mind. The aim is eventually to have a set of learning activities that allow students to explore different subject matter areas using different thinking processes; activities that are exciting and enjoyable for students; involve students working cooperatively with peers, teachers, families and the community; and last but not least, activities that provide success to students at many levels while using mistakes as an accepted, integral part of their projects (Enright, 1988). The students may make an awful lot of mistakes while doing things at their own. However, it is not possible to learn anything without making mistakes. Kounin (1977) argues that, as we learn 'by consequences', we learn most of all from our mistakes. The curriculum objectives and competencies should be intrinsically imbedded in these projects, not only to ensure that objectives are being met, but also to justify the projects to the administrators and parents and other concerned authorities that the curriculum has been 'covered', and not to lose the 'precious instructional time'.

Another provision step is creative writing skills. Writing is one of the potent methods to empower student's critical thinking. Writing is a productive skill, which has been practiced in classrooms for centuries. Unfortunately, the

way writing is taught to the students, renders it extremely dull. Reading and writing are made explicitly meaningless and useless in our classrooms. Many young children come to school with an interest in learning. They love creativity. Nonetheless, beginning education programme often continue to demand that children sit quietly on hard chairs and listen carefully to the rules and regulations of a written expression. The rules and regulations may be too abstract and intrinsically uninteresting for them. Therefore, not all children respond well to this regimental attitude of a teacher. It is no wonder that they try to escape from this dry environment. As a result many students reach secondary level with little exposure, and little experience with written expression.

Experts agree that writing is a learned skill that can be taught in a school setting and that it should be taught as a thinking-learning activity (Lerner, 1988). Writing is the most complicated action of the central nervous system (Westman, 1990). It is an act of committing thoughts to written form. As a product of one's internal organization, it is a form of creativity. Writing is an active process. During writing the students must actively work at producing something that did not exist before. Writing projects are most successful when students have a personal interest in the subject. The experts consider it extremely important to provide the student writers with sufficient time to think, reflect, write and rewrite. The atmosphere of the classroom should foster writing activities and encourage cooperative writing work. The students should be allowed to discuss wherever necessary. It is a deliberate, premeditated and sustained act of imagination and communication (Gillani, 1997). Reading and writing should be used for exploring, sharing, enjoying, and thinking about the real world. It also furnishes students with a definite sense of achievements, which can act as a push to enhance their learning.

Education is a continuum. A higher education system irrespective of the disciplines involved cannot operate in a vacuum. Hence the quality of education in schools will effect significantly the preparation of students and the quality of higher education. The quality of higher education also effects the quality of education in schools by preparing teachers with clearer concepts of the subject they teach and enhancing students interest and guiding aspirations early in their development, leading to stronger foundations of knowledge.

In conclusion, it may be surmised that the acquisition of life long skills is the weakest point in our education system. It is high time to revise and review the traditional methods of teaching. The teachers will have to find the new ways and means for inculcating the spirit of inquiry and problem solving skills to the students at an early age. There is no magic formula to solve the problems, which

Pakistan has been facing since its birth. Still, there is a growing realization that we need to embark on a set of hard, pragmatic and doable decisions. The policy makers and the educationists need meticulous planning to establish a clear-cut strategy for a visible change in our education system. Our obvious starting point should be to create a cadre of well motivated, disciplined, honest and professionally competent teachers, with clear direction and passion for their profession. Anyhow, continuous learning and re-training should still be made essential for them. Our system is in a drastic need of teachers who have a clear idea of what they want their students to get out of their classrooms (their educational goals), who have a clear theoretical and practical framework for accomplishing their goals (their instructional models), and who constantly strive to develop and improve the knowledge and performance and to grow professionally. The foremost criteria for teacher's selection and recruitment should be to find out a team of warm, enthusiastic, and well organized teachers, who are equally well versed in their craft of teaching. Second, the curriculum should be revised in order to meet the needs of students so that they will be fully functional in society after graduation, rather than just being able to graduate. As obvious from above discussion, one of the most fundamental challenges facing educators is how to instill in the children the attitude, knowledge, and outlooks they will require to function successfully as adults in the future. Their ability to respond to this imperative depends on the extent to which they can fashion curricula that are truly responsive to the life long learning of the students (Todd, 1977). Third, the educationists should sample the better aspects of different teaching methods in elementary schools. We need to use common sense and experience to create a combination of differing perspectives and blend the positive points of different approaches, thus ending up having a classroom that is more engaging and more creative.

