

1 The principles of instruction are the grounds of our knowledge

Al-Fārābī's philosophical and al-Ghazālī's spiritual approaches to learning¹

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This essay is dedicated to Professor Angelika Neuwirth, Berlin, on the occasion of her 65th birthday, November 4, 2008.

A comprehensive study of Islam's classical pedagogical tradition is still a desideratum in Western scholarship. Although certain aspects of education in Islam in medieval times have been examined recently in a number of publications, the theory of education as an area of medieval Muslim scholarship has not yet received the attention that it deserves.² This study makes a step towards completing modern scholarship's understanding of this issue by examining the educational views of two highly influential medieval Muslim thinkers: the philosopher and logician Abū Naṣr al-Fārābī (d. 339 A.H./950 C.E. in Damascus), and the theologian and mystic Abū Ḥāmid al-Ghazālī (d. 505/1111 in Ṭūs). Al-Fārābī is known as one of the pivotal and most original representatives of classical Islamic philosophy; medieval Muslim thinkers referred to him as "The Second Teacher," with Aristotle being "The First." Al-Ghazālī, on the other hand, received the highest praise for his work on orthodox Sunni theology and mysticism and he is still considered a major religious authority by Muslims today. Al-Ghazālī was greatly influenced in his own learning by al-Fārābī and Ibn Sīnā, especially by al-Fārābī's use of Aristotelian methodology and conclusions.³ Yet, he was also very critical of his predecessor for his adaptation and presentation of Greek metaphysics in an Islamic mode. Given the similarities and the tensions between the outlooks of these two sages, an exploration of their educational ideas in one study seems fitting. Thus, this essay first discusses the educational views of each of these scholars separately before examining which ideas they have in common and where they significantly differ in their views on education. Whether, or to what extent, their pedagogical ideas hold significance for us today is explored at the end of this investigation.

Al-Fārābī

Abū Naṣr al-Fārābī (known as Alfarabius or Avennasar in medieval Europe) is considered the most important political philosopher in classical

Islam and, probably, the first truly eminent Muslim logician. In addition, he is known as an influential metaphysician and musical theorist. Al-Fārābī was of Turkish origin. He was born in Turkestan but lived many years in Baghdad, Iraq, and Aleppo, Syria. Al-Fārābī settled down in Baghdad as a private individual. He studied with the leading philosophers and logicians of his day, and above all with certain prominent scholars in the Baghdad school of Christian Aristotelians. Later in his life, al-Fārābī accepted an invitation of Sayf al-Dawla (d. 356/967), the enlightened Shiite Hamdanid ruler who maintained in Aleppo a brilliant literary court. Al-Fārābī died in Damascus at the age of eighty years or more.

Objectives, course, and conduct of learning

The study of the forms, nature, and preconditions of knowledge takes considerable precedence in al-Fārābī's system of thought. Within this epistemological framework, education is an important social phenomenon. Careful examination of al-Fārābī's writings reveals that in several of them he deals with issues significant to educational theory. According to al-Fārābī, learning includes intellectual and moral education, the acquisition of technical and practical skills, and, remarkably enough, something we today call "value education"—that is, education in universal values that form a basis for creative thinking. Together these areas lead individuals to attain proficiency in the arts and professions that they pursue, refine their character, and turn theory into practice so that newly acquired knowledge is applied (al-Fārābī 1345/1926: 13–14; al-Fārābī 1962a: 22–3; al-Fārābī 1353^{sh}/1974: 34–83, esp. 45–57). In *The Attainment of Happiness (Taḥṣīl al-sa'āda)*, one of al-Fārābī's major works, the author argues, for example, that an inclusive approach to learning paves the way for people to reach the final goal of education, that is, the individual's "perfection" (*kamāl*).⁴ Al-Fārābī is well aware of the fact that curriculum plays an essential role in stimulating intellectual growth and, therefore, pays much attention to its structure and content. He deals with curricular matters most notably in his *Enumeration of the Sciences (Iḥṣā' al-'ulūm)* (1968a).⁵ In the introduction to this book, he classifies the sciences not just for the sake of listing them, but also for the purpose of learning.

Al-Fārābī maintains that the acquisition of knowledge must begin with (1) language and its components. These include syntax, grammar, pronunciation and correct speech, and poetry. This is because language constitutes the basis of understanding. Next follows (2) logic (*manṭiq*).⁶ Logic and its methodology train the students to comprehend correctly, to develop, and to communicate ideas. It familiarizes them with premises and their conditions, along with syllogisms and dialectical proofs. Then there is (3) mathematics, which al-Fārābī calls "teachings" (*ta'ālīm*). It is important since dealing with numbers in general prepares the students for more complex studies in the arts. Geometry (*handasa*) is part of these studies as it trains the

mind particularly well in demonstration (*burhān*) (al-Fārābī 1968a: 96). Mathematics and geometry should be complemented by the study of astronomy (*‘ilm al-nujūm*) and music (*musīqa*). Students also need to study (4) physics and metaphysics. Physics, that is, the “natural sciences” (*al-‘ilm al-ṭabī‘ī*), explore the nature and characteristics of the elements in the material world. Metaphysics (*al-‘ilm al-ilāhī*), in turn, fosters abstract thinking and makes the learners understand the essence of being so that they comprehend the final truth: that is, God (Fakhry 2002: 47–8). At the end of this curriculum, (5) the political sciences (*al-‘ilm al-madani*), jurisprudence (*fiqh*) and theology (*kalām*) are mentioned. The last two disciplines facilitate and support the striving of humans for perfection in that they provide insight and practical guidance for society: first, by determining the legislation of society and religious affairs, and second, by sustaining the beliefs and practices of faith (al-Fārābī 1892c: 1–53, esp. 10–16; Dieterici 1892: xxii–xxxvi; al-Fārābī 1968a: 53, 124–38).⁷ The curriculum that al-Fārābī envisioned “depicted the hierarchical structure of the universe and affirmed the distinction between human and divine knowledge” (Stanton 1990: 84). It was adopted and developed further by later Muslim sages such as Ibn Sīnā (d. 428/1037) and the Brethren of Purity (sometime in the second half of the fourth/tenth century), for example. It is also reflected to some extent in Ibn Khaldūn’s (d. 808/1406) division of the sciences. Al-Fārābī’s curriculum, however, did not become an integral component of formal higher learning in Islam, although it had an impact on the philosophers who—in their private studies and in study circles—followed it to some extent (Stanton 1990: 84; Reisman 2005: 52–71).

