AL Ghazali Cultivates Education: A Comparison with Modern Theories

Dr. Khalid SOUSSI

Mohammed V University-Abu Dhabi

Abstract

Education has always been influenced by the new understandings of learning and teaching processes. From simple inculcation and memorization to modern learner counseling and flipped classrooms, the new ideas and hypotheses of learner roles, teacher training and human knowledge processing have shaped our understanding of the educational field today. The present article aspires to shed light on one of the most influential, 11th century Muslim scholars, Al Ghazali (1058-1111CE), in and outside the Muslim world and compare his ideas and thoughts on education with modern theories and approaches.

His personal reflections have included teaching methods, knowledge, the relationship between teachers and learners, and testing methods and principles. The following article focuses mainly on the teaching and learning aspects of his theory. A list of the most important theories in the contemporary educational field, but not necessarily a comprehensive list, will be presented in the comparison and discussion of Al Ghazali's educational theory.

Key words: education theory, teaching approach, learning process, pedagogy, curriculum

Introduction

Born in 1058 in Tus, Khurasan, he was himself a modest student who travelled seeking 'fiqh' knowledge under famous scholars, a teacher disseminating knowledge and a scholar exploring knowledge and living intense intellectual clashes with the different movements in his era. At the age of 29, he finished his apprenticeship period and was appointed as a teacher in Baghdad in the Nizamiya Madrasa. There he wrote a number of books and taught *fiqh*, *kalam*, and logic, the most important sciences of that age. His works on thought, religion and philosophy were influential not only in the Muslim world but also in Christian Europe and some of his works are still studied today. As a representative of 'conciliatory Islam' by merit, Al Ghazali has influenced thought and scholarly activity for more than nine centuries, education being no exception from his influence (see bibliography for works on his biography and his works on education). In the last years of his living and after a rich period of intellectual production, he went back to his Nizamiya Madrasa, Baghdad, and devoted his time to teaching, which helped shift his thought from a philosophy of religion to a philosophy of education. The following sections will focus on the most prominent aspects of his education theory and try to compare and contrast them with modern theories.

I. Al Ghazali on Early Childhood Education

The phase of childhood took a significant amount of thought and reflection in Al Ghazali's ideas and hypotheses. For him, we are born as entities that depend fully on their environment for socialization. The family and school share the tasks of teaching children language, morals, customs and behaviors. Childhood as the basis for character formation was profoundly stressed in his ideas and described early teaching 'as engraving in stone'. Al Ghazali described the roles of the teachers in this regard advancing that the teachers should motivate the learners in the elementary stage and beware of their interests from one stage to another. He stated that interest development goes through four main stages: an interest in games and physical movement (early childhood), then an interest in the other sex and emotional relations (adolescence), an interest in domination and leadership (after 20) and the final interest in knowledge and intellectual exploration (around 40).

The teachers, therefore, should focus on motivation: 'attracting' the boys to school, offering games, then attractive clothes to boas their confidence as to the importance of looks during adolescence. Fully aware of the physical effect on the intellectual performance, he stated that the learner needs to

> *"be allowed to play suitable games in order to recover from the fatigue of study, and be freed from the constraints imposed upon him. However, he must not tire or overtax himself at play. Preventing the boy from playing and burdening him constantly with learning can only weary his heart and blunt his mind, spoiling his life and making him so despise study that he resorts to all manner of tricks to escape it"*
> (Nofal. N. 2000. p.515)

What can be inferred from the quotation above is that Al Ghazali believed in the inner motivations, desires and motivation of the learners; in modern words, one can see through the constructivist or mentalist approach to learning in his writings.

Physical education was also mentioned in his words: "play suitable games…., feel freed from the constraints." No one can deny the importance of physical education in elementary education. NAYEK, the American National Association for Sport and Physical Education, stresses that sport should be part of early childhood education for many reasons (Pica 2011:56). First, sport is a healthy habit that is acquired early in life. Second, early childhood is the best time to acquire pivotal physical skills that last a lifetime such as body management skills or direction/space awareness. These skills "do not mature on their own" (ibid). moreover, physical education is important for the psychological child and would-be adult. Gruber (1985) states that " directed play and physical education programs contribute to the development of self-esteem in elementary children" and "may be the prime determiner of future behavior" (p.42).