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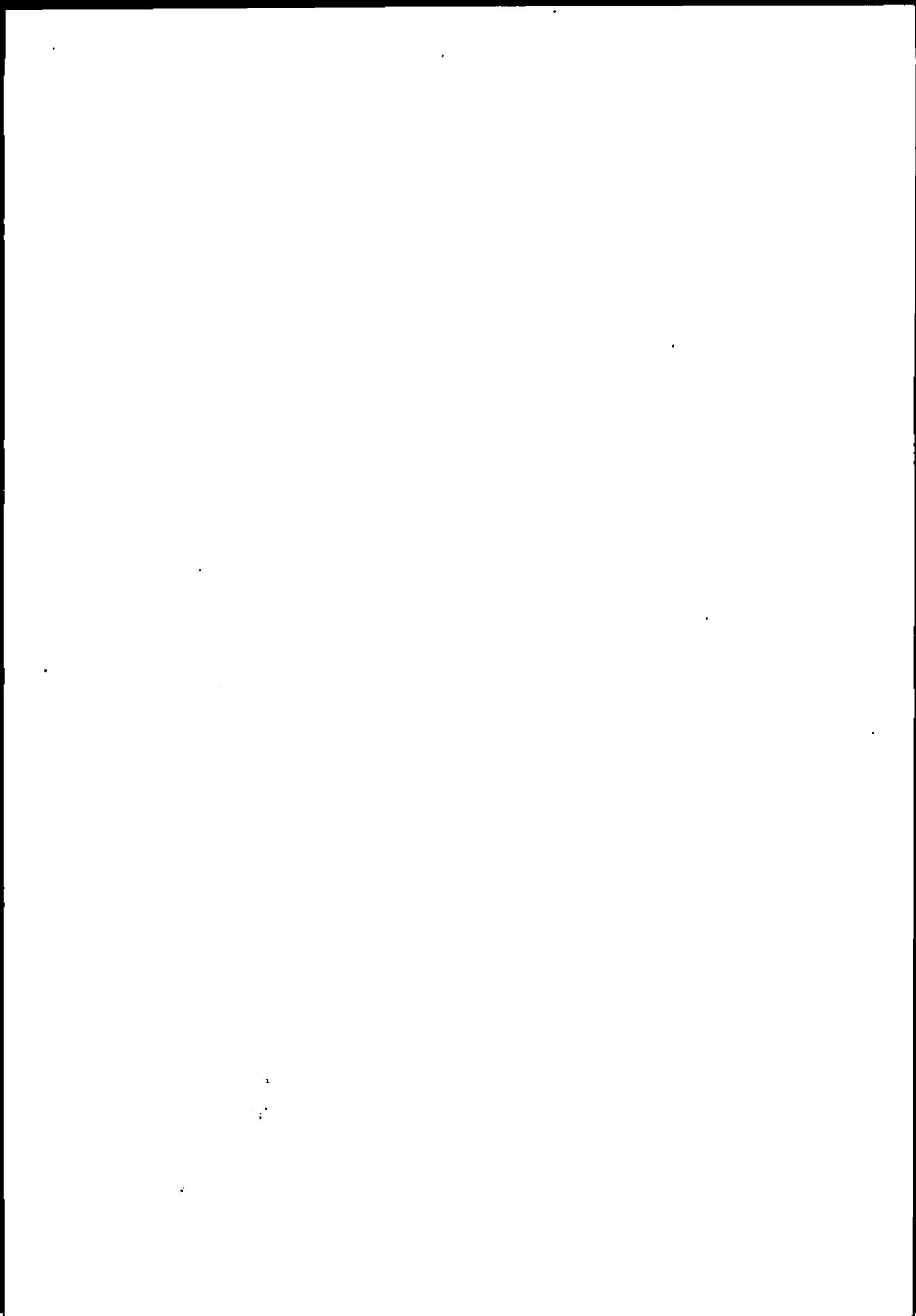
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ICT PRACTICES IN LITERACY AND SKILL TRAINING IN OPEN DISTANCE LEARNING – A PERSPECTIVE OF PAKISTAN

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This paper was presented in COL workshop on Awareness and Advocacy: Using ODL for Literacy and Skills Training held at BARC Centre in Dhakka, Bangladesh from 26-28 September, 2005 as Country Paper

