

The Purpose of Tertiary Education: Has the Classical Islamic Model Been More Consistent than that of University Education in the U.S.A.?

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Introduction

Bloom (1987) claims that universities in the U.S.A. have failed; that they have failed to inculcate the values of democracy and that the differences in character initiated by ethnicity, religion, nationality and other "cultural baggage" have been removed in the democratic search for ultimate egalitarianism (p. 88). The result is that "now all student bodies of all the major universities are pretty much alike, drawn from the best applicants, with 'good' meaning good at academic disciplines....there is hardly a Harvard or Yale man any more" (p. 89).

In comparing the Classic Islamic education to that of university education in the U.S.A., this paper briefly overviews and compares the history of curriculum development and traces the affect of Bloom's 'indicators' (e.g., religion, culture, knowledge and character) on these two 'ideal' educational systems.

Dobbert (1982) defines "pattern" as the "organization or structure behind the behavior" (p. 12), and "culture" as a "shared set of patterns" (p. 39). These definitions are used to guide the research findings. Also, Tanner and Tanner suggest a working definition of curriculum as "that reconstruction of knowledge and experience, systematically developed under the auspices of the school (or university) to enable the learner to increase his or her control of knowledge," (p. 43). In this definition for curriculum, choice of content, instructional methodology and evaluation procedures are viewed as a single and complete concept. The term 'curriculum' as used in this paper is therefore inclusive of these three elements, unless one element is specifically referred to.

The Beginnings of Education

Informal or 'native education' had initially assisted the peasant-village cultures to combine agriculture, animal-husbandry and craftsmanship into a unified mode of life (Turner, 1941, pp. 62,63). Slowly, over a period of 1500 years, Mesopotamia and Egypt were the first geographic areas to develop an economic surplus which enabled urban centers to materialize and expand. Childe's thesis (1936) is that writing, mathematics and the standardization of weights and measures were developed as a response to the practical needs of this new (surplus) economy (p. 179).

Formal education first developed as a response to the urban revolution engendered by the advent of economic surplus (Smith, 1955, p.34). As a result of this surplus economy and the consequent centralization of the population in the first urban centers two educational outcomes can be identified:

first "a degree of cultural elaboration which would have been impossible under peasant-village conditions;" second, "a need for specialists to assist in the redistribution of this economic surplus now existed," (pp. 34, 35).

From the outset of formal education, these two separate 'streams' (e.g., cultural-artistic and specialist technocracies) required a "formal" educational environment. This formal schooling took place in the temple schools, which had developed for the training of the priestly cults and whose function now increased to provide palace and kingdom with civil administrators.

Three Levels, Curriculum, Professional Teachers

The Hebrews were the first to develop a universal, three-level system of education (see Table 1); a professional body of teachers for each level; and a curriculum which was not solely determined by basic skills. These distinctives were to become incorporated into other educational systems: first, into the Islamic, and second, into the Judeo-Christian experience--from which the U.S.A. university system is derived.

Drawing upon the experience of other cultures as well as the Hebrew experience and needs, Hebrew education began developing as an institutional structure 2000 years before the advent of the prophet Muhammed (about 570 C.E.) and 1500 years before the Christian era.

At the start, Hebrew education was designed to provide a priestly caste for tabernacle duties. This era lasted from the time of the Egyptian exile to that of the entry into the 'Promised Land.' The second element of the three level system to emerge was that of native education (e.g. home school) for the primary level. This education was 'informal' in that it took place 'in situ' that is: in the home, in the fields and in the community (Deut. 6: 6-9) and not in the formal setting of a classroom. The "outstanding characteristic of Hebrew education during this period was its concentration in and about the home and family" (Smith, 1955, p. 238).

The curriculum content used was the Pentateuch. Reading writing and basic computational skills were the hallmarks of the 'home school.' The practical outcome of this education was that the Hebrews were a 'primary' society in which the child, the family, the community and the faith all subscribed to one set of values--those enjoined by the Torah. Deviant behavior resulted in expulsion from the society (or death).

Initially, the teachers were members of the child's extended family (e.g., home practitioners, not a professional caste) with the father bearing the ultimate responsibility. Boyd 1947, pp. 53-54) and Swift (1919, pp. 28-31) both agree that literacy was widespread among the youth in pre-Exilic times.