In fact, modern theories describe learning as a process of active engagement on the part of learners. Without motivation to learn, the whole process of education fails. Since Plato and Socrates, educators have been warned that learners are not mere *tabula rasa*. True, the learners have to listen to the teachers for new information and as a source of knowledge input to which the learner will provide an 'output' later, but this is behaviorism-oriented and tends to neglect the learners' needs

and own experiences in life. Recently, research in neuroscience has proved that the human brain searchers for stimuli in real life from which to 'learn'. This means that the teacher should guide the 'brain' to learn from other sources, a fact that is a little lacking in Al Ghazali's theory.

In the same regard, Bransford, Brown and Cocking (2000) claim that

> "*It is now very known that young children are competent, active agents of their own conceptual development. In short, the mind of the young child has come to life*". (In Nofal, ibid)

Allowing the student to "experience" life outside the classroom via playgrounds, games, peer interaction, etc. prepares him/her to interpret the new information in class. The previous experiences create paradigms in the mind, and the latter receive and represent new in information in a connected manner with the old knowledge (see Bauersfeld 1988; Brown 1998; Cobb 1994, 1995; Rose 2000).

Back to behaviorism, the best aspect where Al Ghazali's ideas align with behaviorism is when he talks about "rewarding" the students. For him, when the boys show good morals, obedience to teachers and good interaction with peers, this should be 'rewarded' in ways that help strengthen motivation such as '*honoring and praising in public*' in order to encourage their peers to imitate them. On the other hand, punishment should also be resorted to in the form of 'chastisement' rather than physical harm.

The notion of reward in education brings to mind the behaviorism theory, Skinner and Watson being the most recognized theorists and influential researchers. For them, all learners have the same chances to learn and can learn equally when in the same conditions. The theory places much importance on the external stimulus in the learning process; Morisson, Ross and Kemp (2004) state that "*rewards and punishments such as grades, prizes, privileges as well as recognitions and praises, as a means to ensure the replication of the learned activity or behavior*" (in Weegar and Pacis, (2012) p.10).

Even when Al Ghazali discusses introducing lower-level skills and information to the learners and then moving to higher levels gradually, the behaviorist theory is recalled again. However, the behaviorist has been under serious attacks by the constructivists who advance that the mind has more influence on the learning behavior than the outside stimuli (Fisher (2008), Harman (2008), Wakefield (2007)). First, they criticize the behaviorist theory as teaching and focusing on skills in isolation. Second, constructivists consider learning as a process of "*interpretive, recursive, building … by learners interrelating with physical and social world*" (Fosnot (1996), ibid).

Another crucial principle in dealing with infants and children, for Al Ghazali, is that they should learn morals such as equality between peers, civility, truthfulness, abstemiousness and generosity as the character is highly influenced by the peers' at this age. Nevertheless, the differences between the pupils in learning and character ware very noticeable in Al Ghazali's writings. Therefore, the teachers were encouraged to deal with individuals showing outstanding traits such as shyness, physical weakness, etc. the teachers should also not push the young learners beyond their intellectual abilities and '*beyond what they can absorb*' and they should separate pupils based on their levels of knowledge; a 'bright pupil' should not be kept '*back at the level of his schoolmates*'.

Overall, the teacher should keep an open eye on diversities as well as on equalities in their learner groups.

Modern social learning theory stresses learner differences as resources, not as obstacles. Students always bring to class their cultural backgrounds, experiences, understandings and capacities. Teachers, also mentioned by Al Ghazali, should focus on the common traits between the learners and unify their differences. In fact, and for a long time, differences were considered as hindrances to learning and factors that determine how fast learners can progress in relation to the 'single' or 'best way' of teaching and learning. Differences were assumed deficits. Today, most educators are aware of the fact that differences between the learners should be used and shared. This stands in some contrast with Al Ghazali's urge to overcome these differences and not to use or mention them in the teaching environment at all.