Abstract

The paper focuses upon development, use and impact of ICTs in literacy and skill training in open distance and non-formal modes of education in Pakistan along with their impact size, rank order and percentile gain. The ICT initiatives ranged from flip charts to online delivery through Interactive Radio Instruction (IRI), Educational Television (ETV), video cassettes, CD ROMs, Multimedia, etc. The ICTs have been the armoury of AIOU and virtual universities of Pakistan for their literacy and skill training programme because of their wide canvassed outreach regions of operation. The AIOU has its own well established Institute of Educational Technology (IET) which has produced about 2699 radio programmes, and 637 T.V. programmes in addition to several broad cast audios/videos. Other practitioners in the use of ICTs for literacy and skill training through ODL system include ABES, PARC, Girl Guide Association, Jin Technologies, Tameer-e-millat Foundation and FM 99 Radio. The highest Impact size (0.67) was in case of ICT initiatives of Institute of Mass Education (IME), Allama Iqbal Open University (AIOU) for Adult and Functional Literacy(AFL) and skill training. The notable and astonishing impact size (0.63) was that of Pakistan Agricultural Research Council (PARC) which is using at least 15 ICTs for the AFL and skill training of farmers. The paper strongly recommends that, ICTs may be delivered to one of multiple sights via printed material, TV and radio in literacy and skill training. The real time and non-real time computer technologies may also be stimulated in part by the new internet-based and multimedia technologies in Pakistan.

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Rationale

At the beginning of this century, education has faced many challenges. For instance, how to provide high quality education and training has become an important question to be answered in the 21st century for all human beings who need education and can profit from it in the most cost-effective way. Education systems have tried to overcome the challenges by developing new approaches. Information and communication technology (ICT) has a critical role in the new approaches as enhancing the dissemination of information and helping to meet these challenges. Information technology has now become basic vehicle for distance education in modern society. At the same time, the tools and techniques of information technology are of value in the processes of learning and in the organization and management of educational open and virtual universities.

Information and communication technology (ICT) has become within a very short time one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education alongside reading writing and numeracy.

(UNESCO Information and Communication Technologies 1998)

From the beginning of the open and distance education, ICT has had a critical role in enhancing the quality of distance education. The role of ICT is to serve open and distance learning in particular, by helping students to learn and teachers to perform their teaching activities more effectively. As a consequence of rapid developments in a short time, ICT has entered into almost all disciplines and trainings on the agenda of ODL system. The need to incorporate ICT into open and distance education is now inescapable, largely because of the growth of the Internet. In this context, integration of ICT into open and distance education is a critical issue. Many action plans were adopted and standards were determined over the world in order to integrate ICT in literacy, and programmes of ODL system.

Why ICTs for Literacy and Skill Training

The rationale behind bringing development and civil society together was to address two fundamental questions- Why basic education? And, why use of technology in literacy and skill training? The first question can be answered by looking at the span of basic education from early childhood to secondary education inclusive of conventional and non-formal ODL education and literacy programmes and skill training as a necessary adjunct. Appropriate technologies in these areas are those that are effective for increasing access to, or improving the

quality of adult literacy ...for the many rather than the few, and those that play a leading role in the teaching learning process. These include:

- Radio and audio cassettes
- Television and video cassettes
- Printed materials like primers and flip charts
- CDs
- Projectors.
- Computer
- Internet and e-mail.

ICTs can improve both the access and quality aspects in education in terms of opportunities on the one hand and improving effectiveness and enriching the learning process on the other. ICTs also helps standardize and make learning easier. Connecting access and quality through a radio and audio is a low cost option with a wide and powerful outreach. Interactive radio instruction has also tested positively with a variety of audiences, sometimes with evidence of girls and women benefiting more than other groups. On the other hand, instructional television has been less successful to date. However, video, especially in combination with television, holds greater promise. The supporting role of printed materials is critical in all applications.

International experience shows that appropriate ICT has proved to be a welcome visitor to the classroom and other centers for literacy and skill training. It is evolving "upward link" to newer ICT's. There are new and exciting ideas concerning the utility of technology for literacy and training education provision for out-of-school and outreach youth and adults. Much of this work is still in its infancy and evolving very rapidly.

Many studies and documents have identified many benefits of ICT-based ODL education. As far as impact on the distance and non formal education system is concerned, it makes the distance and non formal education system more open and flexible towards a life-long learning society; increases independence and individuality of learning and makes both Education for All (EFA) and Education for Each (EFE) possible. It contributes to new patterns of teaching as it requires new competencies, skills, behaviour, working style and methodology of teaching and tutoring as well as contributes towards enhancing the status of the teaching profession. The impact on learner is manifested in the balance required between the increased independence, flexibility and self-control on the one hand and ethics in learning and teaching through on-line teaching on the other hand. The other arguments for use of ICT-based distance

and non formal education and literacy and training skills may be cited as given below:

- ICT may provide a more effective resource than other alternatives.
- ICT offers a range of opportunities for pupils in presentation and evaluation during a whole-class teaching session
- Independent work is an ideal place for ICTs in a literacy lesson with many opportunities for enhancing pupil activities. Some software provides additional support for independent reading (e.g. text to speech options) and writing (e.g. predictive word processors, word banks, and spell checkers) that increase pupils' confidence when working alone.
- Teaching in a small group with the computer as the focus, alters the group dynamic and places the teacher in a less threatening and less obviously controlling position.
- Literacy through distance and non-formal education will need to take advantage of the power of technology, and work will require an ever more skilled population of producers and consumers. Literacy skill training and technology are becoming inter-dependent.
- Even in poorest population sectors and countries, ICT is now too cheap to be ignored. While once it could be said that ICT would take money away from other lower technologies (such as chalk and blackboards), new approaches can show cost-effective benefits when properly employed.
- The promise of information and communications technologies to enhance the basic education, literacy and livelihood of poor people is a tremendously challenging area of development work today, in both poor and wealthy nations.

Any debate on use of ICTs in literacy and training skill in ODL system can focus on the following five themes:

- How the technology is used rather than the scale of the technology?
- The growing convergence of technologies is making the "high tech" vs. "low tech" distinction increasingly artificial;

- Making use of multiple technologies and exploiting the respective advantages of each for effective learning;
- Planning their use so that they are pulling towards the same educational goals;
- Recognizing that the effective use of technology to assist basic distance and non-formal education comes out not with the hardware that is used, but rather with the way that learning experiences are designed.

Interactive sessions with participants regarding enthusiastically indicated possibilities for using the information in different ways, creating culturally appropriate role models, using local sounds and characters to make distance and non formal education fun was something new for the participants especially the school teachers. The possibility of using radio as a school-based technology was effectively communicated. Moreover, since everything has to be recorded before it is broadcast, audiocassettes would be available for use in areas where there was no radio coverage.

A Case of AIOU

Pakistan is rapidly progressing in the field of information technology since 2000 when, for the first time an IT policy was officially announced by the government of Pakistan. In 1947, Pakistan inherited a total of 12000 working telephones which has increased to 4.2 million with a tele-density of 3.25 in 2004. There are more than 2000 nation-wide dialing stations. About 1800 cities have been connected by Universal Internet Excess resulting in more than nine million internet users in Pakistan (2 million internet connections). The current backbone has recently been upgraded to DWDM with the capacity of 10 Gb/s. Bandwidth available is increasing from existing 215.2 Mb/s and number of ISPs is 127. Pakistan owns a communication satellite now in the orbit and has extensive international connectivity places at the pivotal positions in the region. Computer and its education has gained accelerated popularity since 2000 in Pakistan and computer is being used in every walk of life. There are more than 300 software houses in Pakistan producing and utilizing different ICTs like internet, e-mail, CDs, websites and other programmes.

Pakistan has long experience of using information technologies, especially broadcasting, to support the work of what are described as "nation-building agencies". The technologies have, been a part of the armoury of the Allama Iqbal Open University, established in 1974, which from its foundation has had a responsibility of mass education at various levels, particularly literacy and

training in vocations and life skills. Over the years it has, for example, used radio along with its other teaching methods in teacher training.

The great achievements of AIOU and VU through their open distance learning system coupled with T.V, radio programmes, audio-video cassettes, flip charts, etc, provide a solid evidence that appropriate use of ICTs may allow any country to increase excess, improve quality and cut cost-all at the same time. This educational revolution with the potential dramatic acceleration in adult literacy may also be brought through appropriate use of ICTs in the literacy programmes of EFA Wing, Ministry of education, National Commission for Human Development (NCHD), Provincial Directorates of Literacy and Mass Education, NGOs and other organizations working in the field of adult literacy and mass education.

As far as the literacy and skill training is concerned, ICTs have been hardly used in Pakistan except probably some PTV and PBC broadcasts. This makes a strong case to study the ICT – based practices in literacy and skill training in Pakistan.

ICT Used by Allama Iqbal Open University (AIOU)

(a) General Armoury

The Institute of Educational Technology (IET) – a centre for media production was established with the foundation of this University as its integral part. It has effectively used three mass media i.e. print, sound and picture for its delivery system. The radio and television programmes produced in the Institute of Educational Technology, promote and support the distance teaching based courses of the University. The audio-visual material produced is transmitted on the national broadcasting network and non-broadcast media is used for small group instruction and individual study. The media support which supplements the University's course materials also has a significant public educational value. The Second Educational Channel PTV started functioning from November 1992. The ETV is using satellite for beaming its programmes. The IET, AIOU is contributing one hour daily Educational Programme on this channel.