The education of political leaders was a matter of special concern to al-Fārābī, as can be seen from his books *The Virtuous State* (*al-Madīna al-fāḍila*) and *Political Government* (*al-Siyāsa al-madaniyya*) (Walzer 1985; Fakhry 2002: 101–22). Yet, al-Fārābī had a similar genuine interest in the education of ordinary members of society (Nogales 1980: 241–9, esp. 242–3). In the *Treatise on Politics* (*Risāla fī l-siyāsa*), a short work attributed to al-Fārābī that provides guidance for life, three categories of learners are defined:

[Among the] students . . . there are [first] those of a bad nature (*al-ṭabā‘ī al-raddiyya*) who want to learn the sciences [only] so that they can use them for evil things (*al-shurūr*). Therefore, it is necessary for the teacher to persuade them to refine their character. He must not teach them anything from the body of knowledge that they, when they master it, would use for something they ought not to use it for (*fī-mā lā yajibu*). [Instead,] the teacher must make all efforts to disclose their bad nature so that they become aware [of it and change for the better. Second,] there are students who have difficulties learning,⁸ from whom one cannot expect excellent intellectual achievements. Therefore, the teacher must urge them to deal with what is [understandable and] most beneficial to them (*a‘wad ‘alayhim*). [Finally,] there are the students of pure morals and

excellent intellectual capabilities. These are [the ones,] from whom the teacher must not hide anything of the knowledge he possesses.

(al-Fārābī 1901: 694–5)⁹

Several aspects are important here. First, for al-Fārābī ethics play a key role in education wherein both the intention and conduct of learning needs to be virtuous. If this is not the case, moral education must precede intellectual instruction. Second, learning is not a privilege of the elite. Rather, for al-Fārābī, a certain level of education is appropriate for all members of society. Third, every human possesses certain inborn aptitudes and it is upon these natural abilities that education must be built. The intellectual capacity of the student is decisive in determining the educational approach, the amount of knowledge, and the subject matter that is to be taught. Finally, teachers are fully responsible for bringing out the best in their students, regardless of whether a student is slow in learning or intelligent. Indeed, student excellence deserves support under all circumstances.

Ethical components of learning and the teacher–student relationship

For al-Fārābī, “education combines knowledge and virtuous behavior; it is happiness and goodness at the same time” (al-Tālibī 1993: 355). This concept is perhaps best represented in his book *The Attainment of Happiness*. In another work, entitled *What Must Precede the Study of Philosophy* (*Fī-mā yanbaghī an yuqaddama qabla ta'allum al-falsafa*), al-Fārābī also deals with the ethical components of learning. Here he provides practical advice to students and teachers when discussing the requirements for the study of philosophy. He emphasizes, for instance, that students must purify their souls before beginning to learn and that their intent to study must be impeccable. This ensures that students aspire to nothing but the truth. Furthermore, students ought to cherish and honor their teacher. However, they are allowed to do so only to the extent that they do not prefer their teacher’s opinion over the truth. Al-Fārābī states:

As for the teacher’s measured approach (*qiyās*), he should be neither too controlling nor too humble: too much dominance drives the student to hate his teacher; [however,] if the student sees too much humility in his teacher, this leads him to belittle him and become slothful towards him and his teaching.

As for the student’s need to be very careful and persevering, it is exemplified by the saying that “Dripping water hollows out a stone.”¹⁰

Regarding [the advice] that the student should not be preoccupied with things other than learning, the reason for this is that too much preoccupation with [too many] other things [would make] a person undisciplined and disorganized.

[Finally,] Hippocrates [died c. 377 BCE] is correct in saying that a sensible regimen for the body extends the life-span. How much more is this true in the case of taking care of the soul.

(al-Fārābī 1890d: 49–55, esp. 54)

Nature, methods, and principles of instruction

In *The Attainment of Happiness*, al-Fārābī deals at some length with the theory of instruction. He argues that instruction and study—along with meditation, investigation, and inference—are activities that serve humans either to acquire or provide “new” knowledge (al-Fārābī 1345/1926: 2; al-Fārābī 1962a: 13).¹¹ In other words, instruction and studying enable people to reach definite conclusions regarding matters or things and, eventually, to attain truth. To accomplish this, al-Fārābī recommends the application of a variety of educational methods and techniques. However, all these methods have to be “artfully mastered before setting out to investigate problems: we must know how to distinguish the various methods by means of specific differences and marks designating each [of them], and we must have our innate and natural aptitude for science developed through techniques that can provide us with knowledge of these differences since our innate capacity alone is insufficient for differentiating these methods from each other” (al-Fārābī 1345/1926: 4; al-Fārābī 1962a: 14). This is necessary because the data and arguments one encounters in studying are often complex and sometimes contradictory. Moreover, al-Fārābī maintains that there is no universal method of study; even if a particular method of teaching or learning has proven to be useful in one case, this will not necessarily recur in every case. This is noteworthy since these ideas appear to anticipate innovative principles in modern education, according to which adapting lessons to respond to different types of learners (visual, aural, and tactile, for example) is an essential part of instruction.

On these premises, al-Fārābī elaborates “the principles of instruction” (*mabādī’ al-ta’līm*), which he understands to be “the basic ways . . . and conditions through which the student is led” to obtain precise knowledge of what he seeks to know (al-Fārābī 1345/1926: 5; al-Fārābī 1962a: 15). Embedded in a larger philosophical discourse, he shows how the principles of instruction relate to what he calls the “the principles of being (or human existence)” (al-Fārābī 1345/1926: 7; al-Fārābī 1962a: 16–17). He emphasizes that proper application of the principles of instruction ensures that students understand not only *whether* a thing is, but also *why* it is. This, he says, will help them to comprehend the characteristics and nature of things and obtain understanding. Thus, as al-Fārābī propounds, “the principles of instruction are the grounds of our knowledge of the principles of being” (al-Fārābī 1345/1926: 7; al-Fārābī 1962a: 16–17).