Research on cross-cultural differences has proved that differences among learners can be used as sources. This is obvious for language teachers, for example, who notice significant interest and motivation among their students when a subject is discussed, orally or in essays, from different cultural perspectives. The recourse to group work evaluation, group tasks, and group discussions stems from the belief that diversity is a resource for learning. After the age of 20, for Al Ghazali, the learners should take '*responsibilities and challenges'* during adolescence and early adulthood. At this age, they are supposed to have gathered enough knowledge and understanding of their subjects so as to endeavor the exploration and search for knowledge tasks.

The notion of 'responsibility' and 'challenge' hint at the modern task-based orientation in most theories. The teaching as intellectual work has gained significant momentum in the recent years, and Al Ghazali's writings go hand in hand with the orientation. In this connection, White-Clark, et al. (2008) states that

> *"assuming the role as 'guide on the side' requires teachers to step off the stage, relinquish some of their power, and release the textbooks to allow their students to be actively engaged and take some responsibility of their own learning" (p. 41).*

Here, teaching is allowing learners to discover, think critically, and create their own learning skills and experiences. Dewey (1983) could be the founder of the thinking-skills movement in modern education, the pioneer constructivist (see Sternberg (2008)). In other words, Al Ghazali's theory of education lacks or, at least, does not mention or clarify the learners' a ability to develop learning skills, discover and build knowledge apart from that imparted by the teacher. Perhaps, the scarcity of knowledge resources and the sacred representation of the instructors at the time rendered learning a totally dependent process on the teacher as a counselor and, at the same time, man source of knowledge.

A look at the teaching approaches today would lead to the vision that teachers need to teach challenging content. This goes hand on hand with Al Ghazali's principle of learner 'responsibility' and 'challenges' in higher education (after the age of 20). Stigler and Hiebert (1999) mention that teaching in the USA today is generally characterized by "learning concepts and practicing

procedures" whereas in Germany students focus on "developing advanced procedures" and the Japanese ones have to work on "structured problem-solving" (p.57). Still a comparison of the levels of challenge or difficulty across countries today reveals an inconsistency. For example, what 8th graders study in the USA is studies a year earlier in Germany. Even the nature of courses varies from one context/setting to another. Add to it, even lesson coherence – the relation between lessons or parts of lessons- is not always mentioned to students. This boils down to the belief that higher education should involve some challenge and responsibility on the part of the learner.

Curricula and Knowledge

Spending most of one's life as a teacher and scholar, the concept of knowledge should have matured and taken a particular, personal form for Al Ghazali. Interestingly, the *Imam* pondered and wrote on the concept of knowledge in education, its categories and teaching methods.

1. Knowledge: the concept and categories

The ultimate knowledge in Al Ghazali's view is the knowledge of God, his prophets, the heavens and *Shariah*. All forms of knowledge should serve man's happiness – plenitude and true happiness of the hereafter. Hence, all forms of religious sciences are superior to other sciences such as natural sciences, theology or mathematics; the ones mentioned earlier, in his view, connect the Muslim with the afterlife and pave the way for his salvation. In fact, Al ghazali classified sciences, as did most Muslim scholars influenced by Greek philosophers, into two categories: revealed and rational sciences.

In Al Ghazali's opinion, the two categories do by no means contradict the teachings of religion. Even though he attacked philosophy and natural sciences earlier, he maintained that they are complimentary to each other. The best proof of this could be the fact that al Ghazali's statements about natural sciences were included into the Al Azhar curriculum at the end of the nineteen century. Hence, one can see through the balance in knowledge variety and interaction and indispensability in his vision of the Muslim learner and scholar needs.

There has been a considerable shift today in knowledge teaching, and perhaps this is the only aspect in which modern theories have drifted significantly far from the teaching of facts and procedures. Knowing facts and rules of a discipline is no longer enough. It is absolutely necessary to know the basics of a discipline, but it is more important to know how to use those basics to identify and solve problems. The skills of inquiry, synthesis, argument need to be mastered by learners in the same manner physicists search for new problems to solve using the basics of their disciplines. Students need to master the language of the discipline, to be familiar with the procedure of forming, developing, arguing and proving ideas, and to write so that they can think critically and to read sources so that they can interpret them based on the basics (see Bruner 1960, 1977; Dewey 1956; Schwab 1978).