The previous TV studio equipment at IET was provided by UNDP under technical assistance to the Allama Iqbal Open University in 1983 as a pilot project. TV studio and the radio studio equipment was provided by ODA. Before 1983, the University was producing the radio programmes at the campus in an improvised radio studio and the television programmes were

produced at the studios of PTV, Rawalpindi. The pilot radio/TV equipment was effectively put for use from 1983 to 1996. When installed, the working life of life equipment was estimated ten years. This old equipment has been installed in one of the T.V studios and is being used for training of fresh academicians and producers for orientation into distance education.

In order to replace old and obsolete equipment, a project was undertaken for production of programmes and the Japanese government very kindly agreed for a grant-in-aid Project for 974 Million Yen and the agreement for this project was signed on 22nd March, 1995 between the two governments. This project was implemented by the end of 1996. After the completion of the project, the AIOU has been able to increase not only the number of its programmes but even the quality of the software.

The existing profile of 240 courses claim significant media support. The support at present is in the form of 637 TV programmes, 2699 radio programmes, 518 non-broadcast audios, 17 sound slides, 70 audio cassettes with flip charts and 107 non-broadcast video till March 2004. The support for functional courses is inadequate as over 70 per cent population is illiterate which can effectively be reached through TV/Radio and non-broadcast programmes. Extended media support in this regard is of crucial importance. Quality and extended service is enabling IET to produce better media material for reaching the majority of dispossessed masses since both radio and television have the potential to enhance the literacy rate in the country. The AIOU is, thus, contributing its share in this area like every open learning system has done in their respective countries. Its IET has already produced science programmes at Higher Secondary level in Physics, Chemistry, Biology, Mathematics and English, 50 programmes in all i.e., ten programmes of half hour duration for each subject. The audio visual media material is also being produced for teachers' training courses at different levels. The IET has recently produced 20 programmes on "Science Video Textbooks Project" at Secondary level, sponsored by Ministry of Education, STE Wing. These programmes on Physics, Chemistry, Biology and Mathematics would be distributed as supplementary material to all secondary schools throughout Pakistan.

The importance of Information Technology in the present day world has been taken into consideration by the University by launching BCS and MCS and other diploma course in Computer Science. The IET has provided media support in this crucial area in different realms of computer

science. The IET has also planned media support at graduate and post-graduate level for science courses during the next five years.

A detail analogue of number of different ICTs produced by the AIOU after its formation is given in Table 1.

Table - 1
Showing the number of different ICTs produced by AIOU in last 28 years

Year	Radio	T.V.	N.B. Audio	N.B. Video	S.S. Show	Flip chart
A. TV Programmes produced by PTV – Radio Programmes produced by IET						
1976-77	120	24	–	–	–	–
1977-78	125	30	–	–	–	–
1978-79	145	15	–	–	–	–
1979-80	153	12	–	–	–	–
1980-81	129	22	–	–	–	–
1981-82	133	16	–	–	–	–
1982-83	54	11	–	–	–	–
1983-84	120	19	–	–	–	–
	979	149	–	–	–	–
B. U – Matic High Band IET Studio						
1984-85	74	23	–	1	3	4
1985-86	94	24	–	–	4	10
1986-87	93	21	18	4	6	5
1987-88	101	9	50	14	4	
1988-89	179	20	45	6	–	–
1989-90	200	15	7	1	–	–
1990-91	146	13	38	–	–	38
1991-92	84	14	17	5	–	
1992-93	60	31	35	–	–	–
1993-94	59	43	24	–	–	–
July 94 to Dec. 94	26	20	7	–	–	–
Jan. 95 to Jun. 95	26	16	19	–	–	–
July 95 to Dec. 95	27	4	2	–	–	–
Jan. 96 to Jun. 96	26	5	2	–	–	–
July 96 to Dec. 96	26	2	8	–	–	–
	1221	260	272	31	17	70
C. Betacam SP IET Studio						
Jan. 97 to June 97	36	2	2	1	–	–
July 97 to Dec. 97	26	17	5	7	–	–

Year	Radio	T.V.	N.B. Audio	N.B. Video	S.S. Show	Flip chart
Jan. 98 to June 98	28	3	-	-	-	-
July 98 to December 98	29	4	-	-	-	-
Jan. 99 to June 99	31	6	-	14	-	-
July 1999 to Jun 2000	61	26	-	28	-	-
July 2000 to Dec. 2000	30	12	-	-	-	-
Jan. 2001 to Dec. 2001	92	32	35	2	-	-
Jan 2002 to Sept. 2002	64	41	53	1	-	-
Oct. 2002 to March 2003	37	31	80	-	-	-
April 2003 to March	65	41	71	23	-	-
	499	215+13=228	246	76	-	-
GRAND TOTAL:	2699	637	518	107	17	70