A number of epistemological aspects of instruction are discussed in the treatise *The Harmony between the Opinions of the Two Sages, the Divine Plato and Aristotle* [*al-Jam’ bayna ra’yay al-ḥakīmayn Aflāṭūn al-Ilāhī wa-Aristūṭālīs*]

(al-Fārābī 1890c: 19–23).¹² Al-Fārābī here examines Plato’s and Aristotle’s arguments on whether and to what extent human learning relies on previously acquired knowledge. Al-Fārābī suggests, among other things, that “indications” (*alamāt*) and “directions” (*dalā’il*) are helpful instructional tools. He also maintains that teaching needs to be facilitated by ideas and images already familiar to the learner (*ma’ānī mā kāna fī nafsihi qadīman*); if this is not the case, students have difficulties in relating to new ideas and may even be unable to learn. Additionally, instruction needs to take place both gradually and in a focused manner. The teacher should begin with one definite topic or argument and then broaden his discussion to deal with more general matters. Al-Fārābī states also that “the acquisition [of knowledge] takes place only in the case of individual things; and only on the basis of these individual things will the comprehension of general matters occur” (1890c: 20–1).¹³ Al-Fārābī shows how knowledge acquisition and instruction work when critiquing Plato’s and Aristotle’s views on learning. He demonstrates how to survey and analyze sources of expertise and how to extract information from them. More specifically, he determines and explains different categories, levels, and characteristics of knowledge and, finally, he identifies certain difficulties one may encounter in learning. However, he does not do so without indicating ways to help students overcome such problems.

Interestingly, al-Fārābī highlights some methods of instruction that were known to be more appropriate than others for achieving certain goals. For example, argumentation, dialogue, and scientific discourse—whether conducted orally or in writing—are particularly efficient ways to instruct in theory-oriented problems. Furthermore, dialogue and discourse help the learner to arrive at precise knowledge and bring out the true nature of things. Debate, by contrast, is more useful to win over an adversary and make an idea triumph.¹⁴ Al-Fārābī also suggests that imagination has an important educational function. This is because the power of forming a mental image of something no longer present to the senses can be especially useful in teaching more complex concepts to common people (who would otherwise be incapable of understanding philosophical thoughts).¹⁵ Indeed, imagination—particularly the use of metaphors in teaching—is considered a creative way to help make things easier to understand (al-Fārābī 1961: 85; al-Fārābī 1962b: 92–3).¹⁶ Finally, al-Fārābī also provides three reasons that justify—and may even make advisable—the use of ambiguous language in advanced classes. Relying on Aristotle, al-Fārābī says a somewhat cryptic means of expression and subtle indications can be used: “First, to test the student’s nature and learning abilities; second, to avoid teaching philosophy to those who are not worthy of it; and third, to train the student in rational reflection through making him study harder” (al-Fārābī 1890d: 54).

Al-Ghazālī

Abū Ḥāmid al-Ghazālī (Latinized: Algazel) is viewed as the most important theologian of Islam. He was also a noted jurist, mystic, and influential

religious reformer. Al-Ghazālī was born in Ṭūs near the city of Mashhad in Iran. He pursued much of his education and higher studies in Nishapur and Baghdad. In 1091, at the age of thirty-three, he accepted the head teaching position at the newly-founded Nizāmiyya College, the most famous institution of higher learning in Baghdad and the entire Muslim world in the eleventh century. He occupied this position for several years.

Al-Ghazālī is generally noted for accepting Greek logic as a neutral instrument of learning and for recommending it to theologians. It is, however, in his mystical writings that we encounter two things of significance to education. The first is his incorporation of basic Aristotelian ethical values into an Islamic mode, representing them as Sufi values. The second is his insistence that the path to mystical gnosis must begin with traditional Islamic belief.

Reason and inspiration

Al-Ghazālī's powerful intellect and lifelong pursuit of knowledge made him an epitome of Islamic learning. His combination of rationalism with both mysticism and orthodox belief shaped Islamic thought in a way that is still evident today. His impact on the field of education is significant and there is good reason to view him as one of the great architects of Islam's theory of education. Much of his pedagogical advice is contained in *The Revival of the Sciences of Religion (Iḥyā' 'ulūm al-dīn)*, al-Ghazālī's *magnum opus*, in which he strove to reconcile traditional Islamic beliefs with Sufi teachings (Watt 1965: 1038–41; Marmura 1997: xviii–xix). He wrote this work after a life-changing spiritual crisis in 1095 C.E., as a result of which he became a mystic.¹⁷ Nonetheless, his advice is grounded in hard facts and soars above mere common sense. Since al-Ghazālī served for several years as head teacher at the Nizāmiyya College in Baghdad, with several hundred students attending his lectures, the educational philosophy expressed in *The Revival* and various other works reflects real teaching experience and the pedagogical expertise of an eminent educator.

Al-Ghazālī believed that reason and the senses allow humans to acquire knowledge of the visible, material world, while revelation and inspiration permit them to discover the invisible, immaterial world. Through perpetual learning and spiritual exercises humans attain "true" knowledge and become capable of comprehending (to various degrees, and depending on the learner's stage in gnosis) aspects of the realm of the Divine (*ālam al-malakūt*). This fundamental view of al-Ghazālī's concept of learning is reflected in the curriculum he discusses in the very first pages of *The Revival*. When he engages himself and his readers in a profound exposition of the excellence and merits of knowledge, instruction, and learning, al-Ghazālī identifies the Qur'ān, the prophetic tradition (*ḥadīth*), and intellect or reason (*'aql*) as his basis. The essence of his discussion is frequently reinforced and exemplified by maxims that he quotes from the literature of prophetic tradition. One of them reads:

Acquire knowledge, for its acquisition is [equivalent to] the fear of God; its pursuit is [equivalent to] worship; its study is [equivalent to the] praise [of God]; searching for it is [equivalent to] *jihād*; teaching it to [those] who do not know is [equivalent to] almsgiving; and imparting it to those who are worthy is meritorious.