The synagogue was originally designed as a 'bridge' between native education and the Temple schools (yeshiva). However, in time, the synagogues came to replace the native schooling entirely. Smith (1955) states that "parental instruction had in practice failed to supply adequate preparation for the work on the

higher level (p. 246). Drazin (1940) postulates three characteristic reasons for this need of remediation:

- (a) orphaned children were entirely deprived of an education;
- (b) other children were neglected because the father was too busy 'earning a living;'
- (c) some fathers themselves were not sufficiently versed in the "elements of Jewish learning" to teach their children (p. 43).

In addition, since the yeshivas were initially situated close to the Temple site, the costs of boarding in Jerusalem may have been prohibitive to some parents. Locally situated synagogues were in a position to provide nearly equivalent higher and secondary studies as well as to fill the needs of native schooling..

Curriculum Develops the Culture (proactive)

The destruction of the first Temple and the subsequent Babylonian exile (605 B.C.E. to 536 B.C.E.) resulted in the loss to the Hebrews of the Temple system for worship and instruction. In Israel, in Babylon and subsequently through successive Diaspora, the community and the distinct culture of the Hebrews grew to rely on the system of synagogues. Regardless of place of exile, worship could be maintained and cultural identity (so closely bound to the Hebrew religion) could also be maintained and reinforced. The role of the Synagogue in education was vital to the survival of the Hebrew faith and culture.

However, professional teachers now assumed the parental role of instructional leadership in the teaching of the scripturally based moral values and ethical practices. Although more 'efficient,' this system definitely removed 'leadership' from the family home and placed the synagogue and the rabbi as the focal point for both education and worship. Swift, (1919) states that:

Through their literary and educational activities they [the rabbis] eventually gained almost complete control over religious thought and education....In their teaching and in their lives they represented the new educational and religious ideal of the times, Judaism. Within their schools arose the oral literature which developed into the Talmud (p. 32).

By the time of Muhammed's revelations (about 570 C.E.), Hebrew education had settled into its classical design, developed over a period of more than 1500 years, which incorporated four major components:

(a) **OBJECTIVES:** the primary objectives were to reproduce the faith and to maintain scriptural patterns of personal and community behavior which would inevitably create and then maintain a distinctive cultural separation from that of the neighboring tribes and cultures;

(b) **LEVELS OF INSTRUCTION:** a three-level system of instruction consisting of a

universal elementary education and an elitist and sex-differentiated preparatory and higher education;

(c) CURRICULUM CONTENT & INSTRUCTIONAL METHODOLOGY: curriculum content based on a series of authoritative (revealed scriptures) and rabbinical interpretations (the Talmud), both of which had to be studied, memorized, assimilated and interpreted by the students at each successive level and an instructional methodology which was discursive as well as subjective;

(d) TEACHERS: a priestly caste of teachers who were in control of both education and religion and who were expected to live holy personal lives as a model to their students and to the community.

These foundational pillars for the Hebrew educational system were used to establish and maintain a distinct, cultural separation for the practitioners. The curriculum was proactive, that is, the content was prescribed by authority (scripture) and was intended to create a separate culture. This system was to be transmitted: first to Islam, then to the U.S.A., via the Judeo-Christian ethos.

Table 1

TERMINOLOGICAL SYSTEMIC EQUIVALENCIES

DATE HEBREW ISLAMIC U.S.A.

ad 64 Mikra Maktab or Masjid Elementary

bc 75 Mishnah Mosque Circle (Halqha) Secondary/

Madrasah & Palace Preparatory

Schools

Midrash Academies, Higher

Talmud Denominational Education

Yeshiva Colleges

Universities

&Bookshops, Libraries

Literary Salons,

Mosques

(Note: this table was partly developed from Smith, 1955, p.247)

CLASSIC ISLAMIC EDUCATION

Beginnings of Islam

From its first beginnings, the teachings of the Qur'an have played an authoritative role in Islamic education. These revelations experienced by the illiterate Muhammed, "God's final messenger to humanity," (Pullapilly, 1960, p. xiii) were recorded by his companions shortly after his premature death (possibly from pneumonia) in 632 C.E. (Nutting, 1964, p.36). This "Word from God" is venerated by all Islam and forms the basic vehicle upon which the integrated religious and temporal values of the Islamic civilization are based.

Education was the vehicle used for this integration, and two major events assisted in the design of Islamic Education. First, the closure by the Romans of the Greek Academy in Athens--many scholars relocated to the Islamic world, bringing with them the Greek knowledge and curriculum; second, the role that territorial conquest was to play in the transmission of curriculum to Islam.

Muhammed's message in regard to conquest was simple, "unlike the subtle Greek intellectualism that had developed in Christian teachings by the seventh century after Christ" (p. 37). The Islamic message could be understood by the simple, practical Arabs. In terms of territorial conquest, it centered on (a) use of the sword, and (b) predestination in regard to death.