* N.B. stands for "Non-Broadcast"

* S.S. stands for "Sound-Slide"

(b) Use of ICTs In "FEpra" Project of AIOU

Besides the radio and TV programmes for adult literacy and awareness, it was probably the first project in which ICTs were actively used for functional literacy of rural area males and females, by a state-run institution AIOU. Functional Education Programme for Rural Areas (FEpra) was started in 1983 by BUESP with the total sponsorship of Netherlands's government. It used AV Van, audio cassettes and flip charts as the ICTs alongwith the primer and other course books. It provided functional literacy in the following 10 issues/problems through the use of ICTs in the rural areas of Rawalpindi, Islamabad, Kharian and Uch Sharif:

1. Child care
2. Poultry keeping at home
3. Electricity in the village
4. Livestock management
5. Agricultural credits
6. Sanitation
7. Better yields
8. First aid
9. Population education
10. Women's health

The ICTs were developed in Siraiki and Punjabi languages, keeping in view the facilitation and understanding of target learners. These ICTs were

pre-tested and improved. Teacher training was also provided through ICTs and in ICTs use during the project.

Methodology Used

The methodology was based on the outreach and the distance education system of AIOU. The ICTs were planned and developed according to the primer and course contents. Literacy centers were opened in the target areas. Each literacy group consisted of 15 persons. Trained teachers used ICTs for teaching the group and central monitoring team from AIOU visited to each center fortnightly with A.V Van containing all the ICTs for guidance, supervision, monitoring and evaluation.

Beneficiaries

Total numbers of beneficiaries in the ten cycles from 1983 to 1993 were 23873 (12265 males and 11608 females), in the four districts, in 700 groups. The pass percentage of the learners was 80 % for Rawalpind, 90% for Islamabad, 65% for Uch Sharif and 83% for Kharian. Drop out rate was measured as 11% of the total enrolment.

Cost-Effectiveness

According to the report on Consultancy Mission by Berry Reeves and Dr. David Warr (pp.34-36), cost effectiveness for FEPR was, as given below:

Table - 2
Showing the Cost-effectiveness of the FEPR

Fixed costs	Rs.319.00 per learner
Variable costs	Rs.253.00 per learner
Total cost per learner	Rs.572.00
Total cost per learner based on average enrolment (520 p.a) over the 18 cycles	Rs.3080.00
Overall cost for each student passing the examination	Rs.1056.00

Impact, Evaluation and Conditions of Replication

This ICT based education practice of FEPR was evaluated after every two years by foreign as well as local consultants and found useful, keeping in view its mechanism and outcome. All the evaluation reports recommended replication of the ICT based adult literacy after further improving the whole package. These have been replicated in the form of a new project BEFP which is being run by AIOU from its own resources without any sponsorship.

(c) **Use of multimedia CDs and internet for education by Computer Science Department, AIOU.**

To take initiative in the use of multimedia in the ODL system of education initially for training in the field of Computer Science and Information Technology, the University has established a Multimedia Electronic Courseware Design Centre at its Computer Science Department with the funding of Higher Education Commission, Pakistan.

Under this project, multimedia laboratories have been set up at the AIOU main campus, and at the regional campus Lahore. Under the Electronic Courseware, two courses in information technology/computer science at master level and four courses in information technology/computer science at bachelor level are being developed. Six courses in information technology PGD/Diploma certification/continuing professional education are being developed.

Objectives

The main objectives of the project are:

1. To develop international standard information technology course materials in electronic form. This includes the multimedia courseware and web enabled courseware;
2. To prepare electronic documents and printed manuals to make an effective use of the course materials;
3. To develop capacity of AIOU faculty by training in the design and development of new IT based course materials; and
4. To initiate multimedia and web enabled courseware development work in Pakistan and to launch new electronic course materials to assist in IT training and education in Pakistan.

Course Development Phase

In this phase, the course contents are developed using the expertise of house professional coupled with expertise from outside the University.

Course development phase consists of the following activities:

- i. Course Outline
- ii. Course Write-up
- iii. Course Write-up review
- iv. Script writing
- v. Script review
- vi. Multimedia text and animation design creation
- vii. Test item development

Multimedia Production Phase

In this phase, the production of the multimedia component of the learning package is developed on the basis of the material produced from the last phase. This phase is carried out with the help of other relevant departments of AIOU.