(al-Ghazālī 1312/1894: 8 [vol. i]; al-Ghazālī 1991: 24)

Certain sayings of the Prophet Muḥammad, whom al-Ghazālī prominently quotes, reassure us that “To rise up before daybreak and learn something new is better than prostrating yourself in prayer a hundred times”; “Any bit of knowledge which one acquires is better for the learner than all the riches of the world”; and “Knowledge is like sealed treasure houses, the keys of which are inquiry (*su’āl*). Inquire, therefore, for therein lies reward for four: the inquirer, the learned, the auditor, and their admirer.” Al-Ghazālī further quotes the Prophet Muḥammad in stating that “the greatest achievement . . . of [humans] is eternal happiness, and the most excellent thing is the way which leads to it” (al-Ghazālī 1312/1894: 7, 9; al-Ghazālī 1991: 18, 26).¹⁸ However, al-Ghazālī indicates as well that happiness will not be attained except through learning and action; and deeds are impossible without the knowledge of how to accomplish them. Therefore, the basis for happiness in this world and the next is learning, which is the most excellent of human actions. Also, al-Ghazālī is very clear about the fact that knowledge and learning are necessary to master certain professions and worldly activities such as agriculture, weaving, architecture, and politics (the latter is needed for human relationships and society); they are fundamental to the welfare of the community and society (al-Ghazālī 1312/1894: 9; al-Ghazālī 1991: 26–7).

The curriculum

As for religious and secular intellectual education, al-Ghazālī highlights the importance of the religious sciences, a fact that is not surprising in a book with the ambitious title *The Revival of the Sciences of Religion* (al-Ghazālī 1312/1894: 10–22; al-Ghazālī 1991: 30–72 [section 2: “On the praiseworthy and the objectionable branches of knowledge”]). His discussion of the curriculum includes:

- (1) The science of religious practice (*‘ilm al-mu’āmalā*), which al-Ghazālī equates with “the knowledge of the conditions of the heart” (*‘ilm aḥwāl al-qalb*). However, al-Ghazālī says it is not required to study this discipline in an analytical way, that is, “through scrutiny (*naẓar*), investigation (*baḥṭh*), and research (*tahrīr al-adilla*).” Rather, it suffices to believe and confess sincerely and without hesitation (al-Ghazālī 1312/1894: 10; al-Ghazālī 1991: 31).
- (2) The sacred sciences (*shar’iyya*), which are devoted to the knowledge acquired from the prophets. This knowledge is different from the

knowledge at which one arrives by reason (as in arithmetic), experimentation (as in medicine), or audition (as in language studies). The sacred sciences “are all praiseworthy.” They incorporate:

- a) “Fundamental disciplines” (*uṣūl*), which deal with:
 - i) the Qur’ān
 - ii) the authoritative custom and precedence of the Prophet (*sunna*)
 - iii) the consensus (*ijmā’*) of the Muslim community
 - iv) the traditions relating to the companions of the Prophet (*āthār al-ṣahāba*)
- b) “Derived disciplines” (*furū’*) which deal with the systematic elaboration of canonical Islamic law and with ethics.
- c) “Preparatory disciplines” (*muqaddimāt*), such as linguistics and syntax. They are tools necessary for the understanding of the Holy Scripture and the prophetic traditions.
- d) “Supplementary disciplines” (*mutammimāt*), such as the variant readings of the Qur’ān (al-Ghazālī 1312/1894: 12–13; al-Ghazālī 1991: 37–9).

The study of the history of the revelation and the biographies of virtuous people and transmitters of prophetic traditions are complementary. Finally, there are:

- (3) The secular sciences (*ghayr shar‘iyya*), which al-Ghazālī divides into:
 - a) “Praiseworthy” (*maḥmūd*) disciplines, such as medicine, arithmetic, and astronomy. These sciences are indispensable for the welfare of this world.
 - b) “Blameworthy” (*madhmūm*) disciplines, such as magic, talismanic science, juggling, trickery, and the like.
 - c) “Permissible” (*mubāḥ*) disciplines, which he lists under the umbrella of philosophy. They are as follows:
 - i) Geometry (*handasa*) and arithmetic (*ḥisāb*).
 - ii) Logic (*mantiq*), which studies the manner of proofs and conditions.
 - iii) Metaphysics (*ilāhiyyāt*), which investigates the being of God and His attributes.
 - iv) Physics (*tabī‘iyyāt*), which investigates different substances of the natural world, their properties, transformations, and changes.

While geometry and arithmetic are permissible nearly without any restrictions, al-Ghazālī specifies that there are certain constraints to be observed for logic, physics, and metaphysics. As for the studies in logic and metaphysics, he argues that these are also part of *kalām*, that is, [discursive] Islamic

theology. On the one hand, *kalām* helps “safeguard and protect the hearts of the common folk against the snare of the innovators,” but, on the other hand, it is pursued by certain people who distinguish themselves by their “erroneous views.” The components of metaphysics, which al-Ghazālī considers as belonging exclusively to the philosophers, are certain doctrines that he holds to constitute infidelity (*kufīr*) or heretical innovations (*bidaʿ*). As for physics or natural sciences, “some parts” of them “contradict . . . the [divinely revealed] law (*sharʿ*), religion (*dīn*), and truth (*ḥaqq*) and are, therefore, folly” (al-Ghazālī 1312/1894: 16–17; al-Ghazālī 1991: 53–4). At the end of this curriculum, al-Ghazālī deals with jurisprudence (see, sacred sciences, above 2b). He advocates the idea that jurisprudence is connected with religion, although only indirectly, because jurisprudence deals with the affairs of this world, which is “the preparation for the hereafter.” In other words, the jurist’s domain is confined to the affairs of this world (al-Ghazālī 1312/1894: 13; al-Ghazālī 1991: 40).