Muhammed and then his successors taught two simple doctrines in regard to war (the sword) and death (predestination). In regard to: the sword, any Arab warrior who drew it in faith on the battlefield against infidels would be rewarded with material advantages if he lived; if he died, he would be immediately transported to heaven to revel in eternal pleasures there. In regard to predestination, the equally simple message was that death would come to each person as ordained by God, whether in bed or in battle. So a believer might just as well fight for his faith and qualify for paradise (if he died in battle) or share in the battle spoils (if he lived). It was preordained (p. 31). With these two simple messages, Nutting concludes that Muhammed was "able to uplift the Arabs and give to the underprivileged citizens who received his call a new dignity in being a Moslem Arab" and, just as important, "the faith of the Prophet was used more as a political instrument than as a purely spiritual appeal" and, finally "Islam became more a device to unite the conquerors than a call to convert the conquered" (p. 37). Armed with these two certitudes, Islam rapidly expanded its economic-politico-religious power over an empire much larger

than that of Rome:

At the zenith of Omayyad power in 715 the Arab empire stretched from the Chinese frontier to the Atlantic Ocean, from France to the borders of modern India, and from the Caspian Sea to Nubia. It included Spain, the northern coast of Africa, the Arabian peninsula, Syria, Palestine, half of Anatolia, Iraq, Persia, Afghanistan, Pakistan and what are today the Turkmen, Uzbek and Kirgiz areas of the Soviet Union. No empire approaching these dimensions has been won in so short a timeconquered over four and a half million square miles of territory, a rate of advance equal to 150 square miles every day for eighty-three years (Nutting, 1964, p.80).

This territorial expansion affected the content of the Islamic curriculum immeasurably. According to Nakosteen (1964), the "Islamic culture was as cumulative as it was heterogeneous" (p. 11). Islam not only affected the conquered cultures, but also in its turn, was affected by them. As a result, for the next five hundred years the era became known as the Classical Age of Islam in education. The next sections investigate the curriculums of this classical age.

Islamic Curriculum in the Classical Age

In order to show the range of the curriculum in the Classical Age, Nakosteen (1964) enumerates seven basic sources of "transmissions from [other] classical cultures to the Muslims (p. 14) which eventually were to become included in the "knowledge and experience" of Islam. These sources are listed in Table 2, below:

Table 2

TRANSMISSIONS TO ISLAM FROM OTHER CULTURES

1. Materials directly translated from Greek into Arabic;
2. Materials translated into Pahlavi, amalgamated with Zoroastrian-Hindu (Buddhist) thought and then transmitted through translation into Arabic;
3. Materials translated from Hindu to Pahlavi, then into Syriac, Hebrew, and Arabic;
4. Materials borrowed from non-Muslim sources, with the line of transmission obscure;
5. Materials which were mere commentaries or summaries of Greco-Persian works;
6. Materials which were advances over pre-Islamic learning but which would not have been developed in Islam except for pre-Islamic foundations in Hellenistic, Syrian, Zoroastrian, and Hindu learning;

7. Materials which appear to arise purely from individual genius and national or regional stimulation, which would have developed regardless of pre-Islamic learning, although the form these original creations took might have been different if they had developed in a non-Islamic context or frame of reference.

(Note: although this quotation is "word-exact," the form of presentation has been changed in order to make it more understandable and less compacted.)

In Table 2, items one and three indicate, obliquely, the existence of a Judaic-Christian source. Muhammed, who according to Islamic tradition (Nutting, 1964) had caravanned to Syria at age twelve, and had there been greatly influenced by a Christian monastic named Bahira (p. 14). In Mecca, he also came under the influence and friendship of a Christian sage (p. 27). Thus, to a certain extent, Muhammed respected the teachings of both Judaism and Christianity as the "People of the Book." Certainly, the Biblical patriarchs, Jesus and Mary are revered and respected in Islam. As a result of these "transmissions" to the Islamic culture, the Islamic curriculum developed and evolved into a design which included some elements from the *mystical* influence of the East, the *philosophical* thought of Greece, the *educational system* of the Hebrews and the *religious tenets* of Christianity all combined into a distinct Islamic educational system during which Islam was the leading educational system in the world for over five hundred years.

Nakosteen (1964) categorized the aims of this Islamic system under two headings: (a) religious aims, and (b) secular aims. The system was based upon nine foundational principles (see Table 3).