Following activities are performed during this phase:

- i. Graphics and interface design.
- ii. Sounds recording.
- iii. Sounds editing.
- iv. Animations.
- v. Integration.

Product Testing Phase

In this phase, the testing of the learning package is done both inside the department as well as in the field. Necessary changes\corrections are made on the basis of test reports.

Expected Beneficiaries

The Expected beneficiaries of these ICTs are more than 5000 male and female students of AIOU all over the Pakistan in the field of Computer Science.

Open Learning Institute of Virtual Education (OLIVE)

Open Learning Institute of Virtual Education – an e-educational programme is being launched by AIOU. It comprises of online registration for education in any area of interest offered by the university, and contains web-based lectures. This would definitely help to eliminate the need of a regular campus and hurdles to reach the premises on time. Students are provided with the facility of Net Meeting, online chat session with tutor (Virtual Class room), access to online course material and discussion forum for student to discuss academic as well as other related issues on the web. Using this interface, students can communicate with each other as well with management and Faculty very effectively. Online help will be provided to the students, tutors and university staff to use the web site more efficiently. A static page for help will be displayed for using all the features. Students can view the exam schedule, results, and sample questions etc., which are to be held at the end of each semester. Students can submit their assignments in PDF format. This file contains the information about the assignments. Students can view the submitted

assignments and can comment on it. The ICT armoury of AIOU is summarized in Table 3.

Table-3: ICT Armoury of AIOU

S. No.	Specificity	ICT Used	Numbers	Topic (s)	Years	Cost (Rs.)	Level/ Beneficiaries ¹	Territory covered
1.	General (IET)	TV Programme	637	For different courses offered by AIOU	1976 to 2004	75,000/prog	Students of AIOU (1 million)	All over Pakistan
		Radio Programme	2699	-do-	1976 to 2004	7780/prog	-do-	-do-
		Video Cassettes	107	-do-	1984 to 2004	75,000/prog	-do-	-do-
		Audio Cassettes	518	-do-	1986 to 2004	80 per cassette	-do-	-do-
		S. S. Show	17	-do-	1984 to 1988		-do-	-do-
		Flip Charts	70	-do-	1984 to 1992		-do-	-do-
Computer Science Department, AIOU	CDs	12	Computer Related Courses	2003 to 2004	3.2 Millions	Bachelor , Masters, PGD students (5000+)	All over Pakistan	
	Online Education Internet/Email	2 courses	Information Technology Management, Software Engineering	2003 to 2004	4500 per course	Masters (30 Students/semester)	-do-	
Institute of Mass Education, AIOU	TV Programme	8 to 10	Functional Literacy, Women's lives, Health, Vocational and life Skills,	2004	2750 per package	Illiterates and women of rural areas	Rural areas of Pakistan	
	Video Cassettes	28	-do-	-do-		-do-	-do-	
	Audio Cassettes	10	-do-	-do-		-do-	-do-	
	Flip Charts	70	Functional Literacy, related to Women	-do-		-do-	-do-	

Other initiatives in ICT based literacy and skill training using ODL system

Besides AIOU and virtual University, there are a score of organizations like ABES attending this workshop as practitioner from my country who are not only producing, but actively using ICTs fro imparting literacy and skill training using non-formal mode of education. Significant of these are:

- i. Telelessons by Educational Television (ETV) AFL Programme (1978 – 1984) using Television Programmes.
- ii. ICT based AFL of farmers – a practice by Pakistan Agricultural Research Council (PARC), using e-mail, Online Education, Computer Assisted Teaching, TV Programme, radio programme, video cassettes, audio cassettes, multimedia projector, slide projector, overhead projector, flip charts, printed charts.
- iii. ICTs used by Pakistan Girls Guide Association (PGGA)- Literacy Resource Center, Punjab using CDs, radio programmes, audio-cassettes, flip charts printed charts, Internet and email, multimedia, overhead and slide projector.
- iv. ICT – Based education Initiative of TMF, radio programmes, printed charts and computers.
- v. Functional literacy through private radio channel Power 99 in programme.
- vi. CD – ROM as ICT for literacy by JIN Technologies (Pvt.) Limited “Cartoon Qaida” – urdu primer, produced for literacy.

Impact Study

A study was formally conducted to find out the impact of use of ICTs in literacy and skill training through ODL system by developing a criteria (Annex-A) and ICTs Initiatives of various organizations in Pakistan were ranked which is provided in Table-3.