Rules for students and teachers

As guidance for the virtuous path of learning, which is a pledge in human hands for salvation and happiness in the Hereafter, al-Ghazālī provides in *The Revival* a detailed catalogue of directions for students and teachers. He gives the rules of conduct for students in ten points, and for teachers in eight.¹⁹ Al-Ghazālī urges students to purify themselves by renouncing bad habits and character flaws in order to become worthy vessels for knowledge. They should remove themselves from worldly (and family) affairs and fully concentrate on learning, and they must respect and honor their teacher, inwardly and outwardly, and always embrace his advice. Furthermore, students must focus and adhere to the method and contents of learning offered by their teacher and ignore the contradictory views of others. They must strive for a comprehensive general education before devoting themselves to more specific studies. They must order their studies, deal with the most important disciplines first, and not attempt to study everything at once. Students must also learn to appraise the fruits and validity of each discipline. Finally, they should know that the attainment of inner virtue and spiritual perfection is the true goal of learning, not the gain of authority or recognition by others. Therefore, students must have a clear idea of the “relation of the different sciences to the goal [of learning]” (Haddad 1989: 138) and not over- (or under-)estimate a discipline. In other words, al-Ghazālī greatly emphasizes the need for students to free themselves from any attachments unrelated to studying, show humility towards both knowledge and their teacher, avoid sectarian differences, and give each science its proper due. We note also that al-Ghazālī mentions first his ethical advice and the psychological preparations for learning, and then follows this with practical directions concerning the content, order, methods, and objectives of learning.

For the teachers, al-Ghazālī recommends that they be understanding and treat their students as if they were their own children. Teachers should

follow the example of the Prophet Muḥammad and seek no praise or payment for instruction. Furthermore, they must ensure that their students know that the aim of learning is to draw closer to God, and not to accrue worldly gains. Teachers must persuade their students to give up bad habits, using subtle suggestion and compassion rather than direct criticism. Teachers must not speak in a derogatory way about disciplines other than those they are teaching. They must ensure that the study and test materials are appropriate and not too difficult. Student success is important, for it ensures that the students continue to enjoy learning. Students experiencing difficulties learning should be instructed only in things suitable to their limited understanding so as not to confuse or discourage them. Last but not least, the teachers' behavior and actions must conform to their words and teaching. Thus, al-Ghazālī views teachers as people who have acquired knowledge and are now philanthropically sharing it with others. He considers them the noblest among the erudite, and feels that it behooves him to advise them regarding the treatment of students and matters of pedagogy.

Al-Ghazālī's directions for students and teachers clearly mark a high point in the classical Islamic educational tradition. They allow us to picture an academic teacher who is aware of his responsibilities and passionately cares both for his students and the state of the teaching profession. It is, therefore, not surprising that al-Ghazālī's advice was a great source of guidance and inspiration for several scholars of later times. These include such scholars as Burhān al-Dīn al-Zarnujī (second half of the sixth/twelfth century), Naṣīr al-Dīn al-Ṭūsī (d. 672/1274), and Badr al-Dīn Ibn Jamā'a (d. 733/1333) who relied heavily on al-Ghazālī's concepts when composing their own books on educational theory and practice.

Logic and spirituality

Furthermore, education is a major theme in al-Ghazālī's *Balance of Action* (*Mizān al-'amal*), a work written prior to *The Revival*, but it is also discussed in *O Disciple* (*Ayyuhā l-walad*), a popular treatise believed to have been composed at the end of his life.²⁰ Both of these works contain lengthy passages that parallel and often complement the issues discussed in *The Revival*, al-Ghazālī's principal theological work. Moreover, they also present views of the mystical experience of learning which al-Ghazālī discussed (perhaps more prominently) in part three of *The Revival*, the chapter entitled "Disciplining the soul, refining the character, and curing the sickness of the heart (*Riyāḍat al-nafs wa-tahdhīb al-akhlāq wa-mu'ālat al-qalb*)." It is here that al-Ghazālī eloquently defines "an equilibrium between the letter [of the revelation] and the soul which, despite the continuing vitality of both extremes, was to determine the tenor of Muslim religious life from his day on" (1995: xv). Interestingly, in this chapter al-Ghazālī devotes an entire section to "the way in which young children should be disciplined and educated, and the ways of bringing them up and improving their character" (al-Ghazālī 1995: 75–82, esp. 75).

Knowledge acquisition and other issues related to learning as a complex process in the mind are explored in al-Ghazālī's famous work *The Aims of the Philosophers* (*Maqāṣid al-falāsifa*) (1888).²¹ In both the introduction and the conclusion of the *Maqāṣid*, al-Ghazālī states that this work is a survey of the theories of the philosophers without criticism, intended as a prelude to their refutation in *The Incoherence of the Philosophers* (*Tahāfut al-Falāsifa*).²² It is significant, though, that he introduces the following passage with a heading that clearly indicates a positive judgment. Al-Ghazālī says:

A Preface Introducing Logic: On the Usefulness and the Parts of Logic
 . . . The branches of knowledge, although diverse, are confined to two parts (*qismayn*): conception (*taṣawwur*) and assent (*taṣdīq*).²³ Conception consists of apprehending the essences—signified by specific expressions—by way of providing a correct understanding [of them] (*tafahhum*). Assent, [in turn,] is similar to apprehending what is intended by [general] expressions such as “body,” “tree,” “angel,” “jinn,” “spirit,” and the like . . .

Furthermore, both conception and assent can be divided into that which can be apprehended directly, [that is,] without investigation (*ṭalab*)²⁴ and reflection (*ta'ammul*), and that which can only be attained by investigation . . .

Everything, which necessarily requires an inquiry in order to be conceived mentally, can only be attained through a definition (*ḥadd*) [of it; whereas] everything, which necessarily requires an inquiry for its assent, can only be attained through an argument (*ḥujja*). [Be that as it may,] each of the two [categories] needs to be preceded by [unequivocal] knowledge (*ilm*).