2. Educational curricula

The educational system in the early Muslim society was divided into two primary levels: elementary and higher education.

The first phase, primary education, was provided in *Kuttabs* or schooling centers for the public whereas higher education occupied many institutions such as *Madrasas* (schools), mosques, hospices or 'houses of wisdom and science'. The elementary curriculum focused on religious fundamentals, the memorization of qoranic verses, as well as on reading, writing, grammar, narration, arithmetic and moral teaching sometimes. Higher education was concerned with pure religious sciences. However, as Nofal. N. (*ibid*) advances that

> *"As Islamic society developed and assimilated Greek science, there arose alongside the Islamic curriculum a new curriculum, in which philosophy and science… were studied. It was not easy to combine these two kinds of knowledge; only a small number of students and scholars succeeded in doing so".* (p.527)

The early attacks of philosophy and natural sciences played havoc on their position resulting in their gradual disappearance from the curriculum to be taken up again only at the end of the 11th century as mentioned in the earlier section.

At the last years of his life, Al Ghazali criticized his own thinking and believed in the complimentarity of sciences and knowledge.

It is worthy of mention in this regard that Al Ghazali set two types of higher education curricula: obligatory and optional. The first type included religious sciences and the related sciences such as linguistics or literature. The optional sciences embraced a variety of subjects that depended on the capacities and preferences of the learners. Al Ghazali divides even the latter into 'revealed' and 'non-revealed' sciences. The revealed sciences encompass four disciplines: the fundamentals including the Book, *sunna*, *ijmaa* and the teachings of the Prophet companions; the branches including *Fiqh* and ethics; the means including language studies and grammar; and the accessories including *tafsir*, the sources of *Fiqh* and genealogy. The non-revealed sciences embrace medicine, mathematics, poetry and history. The principle of 'choice' in higher education curricula was a very outstanding characteristic of Al Ghazali's conceptualization of higher education. He claimed that once these sciences were useful and needed by society, the learners should benefit from them in addition to the obligatory branches of knowledge.

Special attention should be paid to Al Ghazali's rejection of most artistic education content. As a *faqih* dealing with the general principles of education, Al Ghazali defined beauty as seeing a thing *'in its entirety'* but rejects the introduction of music in the educational environment and advances that arts are split into three categories: licit, reprehensive and forbidden. Licit arts are the ones encouraging fervor and religious commitment and worship; the reprehensive and the forbidden ones are mainly for entertainment.

Only the heroic and religious songs, usually sung at festivities such as celebrations, religious festivals or banquets, are authorized as far as he is concerned. For him, such songs inject fresh,

lively blood in one's spirit and help it carry on the task of worship and connection with the afterlife, but they should be used with caution and no excess. All other forms of singing or dancing were compared to "medicine", to be taken only 'as needed' as long as they do not encourage desire or acts leading to sin.

Al Ghazali's general rejection of arts in education does not exclude painting and drawing. Whenever the latter represented man or animal, they were strictly rejected as they would revive the idols and icons worshipping fought by Islam at its very early age. As to poetry, he did not forbid its composition or recitation but advised that it was not really worth a man's time. Most of these ideas were in complete compatibility with the general aversion of the *fuqaha* (scholars of Islamic law) at the time.

Nowadays, based on the necessity and complimentarity of knowledge, most higher education institutions in the Muslim world incorporate artistic subjects, ranging from poetry, fiction, literature, drama to professional institutions for theatre and cinema training. Even the universities specialized in Islamic studies allow their students to study foreign languages, natural and exact sciences based on the belief that human knowledge is limited and interdisciplinary knowledge is a source of creativity and progress for societies.

II. Teaching
1. The learner

Al Ghazali's writings seem to put as much focus on the learner as they do on the teacher. He advances that

> *"Education is an 'interaction' affecting and benefiting teacher and pupil equally, the former gaining merit for giving instruction and the latter cultivating himself through the acquisition of knowledge"* (in Nofal, p. 528).