Table 3

FOUNDATIONAL PRINCIPLES OF ISLAMIC EDUCATION

1. The Qur'an is the source of all truth;
2. Knowledge is to be based on a spiritual foundation;
3. Knowledge is to have sectarian morals;
4. Secular subjects are to be subordinated to religion;
5. The equality of all men [including women] exists before God and man;
6. Muhammed is to be held supreme over all other prophets (e.g., Jesus);
7. The six articles of faith are to form the basis for belief and practice (e.g., the existence of one God, angels, scripture, prophets, judgment and decrees);

8. Belief and application in A'amal or religious duties is expected.

(Note: this table is developed from the findings of Nakosteen, 1964, p. 14)

In addition, the secular components of the Classical Islamic education was based on three foundational principles: first, all knowledge is to be viewed as the revelation of God; second, education is to be open to all on equal terms, limited only by ability and interest; third, scriptural ethics and morality are to form the basis for the teaching of knowledge and for all education (p. 41).

As will be examined below, Islamic leaders are, even today, seeking to preserve these foundational principles. Also, several other systemic traditions of Islamic education which were first established during the Classical Age continue to be applied today:

First, a formal education was provided *free* of tuition fees and 'room and board' costs. Scholarships and subsidies were provided by the universal (governments) and local rulers (see Item 8, Table 3).

Second, from its earliest history, education in Islam relied heavily upon a comprehensive *non-formal* system which has been extremely influential--especially at the adult level (see Table 2). These informal centers of scholarship were also extremely influential when Islamic scholarship was transmitted to the European educators of the Renaissance period (pp. 47, 48).

Third, even formal education was *co-operative*. That is, no grades (in the Western sense) existed. Even today, no entrance exam or graduating benchmark exists. A student studied, literally, 'at the feet of a master' until such time as he and his 'master' evaluated that his discipleship was over.

Fourth, *curriculum content* involved many separate disciplines (see Table 4), unlike that of the Hebrew system which only involved the study of the theology and the scriptural law. In its variety, the Islamic Classic system rivalled the offerings of many Western universities today as it sought to combine the Greco-Hellenistic philosophical/mathematical traditions to the Eastern religious/scientific knowledge (p. 37).

Fifth, first to the pre-Islamic Arab, then later in Classic Islam as well as to this day, the *supernatural* is an everyday experience and belief in jihns (spirits--good and bad) is universal. In the education system, the supernatural life and the material life are integrated.

Table 4

ISLAMIC CLASSIC AGE--CURRICULUM CONTENT

DISCIPLINE SUBJECTS STUDIED

Law Jurisprudence; exegesis; tradition

Literature Philology; syntax; rhetoric; poetry

prosody; composition; reading;

history

Mathematics Geometry; astronomy; trigonometry

algebra; music; politics; ethics;

domestic economy

Medicine Anatomy; surgery; pharmacy & other

specialized areas

Philosophy Logic; ethics; metaphysics

Rational Studies Examination of logic; dialectic; metaphysics; natural sciences

Science Chemistry; physics; astronomy

Theology Comparative religions; history of

religions; the Qur'an; dogmatic theology; religious traditions

Miscellaneous Surveying; veterinary science

phrenology, dream interpretation;

astrology; magic

(Note: Developed from details provided by Nakosteen, 1964, p. 53)

The instructional methodology used was both didactic (delivery) and discursive (assimilation). The

'master' first delivered a formal lecture, lasting from one to two hours, "squatting on a platform against a pillar and one or two circles (a circle within a circle) of students seated before him" (p. 57). The most advanced students and visiting guests sat closest to the teacher; women and children would sit at the outer circles if they wished to attend. Integration of community and school was expected. The lecture was delivered from a prepared manuscript. There being few texts, the students took notes and were expected to memorize a great deal of the content. Three steps were used in the presentation: first, the teacher introduced the subject, avoiding details; second, the material was revised in greater depth; finally, the difficult points of the subject were fully explained.

The lecture was then followed by intense discussion during which questions were posed and answered, sometimes by the teacher, sometimes by the guests and advanced students. The debate would often grow heated and the teacher was expected not to lose control while being 'heckled' by the students and guests (p. 58).

Possibly, however, the greatest contribution of the Classic age of Islam is that, in its turn, it transmitted a curriculum to the Western civilizations (through the European Renaissance) which sought the assimilation of a universal (Greco-Hellenistic and Eastern) curriculum into a religious system of education without seeking either the loss of scholastic integrity or the loss of personal faith, community values or belief in the supernatural. The curriculum remained *proactive* and the knowledge, whether it had a scientific/mathematical base or a philosophical/theological base was tested against the authoritative scripture to determine the truthfulness of the research.