(al-Ghazālī 1888: 4 [lines 12–16], 5 [lines 7–8, 17–20])

Relying on al-Fārābī's and Ibn Sīnā's concepts,²⁵ al-Ghazālī posits here that “conception” and “assent” are two basic kinds of knowledge acquisition. He indicates that conception or understanding is generally achieved through individual words that are defined on the basis of ideas and images already known to the learner. In contrast, assent or affirmation seeks confirmation of the meanings of words on the basis of the contexts in which they occur. Affirmation, then, is accomplished through argumentation and reasoning, including the use of syllogism, induction, and example. This process, he maintains, helps the learner to familiarize himself with something new and, thus, actually to learn. Furthermore, he indicates that precisely defined expressions are a major tool of learning, and that comprehension of the true nature of things is the final goal of learning. Moreover, this framework also promotes the idea that knowledge is not confined to inquiry, consideration, and other such learning activities. Rather, it is suggested that knowledge of certain things may simply exist. Thus, the soul would not require a definition or proof in order to understand that those things are true; as examples of the latter,

al-Ghazālī mentions the creation of the world, bodily resurrection after death, and the Day of Judgment (1888: 5).

Within this set of ideas, al-Ghazālī presents logic as a most useful tool of learning. He stresses that it guides humans to distinguish between truth and untruth. However, he very clearly notes also that all knowledge acquisition, whether conducted in the religious or natural sciences, eventually serves humans to understand the Divine. Since learning leads to perfection of the soul, which is a prerequisite for the attainment of eternal happiness in the Hereafter, striving for an excellent education is not only beneficial; it is a high-priority obligation upon every believer.²⁶

Conclusion

Al-Fārābī's and al-Ghazālī's concepts of learning reveal to us that these two medieval Muslim thinkers were remarkably aware of the significance that education holds for human growth and the welfare of society as a whole. Both scholars deal in a highly original manner with key issues in education, such as the objectives of education and the pedagogical tools needed in order to achieve such goals, the teacher–student relationship, and the curriculum. It is striking that their educational philosophies share a number of characteristics. Both are part of a larger epistemological discourse, both rely on reason and rational argumentation, and both are pragmatic, particularly when it comes to the relation of science to society. They also emphasize the need for well-educated and skilled people in order for society to function. Lastly, they both connect learning with the moral refinement of the individual and stress the obligation that both the intent and conduct of learning must be ethical. These similarities are evident despite the fact that al-Fārābī approaches these issues as a philosopher and logician with a metaphysical outlook, whereas al-Ghazālī approaches the topic from the viewpoint of a spiritual guide, religious reformer, and mystic.

Nonetheless, there are a number of more significant differences between al-Fārābī's and al-Ghazālī's concepts of education. For instance, it is obvious from the content and structure of their proposed curricula that the two scholars assign different value to individual disciplines. Al-Fārābī's suggests a curriculum for higher learning that integrates and gives equal weight to both "foreign" and "religious" sciences. The "foreign" sciences are those grounded in Greek philosophy and science (he considers these as preparatory or propaedeutic), and the "religious" sciences are those based on the Qur'ān and its interpretation. In contrast, al-Ghazālī affirms the supremacy of the religious disciplines. In his world of learning, the sacred sciences—with the letter and the spirit of the Qur'ān at their very heart—are incontestable and the secular sciences are subordinate. However, al-Ghazālī also recommends studying the natural sciences. Although he ranks them lower than the religious, he views the natural sciences as indispensable for human life and the welfare of society.

Another difference between al-Fārābī's and al-Ghazālī's educational views is more complex. It relates to the notion of "perfection" as the ultimate goal of learning and to the steps needed for humans to attain it. Al-Fārābī, on the one hand, appears to view perfection in the Aristotelian sense as the attainment of the ultimate "good" or "happiness" (Greek: *eudaimonia*). For him, fulfillment is reached through the optimal use of one's natural abilities. Al-Ghazālī, on the other hand, considers perfection and happiness to be found in contentment, a spiritual life, and faith in God, and these are the main grounds for learning.

A final point to make regarding their differences is closely related to the preceding remark. While the concept of happiness and fulfillment in the Hereafter is very prominent in al-Ghazālī's work, it is much less so in al-Fārābī's known works. In fact, al-Fārābī's writings seem to echo ancient Greek ideas, especially Plato's view that happiness in this world is measured and ultimate fulfillment is reached only in the Hereafter, and Aristotle's view that fulfillment does not go beyond happiness in this world. In contrast, al-Ghazālī propounded the view that ultimate fulfillment would only be reached in the Hereafter, and that this was the ultimate goal of learning. In affirming faith, spirituality, and reason as the foundations of the educational journey, al-Ghazālī decisively shaped the theory and practice of Islamic learning. However, for al-Ghazālī it is not a blind or ignorant faith. Rather, it is a reasonable, powerful, and yet tender trust in wisdom, humility, love, and respect that serves the individual and society, and eventually leads to perfection, salvation, and eternal happiness. As he affirms in a work written at the end of his life, for him "the noblest knowledge is where reason and tradition are coupled, [and] where rational opinion and the *sharī'a* are in association" (1987: 303). This insight might help explain the enduring authority of al-Ghazālī's educational views over the past nine hundred years and why they are still attractive and valued most highly in large parts of the contemporary Muslim world.

We may now ask ourselves in what way the ideas advocated by these medieval Muslim sages are relevant for the Western world in the twenty-first century. There are several points that provide us with food for thought.

First, al-Fārābī and al-Ghazālī alike plead with us to offer instruction that is both competent *and* caring. Furthermore, students are exhorted to be serious about their studies from the very beginning; otherwise, learning will not be successful. Second, it is safe to say that al-Fārābī and al-Ghazālī anticipated several theories and practices significant to modern, humanistic education. Let us recall, for instance, their advice to teachers to group students according to their learning abilities. Likewise, al-Fārābī and al-Ghazālī recommend using a variety of methods of instruction, in all of which the teachers must be well-versed. In modern terminology, this translates into an effort to improve student learning and study skills, and teaching techniques that facilitate the students' motivation, attention, comprehension, organization, and creativity in learning. At the same time, we can only admire

al-Fārābī's appeals to nourish the students' critical thinking abilities and make them understand that the truth is a most precious value overruling even the views and authority of a teacher. In turn, al-Ghazālī's appeal that teachers should not ask for payment for their services also sounds current when interpreted as a reaffirmation of the demand for free and accessible education.