In addition to the interaction condition of imparting knowledge, Al Ghazali highlights also the *"climate in which education takes place and the learners' desires and their relation with the teacher"*. He also refers to the life of the learner as a pivotal parameter in the learning process; the social class of the learners and their personalities are to be regarded by the teachers. It is one of the truisms today that the environment or setting in which education takes place plays central roles in the teaching process.

Researchers today talk about 'perceived' and 'invisible' diversity (see du Plessis & Bischoff, 2007). Diversity is most of the time present in the classrooms, and it is one of the tasks of the teacher to deal with this status quo to best of teaching and learning. Be it cultural, gender, racial, age, ethnic or social class diversity, it does affect the motivation and learning conditions. du Plessis & Bischoff put forward that

> *"When people find commonalities of honor diversity, it allows them to function together with one another in different situations including classroom settings, creating one of the foundations of inclusion. Thus*

> *it is important to promote diversity in teaching and learning to create*
> *an inclusive community of critical dependent learners"* (2007:246).

Dealing with this aspect of the learner is a precious asset of Al Ghazali's theory and merits considerable recognition. He showed that the 'comfort' of the learner in the classroom is central to learning. Knowing about the possible reactions of the learners to race, religion, social class or gender issues is part and parcel of 'teaching'. The teachers concerned should prepare for such situations exactly the same they prepare for new lessons.

2. The teacher

For Al Ghazali, the teacher is to be considered as a father to whom respect and obedience are due. He should also be considered as a model and an example. For him, the teacher is not only a medium or source of knowledge; the "interactive" nature of learning, for Al Ghazali, pushes the teacher to act as a facilitator and counselor.

His concern over the teacher's 'thinking' about the students is what is referred to today as the "intellectual side of teaching". In other words, the teachers should think about both their subjects and their learners. Many researchers (Clark and Peterson 1986; Cohen, Raudenbush and Ball 2003) advance that curricula are not teacher-proof; teachers always modify their curricula based on their experiences, beliefs, knowledge and expectations. For example, teachers need to ask serious questions each time they have new groups of students. Such questions can revolve around what is interesting about the lesson, what ideas are difficult and why, the best methods to teach this or that kind of knowledge or skill and how students' diversity can be used to enhance the syllabus content.

This myriad of questions entails the teacher to know theories about teaching, learning, to know their students learning styles, the obstacles that might hamper the teaching process as well as the methods to overcome them. In fact, this is what is understood from Al Ghazali's words when he urges the teachers to deal cautiously with the learner differences, pay attention to the learners' psychological changes through age and their physical and intellectual abilities from childhood through early adulthood. He also hints at the changing roles of the teachers respectively, hence agreeing with the major and pivotal side of teaching today: teaching as intellectual work. In this respect, Ball and Wilson (1996) claim that teaching a very complex process where the mind, heart and ethics of the teacher are always present. They highlight the teacher's "watchful" eye over students to a great extent.

This reminds us again of Al Ghazali's overriding of the spiritual over the scientific/cognitive aspect since he believes that the ultimate goal of knowledge is the happiness of the soul in this life and the hereafter. This does by no means contradict the contemporary theories about morals and purity in education. Research now indicates that teachers should know why they act the way they do and what they learn from their experiences. These are the new teacher evaluation criteria. Schwab (1978) claims that it is hard "*to divorce discussions of mind from heart, for the intellect is deeply personal"*, therefore maintaining the teacher's moral responsibility.

3. Teaching

Al Ghazali believes in the complimentarity of all sciences though he categorizes religious studies as the most noble because they lead human beings to the ultimate happiness which is that of knowing their creator and, therefore, the happiness of the hereafter. He stresses the importance of the pedagogical tools and techniques. For him, teaching should make recourse to 'concrete examples' and explanatory situations. Knowledge, as mentioned before, needs to be functional. Moreover, he maintains that learning is effective when it is 'put into practice'.