CLASSIC ISLAMIC EDUCATION TODAY

The classic pattern of instruction is repeated today. Waddy (1976) describes the instructional scene in the ancient courts of the oldest university in the world, the Al-Azhar (established in 969 C.E.) in Cairo "one is transported back in history to medieval ways of learning. White turbanned shaiks [teachers] sit by the pillars, text in hand, the students squatting around them in the perennial circle (p. 138).

However, the curriculum content has become vastly reduced from the galaxy of disciplines and subjects offered during the Classic Age. Nakosteen (1964) offers an explanation; that at the nadir of the Classic Age of Islam, denominational colleges were established whose curriculum content centered only on theologically related subjects. These colleges were:

open...only to followers of a given sect. Religious and literary studies and the Arabic language and grammar dominated the subject matter at the expense of philosophy, science and social studies.... These colleges were intolerant of innovations, suspicious of secular studies, and aloof from creative scholars (p. 42).

The narrow boundaries imposed upon the curriculum by these denominational colleges are, in part, responsible for the arrested development of Islamic education and its decline from its position as a world leader in science and technology. The tension between the present ambitions of Islamic education and

that of modern education based on the Western model is described by Waddy (1976):

Many sent abroad with scholarships...return with professional qualifications but knowing nothing of their religion. In contrast, those with scholarships at Al-Azhar return having learned a great deal about religion and the sciences of the Qur'an, but they have no trade and cannot participate in the national advance (p. 140).

Today, Islamic educators like Jamali (as reported by Nasr) are seeking a 'renaissance,' or a modern academic revolution but one which does not ape the mistakes of the West (1975):

The...tragedy, occurring in the East in general and the Islamic world in particular, is that this world is for the most part repeating the very errors which have led to the failure in the West of urban-industrial society and the modern civilization which produced it. The attitude of the East toward the West should be to view it as a case study to learn from rather than as a model to emulate blindly (p. 13).

What Islam considers these "errors" to be will be examined in the next section.

U.S. Education (1647-present)

Background

Faulkner, (1954) states that the original immigrants from Europe, the religious separatists, came to America "impelled by the [dual] hope that they might find in America an opportunity both for economic betterment and for the worship of God after the dictates of their own hearts" (p. 50). These ambitions were to be reflected in the first objectives for the purpose of education in the New World which were laid down in 1647, just twenty-seven years after the first separatists landed from the Mayflower. From this start, Tanner and Tanner (1980) have discerned two major periods in the history of curriculum development in the United States (p. 194): (a) the "Classical Period" (1647-1890), and (b) the "Age of Realism" (1890-the present).

The Classical Period (1647-1890)

Two objectives for the purpose of education existed during the Classical Period, according to Tanner and Tanner (1980). The major objective was "to produce God-fearing Christians," while the minor objective was "to educate citizens capable of self-government" (p. 195).

The major objective was intended to create a literate population capable of reading the Bible so that: (a) a personal (Protestant) faith would be developed, and (b) the individual and the community would learn and practice the moral values and ethical principles expounded through the scriptures. Dissenters were expelled from the original colonies. The objectives and anticipated outcomes reflect both the Judeo-Christian education design and also that of Islam (see Table 3, especially items 1,2,3,7,& 8).

The colonies and then the nation were to develop into a vast "melting-pot" of immigrant people seeking religious and/or political freedom as well as economic betterment.

However, the curriculum of the Classical Period failed to reach its major objective. This can be attributed to three causes: (a) successive waves of European immigrants (Swedes, Danes, Dutch, Germans and French) arrived prior to the Revolutionary war and were allowed to "establish schools in their own language." This led to a decline of cultural (and therefore community) solidarity; (b) the closure of schools during this war. A sharp rise in illiteracy followed with a concomitant result that the scriptures were no longer the guidelines for personal and community behavior; (c) the "classical curriculum of the colonial secondary school failed to meet the needs of a society undergoing rapid economic and social change" by not meeting the demand for vocational and technical training (p. 195). Also, during the Classical Period, two major movements in philosophical thought and practical instruction gradually developed into the forces which eventually spawned the "Age of Realism:" first, notions of 'natural contract' gained credibility; second, scientific empiricism in philosophy and the 'scientific method' in industry and research affected the curriculum. The combination of these two forces was to change, perhaps irretrievably, the design of education in the U.S. as the Bible became discredited as the 'test for truth.'