Finally, we note how much distress it seems to have caused al-Fārābī and al-Ghazālī to consider the possibility of inappropriate use or abuse of knowledge, a fact that concerns us today to no less a degree. Al-Ghazālī goes one step further when dissuading students and teachers from pursuing the natural sciences, especially those that, in his view, contradicted religion. Of course, what al-Ghazālī calls religion could be extended in a modern scientific context to the fundamental ethics on which human existence relies. Without wanting to take a position here on this issue, there are people today who feel deeply concerned about the unregulated pursuit of research, especially in the natural sciences. Be that as it may, al-Fārābī's and al-Ghazālī's pedagogical theories open a window into the dynamic world of classical Islamic learning. Their ideas provide impressive evidence of the richness, sophistication, and diversity of scholarly discussion in medieval Islam on educational theory and practice. Moreover, they show how current and modern certain pedagogical concepts advanced by these medieval Muslim scholars actually are.

Upon further reflection on these issues, we realize that these Muslim thinkers share key concepts and values with what is called "liberal education" in the Western tradition. This is manifest, for example, in al-Fārābī's emphasis on *logos* and the spirit of inquiry, but also in al-Ghazālī's care for perfection and human excellence, both in private and public. Likewise, they devote much concern to "the recognition of basic problems, the knowledge of distinctions and interrelations in subject matter, and the comprehension of ideas" (Hutchins 1988: 3), principal issues in which the very substance of liberal education appears to consist. Thus, close examination of the educational ideas offered by al-Fārābī, al-Ghazālī, and other medieval Muslim thinkers will not only help the West to arrive at a more informed discussion of the dynamics and tensions in Islam's pedagogical traditions, but it will also benefit and greatly enrich current educational discourses.

We may conclude with a quote from the English physicist and mathematician Isaac Newton (1642–1727), who wrote: "If I have seen further, it is by standing on the shoulders of giants." It is to be hoped that with sufficient awareness of what has come before us in the field of education, we can be more confident in our ability to assess what is, in truth, progress in the field and, thus, to determine what truly needs to be done next in order "to see further."

Notes

- 1 This essay presents some results from the research for my book tentatively entitled *Medieval Muslim Thinkers on Education: Insights into Islam's Classical*

- Pedagogical Theories*, to be completed in 2010. The quotation in the title is in reference to al-Fārābī's statement: "*fa-takūnu mabādī' al-ta'līm asbāban Li-'ilminā bi-mabādī' al-wujūd*" (1345/1926: 7). The term "*asbāb*" (sing. *sabab*) is usually translated as "reasons"; for the purposes of this essay, however, I follow Muhsin Mahdi, who translates the expression in this passage as "grounds" (cf. al-Fārābī 1962: 1–50, esp. 16–17). As for al-Fārābī's frequent use of the term "*mabādī*," see Steinschneider 1869: 67, and the literature given there. All translations from the Arabic are my own, unless otherwise specified.
- 2 One reason for this situation is the fact that medieval Muslim thinkers—like their Jewish or Christian counterparts—often did not leave behind works devoted to educational theory. Rather, they usually embedded their views on education in the larger thematic, often epistemological, frameworks of their writings. On the other hand, there are a good number of medieval Arabic texts written specifically to provide pedagogical and didactic advice. On the *ādāb al-'ālim wa-l-muta'allimīn* ("rules of conduct for the teacher and the students") literature, see my article "Advice for Teachers: The Ninth Century Muslim Scholars Ibn Sahnūn and al-Jāhīz on Pedagogy and Didactics" (2005a: 89–128, esp. 89–91). See also Günther, S. "Education: Islamic Education," in Horowitz, M.C. (ed.) (2005) *New Dictionary of the History of Ideas*, vol. ii, Detroit: Charles Scribner's Sons, 640–5, esp. 643–4. Some significant recent monographs on classical Islamic learning include Bakar, O. (1998) *Classification of Knowledge in Islam*, Cambridge, UK: The Islamic Text Society; Berkey, J. (1992) *The Transmission of Knowledge in Medieval Cairo: A Social History of Islamic Education*, Princeton, NJ: Princeton University Press; Chamberlain, M. (2002) *Knowledge and Social Practice in Medieval Damascus, 1190–1350*, Cambridge, UK: Cambridge University Press; and Heck, P. (2002) *The Construction of Knowledge in Islamic Civilization: Qudāma b. Ja'far and his Kitāb al-Kharāj wa-ṣiṣā'at al-kitāba*, Leiden: Brill. See also Makdisi, G. (1981) *The Rise of Colleges: Institutions of Learning in Islam and the West*, Edinburgh: Edinburgh University Press.
 - 3 Michael E. Marmura notes that in the *Tahāfūt*, al-Ghazālī "singles out al-Fārābī and Ibn Sīnā as the most reliable Islamic exponents of Aristotle's philosophy" (1997: xix).
 - 4 Al-Fārābī suggests further: "Then [humans] should set out next upon the science of man and investigate the *what* and the *how* of the purpose for which man is made, that is, the perfection that man must achieve. Then [they] should investigate [everything] by which man achieves this perfection or that are useful to him in achieving it" (al-Fārābī 1345/1926: 16; al-Fārābī 1962a: 24). See also Mahdi 1975: 47–66. Al-Fārābī's concept of achieving perfection is paralleled and refined in another famous work, *The Gems of Wisdom (Fuṣūṣ al-ḥikam)*, known also by the (probably older) designation *Excerpts on Wisdom (Fuṣūl al-ḥikma)*. This work deals with principal issues in medieval Islamic philosophy such as theology, eschatology, cosmology, ethics, psychology, epistemology, and anthropology. Interestingly, its author maintains among other things that the "the calmed soul" (*al-naḥs al-muṭma'inna*, see also Qur'ān 16: 106 and 89: 27), by understanding the created world, will find complete rest and satisfaction in comprehending the ultimate truth, that is, God. Hence, the acquisition of knowledge of the existing world will gradually take every "understanding person" (*mudrik*) closer to God. Moreover, corresponding to the way in which the learner acquires knowledge, he will "resemble" (*mutashabbih*) the object he has comprehended (see al-Fārābī 1890a: 66–83, esp. 70; al-Fārābī 1892: 108–38, esp. 116; see also Horten 1904: 2, 9, 18). However, it should also be noted that the authorship of the *Fuṣūṣ* has been questioned by some modern scholars who suggest attributing it to Ibn Sīnā (d. 1037 C.E.) instead of al-Fārābī (see Pines 1951: 121–4, esp. 121;