Perhaps the best theory that might explain best Al Ghazali's notion is the natural learning theory that qualifies the teacher as a "coach". In this connection, Heath (1991) states that

> *"Natural learning sites shape the semantic and situational constraints*
> *of reasoning in basic ways. Identifying and solving problems, moving*
> *from the known to the unknown, and creating meaning through*
> *reasoning analogically mark everyday reasoning in situations that*
> *integrate individuals into team work and depend on guided learning*
> *in mixed-age groupings" (p.103)*

The teachers and scholars were given extraordinary importance during Al Ghazali's era. The traditional society of the time placed higher importance on the *Fuqaha* than on writers and philosopher. The superiority and prestige of the teachers, Fuqaha and Mudarrisin related to the religious nature of their teachings, and this status quo continued and reined till the 18th century where there emerged a co-existence of the two. Such a co-existence led effectively to the emergence of a new intellectual hegemony of the modern, western-influenced scholars in the 19th and 20th century.

The main approach to teaching mentioned in Al Ghazali's writings could be described as the 'gradual teaching' approach. He claims that the teacher should be patient and gradual in feeding his pupils knowledge. He stresses the 'patience' that teachers should adopt in dealing with learners. An array of modern education theories shed significant light on the affective side of the learners; such theories are based on the belief that motivation, learner personality, character and preferences should all be considered in the teaching process (see Freire, 1970; Gardner, 1983; Larsen Freeman, 2000; Piaget, 1950).

In the same regard, he also describes the necessary characteristics of the good learners themselves. Among such characteristics, the learners should:

a- *"Ensure that they are spiritually pure before they undertake the quest for knowledge and …respect the rights of their teachers and behave in a civil manner towards them"* and

b- Students need to *"devote themselves to the search for knowledge" (Nofal, ibid).*

Recent research has shown that positive teacher-student relationships lay the ground for motivation, learning and enjoyable learning environments (see Dornyei (2001); Gardner (2001); Little & Koback (2003)). Little & Koback (ibid) advance that students in such relationships

> *"feel motivated to learn and supported. Students feel more engaged*
> *when they have a supportive relationship with the teacher; they tend*

> *to work harder in the classroom, persevere, accept direction and criticism, cope better with stress and pay attention more to the teachers"* (in Yunus, Osman & Ishak (2011:2638).

c- *"Master the fundamentals of sciences and then specialize in science deeply* and *Study each subject thoroughly before going on to another, bearing in mind the logical sequence and interconnectedness of disciplines" (ibid).*

As mentioned above, this principle goes hand in hand with both the constructivist *and* behaviorist theories that stress the role of the mind in discovering meaning and knowledge and the role of external stimuli in strengthening what has been learnt *and* "preparing" the learners for new knowledge or skills to be learnt, respectively. The principle also agrees with the constructivists' belief that once the learners master lower-level knowledge and skills, they need to move to higher levels, hence creating higher-level skills and knowledge leading to more abstract and advanced knowledge (see Vygotsky, Skinner & Rummel).

d- *Choose useful subjects in which to specialize (Nofal, ibid).*

The students' preferences in subject choices and achievement have been given significant attention recently. Overall, two main factors have been identified that support the claim that students' preferences and choices are crucial in achievement: gender and social background such as class or ethnicity (Woodrow, 1996). The differences in subject choice for study and specialization "persist between ethnic minority students and genders" (in Jarvis & Woodrow, 2001, p: 1).

Conclusion

The theory of education presented and discussed above represents the most complete and detailed one in the Muslim world. It traced the framework for education through main stages, which conforms to the present day systems. It also specifies the goals of each stage: elementary, secondary and higher stages. It also describes the roles of learners and teachers and has also explained how teaching goals can be attained through the teaching approach, student-teacher relationship and learner characteristics.