THE AGE OF REALISM (1890-the present)

This period has seen a considerable change in the emphasis of the objectives detailed by Tanner and Tanner (see above). The original major objective of the curriculum (to produce a community of God-loving Christians) was overtaken and then eclipsed by the minor objective (to produce citizens capable of self-government).

The change in emphasis has been accompanied by systemic changes in education management, curriculum content, evaluation procedures and instructional methodology in the U.S. educational system the results of which are now beginning to surface. These systemic changes were based upon two philosophical theories: first, the development of the seventeenth century 'natural contract' from hypothesis to reality. A concomitant result was the development of a 'relative values' system where moral values and ethical principles are decided by a majority vote (democracy) rather than by 'absolute' Biblical moral and ethical values (authority); second, the development of the scientific method, which opened the door to the 'efficiency' movement, in education (inspired by Taylor's principles of scientific management for industry).

Bloom (1987) states the 'natural contract' was based upon the concepts of freedom and equality propounded by Hobbes, Locke and Rousseau in which "civil society was to be reconstructed on the natural ground of man's common humanity. Then it would appear that all relations or relatedness within civil society would also depend upon the free consent of individuals" (p. 110).

Today, the practical outcome of this philosophy has been the development of two realities which have greatly affected the structure of society; (a) individuals who believe that "there is no body politic, only

individuals who have come together voluntarily and separate voluntarily without maiming themselves (p. 112), and (b) that in modern political regimes, where rights precede duties, freedom definitely has primacy over community, family and even nature" (p. 113).

Similarly, Belah, et al (1985) see a trend developing towards an ontological individualism which they define as the "belief that the individual has a primary reality whereas society is a second-order, derived or artificial construct" (p. 334).

The theories of the 'natural contract' in which individuals worked towards the common (community) good have deteriorated into the doctrine of 'individual rights' in which the individual reigns supreme and relativistically determines his/her moral and ethical values. The tragic fate of the ultimate ontological individualist who seeks to be self-determining in establishing these values is described:

...it is part of the profound ambiguity of the mythology of American individualism that its moral heroism is always just a step away from despair. For an Ahab, and occasionally for a cowboy or detective, there is no return to society, no more redemption. The hero's lonely quest for moral excellence ends in absolute nihilism. (p. 146)

Today, the cult of the individual and his/her rights preceding the duties and responsibilities of the individual to the community is inexorably entwined in the printed and hidden curriculum of U.S. education. The theory of 'natural contract' has become a rampant 'me first' individualism and the 'melting pot' is a vast 'mosaic'.

The second philosophical change, the emergence of the scientific method as the major 'test for truth,' has resulted in several changes in the U.S. curriculum in management, content, instructional methodology and in evaluation procedures.

In 1911, Taylor published his Principles of Scientific Management. He frankly stated that the "system" is to replace the "man" in order of importance; "in the past the man has been first; in the future the system must be first" (p. 7). This important change in direction, adopted from industry by U.S. educators, placed man, who invents systems, as an agent of the systems he invents--which is a totally non-logical sequitur. Taylor claimed that his principles could be transferred to any form of "social activity." The leading educators of the time 'bought' into Taylor's system. Bagley published his Classroom Management, which became a standard teacher training text and ran to thirty editions. In it, he used industrial and accounting terms such as "product; input; output; environment; accountability; working unit; plant; return of largest dividend." He described classroom management as a "business problem" (p. 7). Schools were no longer inspected, they were "audited" in the hopes of becoming more "efficient."

Administrators were enthralled and immediately adopted "efficiency" wholesale. Their jobs as superintendents and supervisors always precariously balanced, they saw in this new scientific language and methodology a chance to "appease their most powerful and vocal critics" (Callahan, 1962, p. 52).

Very shortly, a most 'successful' superintendent named Spaulding (he later became the head of the Department of Education at Yale) adopted cost accounting procedures:

His contribution had been the introduction of the dollar value as the criterion for judging the relative value of the various school subjects....he had abandoned the attempt to attain a socio-philosophical judgement in favor of a concrete, practical, financial one. He didn't know, he said, whether music was more valuable than Greek, but Greek was more expensive and so from a financial standpoint it was less valuable. (p. 159)

Other curriculum innovations which Callahan states can be attributed to the "efficiency" movement in education include the platoon system, popularized by Ayres and originated by Wirt (both superintendents of school districts) in which students rotate through specialized classrooms to make maximum use of the school "plant;" the introduction of the "cost per-year minute" as a basic unit of measurement to determine the efficiency of instruction; the development of "units of credit" for 'programs;' and an increase in the size of classes, without corresponding increase in teacher salaries (pp. 129-160. This change from a socio-philosophical base for education to a politico-accounting base was assisted by several other changes occasioned by the increasing adherence to the theories of the "scientific method."