Table - 4

Showing Rank Order, Impact Size, and Percentile gain of the past and recent ICT initiatives for literacy and basic education in Pakistan

Past Initiatives					
Organization	ICT Used	Level	Rank Order	Impact Size	Percentile Gain
Pakistan Agricultural Research Council (PARC)	TV programmes, radio programmes, Audio cassettes, S.S show, flip charts, CDs, e-mail, Computer Assisted, Teaching, video cassettes, multimedia projector, slide projector, flip charts/ Printed, Online Education.	AFL	1	.63	26
ETV	Television Programmes	AFL	2	.57	23
FEPR Project of Allama Iqbal Open University (AIQU)	flip charts, A.V Vans,	AFL	3	.43	11
Pakistan Girl Guide Association	radio programmes, Audio cassettes, CDs, e-mail, Internet, multimedia projector, slide projector, flip charts/ Printed.	AFL	4	.41	10
Institute of Educational Technology (IET) Allama Iqbal Open University (AIQU)	TV programmes, radio programmes, Audio cassettes, S.S show, flip charts, CDs, Online Education,	HSSC, to Bachelors	5	.26	04
Jin Technologies	CDs	3-5 Year Children	6	.37	09
Virtual University	Television programmes	Graduate and Post Graduate	7	.31	08
Tameer-e-Millat Foundation (TMF)	radio programmes, flip charts.	AFL, Primary	8	.21	03
Current Initiatives					
Organization	ICT Used	Level	Rank Order	Impact Size	Percentile Gain
Institute of Mass Education (IME) of Allama Iqbal Open University (AIQU)	Flip Charts, Audio Cassettes	Literacy and AFL	1	.67	29
Multimedia Electronic Course Ware Design Center at AIQU	CDs, Online Educations	Masters, Bachelors, PGD	2	.51	22
ABES	TV Programmes	AFL	3	.47	12
FM 99 – Power 99	Radio Programme	Literacy	4	.27	05

Impact size employs or continues where zero means that there is no impact from introducing some innovation, while a negative Impact indicates that the

innovation has a decreased impact on achievement and a positive impact that an ICT Initiatives has an increased impact on achievement, it is calculated, to determine the presence of a statistical achievement in the mean standard deviation units. There are many possible ways to estimate the effect size. The Following is one of the fundamental formula which was used to find out impact size, In this study;

$$I^s = \frac{M_e - M_c}{S_c}$$

In this formula, M is the Mean and S is the standard deviation. An impact size of 1.0 indicates an increase of one standard deviation. Impact sizes are often expressed as percentiles of percentage improvement in learning to help with interpretation of what particular impact size means. For example, an impact size of 1.0 indicates that 84% of the treatment group performed better than subjects in the control condition who scored at the mean.

Conclusions and Recommendations

Consequent upon the review of literature, analysis of data and lessons learnt from interviews and interaction with people and organizations, following recommendations are hereby cited as a future plan of action.

1. ICTs from flip charts to internet is the only panacea in literacy and skill training through ODL system of education to reach the vast majority of outreach populace.
2. There is a general misconception that ICT-based literacy is a costly game while this study has proved otherwise.
3. Success stories of the ICT-based adult literacy and skill of the past like that of ABES functional literacy through tele-lessons and that of IME, AIOU, PARC, Power 99 and Jin.Tech. may be replicated after updating them.
4. ETV and Radio Pakistan are under-utilized from educational point of view. These two media may be planned for their active use for adult literacy through tele-lessons and radio programmes with continuous monitoring and evaluation of learners. Programmes like "Sesame Street", which is aired in 140 countries around the world, may be developed in national and local/regional languages and may be telecasted nation wide. This will require a sound planning and a team work of producers, educators and adult learners.
5. National Education Equipment Center (NEEC) and AIOU may be declared as the centers of excellence for the production of ICTs. All the organizations, teachers and literacy centers of Pakistan may be linked with these institutions for procurement and getting training in the use of ICTs.

6. Public-Private Partnership in efforts of ICT-based production for and skill training literacy is essential to take advantage of the latest ICT tools. The private sector can offer advanced knowledge concerning ICT tools which would be cost-effective and relatively cheaper over time.
7. In adult literacy and skill training, ICTs may be delivered to one of multiple sights via printed material, TV and radio. The real time and non-real time computer technologies may also be stimulated in part by the new internet-based and multimedia technologies in Pakistan.
8. A mechanism of sharing the ICT-based education material and experiences by various organizations is to be developed. Federal and provincial "ICT-based Education Coordination and Dissemination Units" may also be established by Federal Ministry of Education.

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