Al Ghazali's ideas also influenced many Muslim writers on education later. A famous book entitled *Ta'alim Al Muta'alim Tariqat Alta'alum* (Teaching Study Methods to students) by Az-Zarnuji (died 1175 CE) is a summary of passages by Al Ghazali on teaching approaches and methods. The book is considered the most widely circulated one at the time. Al Tusi, an outstanding writer in the middle ages, was also influenced by Al Ghazali in his books: Akhlaq-Nasiri (Nasiri Ethics) and Adab Al-Muta'alimin (Rules of Conduct for Learners). These books were mere summaries of Al Ghazali's thoughts and ideas on education aspects. In the same manner, Ibn Jama'a (died 1332 CE), Ibn Al Hajj Abadi (died 1336 CE), or Ibn Hajar Al Haithami (16th century) all wrote books on education that quoted or referred immensely to Al Ghazali.

Al Ghazali has been an influence on education not only in the Muslim world but also outside, especially in late 11th-century Europe. His thought and works influenced scientists, thinkers and

philosophers, such as Thomas Aquinas, Dante, or David Hume, in the middle ages and the early modern period.

Bibliography

Al Ghazali,
Books:
   a. Ayyuha-l-Walad [Letter to a Disciple]. Cairo, Maktabat al-Jundi, n.d. (Printed as part of a series.) (English translation and introduction by George H. Scherer, O Disciple, Beirut, Catholic Press, 1951. (UNESCO Collection of Great Works: Arabic series.)
   b. Ad-Durra al-Fakhira fi Kashf 'Ulum al-Akhira [The Precious Pearl that Unveils the Sciences of the Hereafter]. Amsterdam, Oriental Press, 1974.
   c. Fatihat al-'Ulum [The Beginning of Sciences]. Cairo, Al-Matba'a al-Husainiya, 1904 (1322 H).
   d. Ihya' 'Ulum ad-Din [The Revival of the Religious Sciences]. Cairo, Al-Matba'a al-Azhariya, 1898 (1316 H). 4 vols.
   e. Kimiya-yi Sa'adat [The Alchemy of Happiness]. Bombay, 1903. (In Persian) (Translated into Arabic as Kitab al-Hikma fi Makhluqat Allah [The Book of Wisdom in God's Creations]. Cairo, Al-Qabbani, 1904.)
   f. Al-Ma'arif al-'Aqliya [Rational Knowledge]. Damascus, Dar al-Fikr al-'Arabi, 1963.
   g. Mi'yar al-'Ilm [The Yardstick of Knowledge]. Cairo, Matba'at Kurdistan, 1911 (1329 H).
   h. Al-Mustasfà fi 'Ilm al-Usul [The Pure Teaching on the Science of Fundamentals]. Cairo, Al-Maktaba at-Tijariya, 1937. 2 vols.

Al-Qabisi. Ar-Risala al-Mufassala li-Ahwal al-Mu'allimin wa-Ahkam al-Mu'allimin wa-l-Muta'allimin [Detailed Report on the Situation of Schoolteachers and the Regulations Governing Schoolteachers and Pupils]. Cairo, Al-Halabi, 1955.

At-Tusi, Nasiri ud-Din. Akhlaq-i Nasiri [Nasirean Ethics]. Bombay, 1850 (1267 H). (In Persian.)

At-Tusi, Nasiri ud-Din. Adab al-Muta'allimin [Rules of Conduct for Students].

Az-Zarnuji, Burhan ud-Din. Ta'lim al-Muta'allim ariq at-Ta'allum [Teaching the Student the Method of Study]. Cairo, Maktabat abi, 1956.

Du Plessis, P. & Bischoff, T. (2007). Diversity and Complexity in the Classroom : Valuing Racial and Cultural Diversity. Educational Research and Review vol. 2(9), pp. 245-254, September.

Dornyei, Z. (2001). Teaching and researching motivation. Harlow, England: Longman.

Fisher, P. (2008). Learning about Literacy: from Theories to Trends. Teacher librarian, 35 (3), 8-13.

Fosnot, C.T. (1996). Constructivism: Theory, Perspectives, and Practice. New York: Teachers College Press.

Freire, P. (1970). *Pedagogy of the Oppressed*. New York: Continuum.

Gardner, H. (1983). Frames of mind: the theory of multiple intelligences. New York: Basic Books.