Second; the curriculum changed radically, especially due to Thorndike's work in the theory of mental and social measurement and Dewey's work with curriculum content. The work of both men greatly changed the methods of evaluation and instruction.

Prior to Thorndike's work, the philosophical base for evaluation had been subjective. The process had been transferred first, from the Greco-Hellenistic traditions to Islam, then into to Europe through the Islamic universities (e.g., Granada and Palermo founded in 1141 C.E.), thence to the U.S. system of education. Ever since Socrates, the evaluation process had been qualitative--character changes were subjectively assessed. This evaluation process had governed the system of instruction in which the teacher's methodology had been to enable a student to (a) research the facts; (b) participate in discussion in order to assimilate and codify the material logically; (c) reach an independent conclusion; (d) be able to defend his/her conclusion orally, and (e) show evidence of living out the moral and ethical values which had been determined. Character changes were subjectively assessed through discussion, oral examination and the writing of essays.

In what now became the U.S. model, Thorndike's work in mental measurement altered the art of evaluation and reduced it to a science where quantified, objective testing now formed the basis for evaluation. Coupled to the increasing demand for "efficiency" and the enormous increase in the number of immigrants (whose children needed education to enter industry), a massive swing to the use of the "lecture" in instructional methodology resulted. Cuban's thesis (1984) is that teacher-directed education and teacher-talk (averaging 80% of instructional time) dominates the instructional scene today.

However, Thorndike's theory is much abused, because *individual* evaluations are often provided, rather

than *group averages*. Thorndike (1904) himself stated that his results could only be attributed to "classes" or groups of people; that a presuppositional base for his theory is the need for averaging where ideally the distribution is bell-shaped so that "if it is constructed from an infinite number of individual measures, its average, mode and median exactly coincide" (pp. 32-37). Even Dewey warned against the possible abuse of Thorndike's theory, maintaining that it should only be used for diagnostic purposes, not the awarding of grades (Callahan, 1962, p. 27). These caveats have been almost totally disregarded by the average teacher at all three levels where quantified assessment takes place almost daily.

In regard to Dewey's influence on the curriculum, he was concerned with moral and ethical decision making, which he believed could best be carried out in terms of the 'natural contract' which had inspired both the Pilgrim Fathers and the signers of the constitution. He theorized that, in a democracy, the function of the school must be to meet the needs of the society. Dewey carried the logic to probably its ultimate conclusion when he theorized that the society should choose the moral values to be espoused which the content should then reflect. In his later years, he explained the basis for these changes in his book, Reconstruction in Philosophy (1920). He states:

First, there is the transfer of interest from the eternal and universal to what is changing and specific, concrete...from the supernaturalism characteristic of the Middle Ages to [a] delight in natural science, natural activity and natural intercourse.

Second, there is the gradual decay of the authority of fixed institutions.... and a growing belief in the power of individual minds, guided by the methods of observation, experiment and reflection to attain the truths needed for the guidance of life. The operations and results of natural inquiry gained prestige and power at the expense of principles dictated from high authority....such is the inner meaning of the modern appeal to experience as an ultimate criterion of value and validity (pp. 47, 48), 1963 ed.).

Dewey views the scientific method (e.g., the use of the three senses, observation and measurement) as: (a) the "ultimate criterion" which will determine moral values, not "authority" (e.g., the Bible); (b) the methodological basis for instruction. That is, "natural inquiry" is to be pre-eminent.

This philosophical theory, labeled humanism, changed the content for study from the supernatural, traditional values and the life hereafter to the examination of the commonplace, experience (through experiment) and the present life. To accommodate this philosophic change, new instructional strategies developed with an emphasis on discovery learning, methods of natural inquiry, practical activities and the experimentation associated with science and the scientific method. Today, an examination of these 'new' instructional strategies dominate such publications as Joyce and Weil's Models of Teaching.

Finally, in regard to who should teach (teacher qualification), Bloom (1987) states that differences in character initiated by ethnicity, religion, nationality and other "cultural baggage" have been removed in the democratic search for ultimate egalitarianism:

They are [people in general and teachers in particular] free to decide whether they will believe in God or be atheists, or leave their options open by being agnostic; whether they will be straight or gay, or again, keep their options open; whether they will marry and whether they will stay married; whether they will have children--and so on endlessly. There is no necessity, no morality, no social pressure, no sacrifice to be made that militates going in or turning away from any of these directions...(p. 87).

In the nineteenth century, the teacher (regardless of academic qualification) was expected to live an exemplary moral life. Today, the qualifications of a teacher are determined not by 'holiness of character,' but by moral values and ethical standards determined by a majority of a given group.

SUMMARY AND CONCLUSION

The design for U.S. education has changed considerably since the start of this century:

- (a) The philosophic foundations have changed; the religious objective has been superseded by a secular objective.
- (b) The socio-philosophical pillar which has been changed to a politico-accounting frame for management in which the "system" and not the "dignity of man" is the criterion;
- (c) The mechanical "machine models" of efficiency was adapted to educational usage;
- (d) Teacher-chosen, subject-centered curriculum content based upon "absolute values" derived from an authoritarian source has changed to pupil-centered content;
- (e) Democratically established (e.g., changing) moral and ethical standards form part of the 'hidden curriculum';
- (f) Instructional strategies now emphasize discovery, methods of inquiry and other "scientific" methods rather than discursive methods;
- (g) Evaluation has changed from the subjective analysis of an individual's character to an objective analysis of group average performance
- (h) Teachers are no longer required to live godly (holy) lives but can publicly opt for any form of 'alternative' lifestyle and still retain their positions;

(i) Humanism and an egalitarian democracy form part of the 'hidden' curriculum.

Education design in the Islamic renaissance is seeking to ensure that the acquisition of knowledge is not an end in itself, but that it is accompanied by the development of Qur'anic (moral) character traits which the teachers are to model so that the Qur'anic virtues are maintained, the Islamic culture remains unified and integrated, and the individual knows God (Nasr, 1975, pp. 134-137). The Qur'an is still to provide the basis for: (a) evaluating scientific and philosophic truth; (b) developing the economy; (c) building moral character; (d) ensuring that the social fabric of the Islamic culture is not destroyed. (Jamali, quoted by Nasr, 1975, p. 52).

CONCLUSION

Recent theoretical research (Wood, 1987) has suggested that nine indicators exist by which: (a) the congruency of an educational system within itself can be established, and (b) two educational systems can be compared. In Table 5, the Islamic and U.S. systems of education have been compared in order to establish whether the Classical Islamic model has been more consistent than that of the U.S.A.

Frequently, Christian educators have concluded that there has been a change in the U.S. education system from that of the Judeo-Christian model to a post-Christian model. No firm criteria have, in this writer's experience, been clearly stated other than statements that such items as 'the Lord's prayer' and 'Christmas carols' have been removed from the curriculum.

TABLE 5

COMPARISON OF ISLAMIC AND U.S. EDUCATIONAL SYSTEMS

Indicators Islamic U.S.

Objective To know God Good Citizenship

Philosophic Authoritarian Egalitarian

Base Democracy Democracy

Moral/Ethical Scriptural Community

Values Prescription Majority

System Three Levels Three Levels

Curriculum Universal-- Universal

Content Denominational Secular

Instruction Didactic-- Scientific--

Discursive Lecture

Evaluation Qualitative Quantitative

Teacher 'Holy' Secular/Religious

Lifestyle 'Alternative' Secular

Qualification Lifestyle Credential

Anticipated #9; Character Change Knowledge of Content

Outcome

The nine indicators listed above clearly show the point of departure--which is the point at which the scientific method supersedes that of scripture as the ultimate "test for truth." In U.S. education, it is now accepted that science rates above authority, intuition, and common sense (Hoy and Miskel, 1982, p. 19) because "none is as consistently reliable and trustworthy as science."

The Islamic thinkers, who are clearly heard in the influential Islamic World councils, are very much aware of the malaise existing in the U.S. 'model' of education today, especially the change in the "test for truth.". As the Islamic nations seek to enter the world of science and technology, their leaders bear in mind what they consider to be the moral and material decadence of the U.S...the 'hidden' curriculum.

Perhaps, with the resource of petro-dollars, this Islamic renaissance will materialize. Regardless, the design of Islamic education today is trying to remain congruent to that of the Classical Age of Islam even as, once again, the curriculum content is being enlarged. That of the U.S. has been shown to be inconsistent to the objectives established by the Pilgrim fathers.

In Islam, the curriculum remains proactive (truth is timeless but man's knowledge of it is imperfect, therefore evolutionary) and governmental legislation is subjected to the Qur'anic test for truth; in the U. S. the curriculum, originally proactive, is now reactive (truth is evolutionary and therefore moral values and ethical principles are relative and can be determined by a democratic majority). There are now no

obvious 'checks' or 'balances' to this egalitarian democracy in the U.S.