Gardner, R, C. (2007). Motivation and Second Language Acquisition. *Porta Linguarum*. (Vol 8/ p.p:9-20).

Gruber, J.J. (1985). 'Physical Activity and Self-Esteem Development in Children: A Meta-Analysis'. The academy papers 19:30-48.

Harman, G. (2008). Mechanical Mind. American Scientist, 96 (1), 76-79.

Hourani, G. F. (1959). A chronology of Al-Ghazali's works. Journal of the American Oriental Society, vol. 79, No. 4. (Oct. - Dec.), pp. 225-233.

Hourani G. F. (1984). A revised chronology of al-Ghazali's works. Journal of the American Oriental Society, vol. 104, No. 2. (Apr. - Jun.), pp. 289-302.

Ibn Jama'a, Badr ud-Din. *Tadhkirat as-Sami' wa-l-Mutakallim fi Adab al-'alim wa-l-Muta'allim* (Memorandum for the Pupil and Master on the Rules of Conduct of the Scholar and Student). Dar al-Kutub al-Misriya, manuscript No. 1831/Lit.

Jarvis, J & Woodrow, D. (2001). Learning Preferences in Relation to Subjects of Study of Students in Higher Education. Winter, J (ED). Proceedings of the British Society for Research into Learning Mathematics 21(2), July.

Morrison, G. R., Ross, S. M. & Kemp, J. E. (2004). Designing effective instruction (4th ed.). NewYork: John Wiley & Sons.

Mubarak, Z. Al-Akhlaq 'ind al-Ghazali [Al-Ghazali's Ethics]. Cairo, Al-Maktaba at-Tijariya, n.d. al-'Uthman, 'A. Ad-Dirasat an-Nafsiya 'ind al-Muslimin wa-l-Ghazali bi-Wajhin Khass [Spiritual Studies by Muslims and by al-Ghazali in Particular]. Cairo, Maktabat Wahba, 1963.

Nofal. N. (2000). "Al Ghazali", Thinkers on Education series in Prospects, *the Quarterly Review of Comparative Education* (Paris, UNESCO: INTERNATIONAL Bureau of Education), vol. 23, no ¾, 1993, pp. 519-542; UNESCO, 2000.

Piaget, J. (1950). The Psychology of Intelligence. New York: Routeledge.

Pica, R. (2011). Why Preschoolers Need Physical Education. Young children, March, p.p:56-57).

Sternberg, R. (2016). Applying Psychological Theories to Education Practice. American Educational Research Journal, SAGE Journals.

Skinner, B.F. (1948). Walden to Indianapolis, IN: Hacket Publishing Company.

Vygotsky, L.F. (1978). Mind and Society: the Development of Higher Psychological Processes. Cambridge, MA: Harvard University Press.

Wakefield S. 2007. The consequences of incarceration for parents and children. PhD thesis.

Watson, M. (2006). Long term effects of moral education in elementary school: In pursuit of mechanisms. Journal of Research in Character Education, 4(1&2), 68–82.

Watson, M., & Battistich, V. (2006). Building and sustaining caring communities. In C. Evertson & C. Weinstein (Eds.), Handbook of classroom management (pp. 253–279). Mahwah, NJ: Erlbaum.

Watson, M., & Ecken, L. (2003). Learning to trust. San Francisco: Jossey-Bass.

Watt, M. (1963). Muslim Intellectual: A Study of Al Ghazali. Edinburgh, Edinburgh University Press.

Weegar, M.A. and Pacis, D. (2012). A comparison of two theories of learning- behaviorism and constructivism as applied to face-to-face and online learning. E-leader Manilla.

White, R. W. (1959). Motivation reconsidered: The concept of competence. Psychological Review, 66, 297–333.

Woodrow, D. (1996). 'Cultural Inclinations towards Studying Mathematics and Science'. *New Community,* 22(1) p.p. 23-38.

Yunus, M.M., Osman, W.S.W. & Ishak, M. (2011). Teacher-student relationship factor affecting motivation and academic achievement in ESL classroom, Procedia Social and Behavioral Sciences 15, (p.p. 2637-2641).