Walzer 1965: 778–82, esp. 778; Lameer 1994: 24–5). In contrast, Max Horten (1904) assumes that the text of the *Fuṣūṣ* may have been exposed to textual modifications in the circles of higher learning of the twelfth to the fifteenth centuries where it appears to have been studied intensively. This wide transmission seems to have resulted in the fact that certain ideas in the preserved text of the *Fuṣūṣ* conform to orthodox (Ash‘arite) views of later times, rather than the Aristotelian-Neoplatonic philosophical tradition advocated by al-Fārābī (cf. Horten 1904: 6).

- 5 A German translation based on a twelfth-century Latin rendering of the *Iḥṣā’* was published by Eilhard Wiedemann in 1970. For a summary of the *Iḥṣā’*, see Nasr 1968: 60–2.
- 6 Al-Fārābī defines logic as follows: “Logic [is] the discipline (*al-‘ilm*), by means of which we learn [to master] the methods [of distinguishing between true and false] so that they lead us to the conception (*taṣawwur*) of things and to their assent (*taṣdīq*)” (1890b: 56–65, esp. 56). *Taṣawwur* and *taṣdīq* are important *termini logici* evident in Arabic works on logic since al-Fārābī. From his time on, they have been used regularly in philosophical treatments by medieval Muslim scholars (cf. Steinschneider 1869: 147–8; al-Ghāzālī 1888: 8–9 [ed. by G. Beer]; and, above all, Wolfson 1943: 114–26, esp. 114—here, he suggests that the two terms lend themselves to various translations, of which “formation” for *taṣawwur* and “affirmation” for *taṣdīq* seem to be the closest to the Arabic).
- 7 See Najjar 1958–9: 94–103; Nasr 1968: 60–2; and al-Tālibī 1993: 353–72, esp. 362. See also Schramm 1986: 1–55.
- 8 Literally, “dullards” (*buladā*).
- 9 See also Graf 1902: 385–406. The treatise *Fī l-Siyāsa* is not to be confused with al-Fārābī’s book *On Political Government* (*al-Siyāsa al-madaniyya*). Although L. Cheikho (1901) and other scholars have attributed the treatise *Fī l-Siyāsa* to al-Fārābī, and despite the fact that this short text delightfully reflects the “Farabian spirit,” some doubts remain as to whether it was actually written by al-Fārābī himself or one of his disciples. M. Fakhry (2002) does not mention this treatise as one of al-Fārābī’s works.
- 10 Al-Fārābī apparently quotes here the Roman poet Ovid (43 B.C.E.—17 or 18 C.E.), who is credited with the saying *gutta cavat lapidem* (Naso 1995: 518 [iv, part 10, line 5]).
- 11 In al-Fārābī’s terminology, “new” knowledge means knowledge that is posterior to “primary” knowledge, with the latter being innate to humans without their being aware of it or perceiving how they acquired it or where it comes from.
- 12 Al-Fārābī’s authorship of this work has also been disputed by some modern scholars (cf. especially Lameer 1994: 30–9). This is despite the fact that Ibn Sīnā (d. 428/1037) mentions it as one of al-Fārābī’s treatises (cf. Lameer 1994: 30, 37). Although the question of the authorship constitutes a problem in al-Fārābī Studies, it does not limit the value of this work for Islamic pedagogy, given the impact it had on medieval Muslim scholarship as a text believed since Ibn Sīnā’s time to be one of al-Fārābī’s.
- 13 Interestingly, the entire discussion in *Tahṣīl* (al-Fārābī 1345/1926: 8–16; al-Fārābī 1962a: 18–25) also mentions and applies many of these ideas.
- 14 The latter point apparently relates to a level of teaching at which the teacher instructs an advanced student in the art of debating and scholarly discourse among peers. See, for example, *Talkhīṣ nawāmīs*, where al-Fārābī quotes Plato to argue that debates about divine laws (*nawāmīs*) might depict some of these laws in a negative light; however, this is permissible if the aim of the debate is to study and analyze these laws (1353^{sh}/1974: 40). Later in this work, al-Fārābī points to Plato’s argument that debating may help people to find a way of life (*summa*)

- capable of uniting them (1353^{sh}/1974: 61); see also al-Fārābī 1987: 79–80. See furthermore Günther 2006: 1–22, esp. 7–10.
- 15 This is an argument already advocated by the classical Arabic littérateur and philosophical theologian al-Jāhīz (d. 868 or 869); see, for example, his *al-Bayān wa-l-tabyīn* [*The Book of Eloquence and Exposition*] (1405/1985: 136, 138–40); *Kitāb al-Hayawān* [*The Book of Living Beings*] (1938–58: vi: 7–9); and my translation of the passage (Günther 2005b: xxxii–xxxiii). See furthermore Günther 2008.
 - 16 See also al-Fārābī 1968b: 86–93 and Haddad 1989: 134–7.
 - 17 This seems to contribute to the impression that many of al-Ghazālī’s educational ideas, at first glance, appear to be “more an expression of the spirit of the time in which he lived [rather] than a response to its challenges” (Nofal 1993: 519–42, esp. 524). However, in this context let us not forget that al-Ghazālī typically preferred continuity and stability over change and innovation.
 - 18 Faris’ translation was slightly adjusted.
 - 19 For a more detailed synopsis of these rules, see Günther 2006: 17–19.
 - 20 In terms of the chronology of al-Ghazālī’s works, modern research suggests that the *Balance of Action* was written between 1091 and 1095 C.E. when al-Ghazālī was staying in Baghdad, *The Revival* was written between 1096 and 1101 during his travels to Damascus, Jerusalem, Mecca, and Medina, and *O Disciple* was penned at some point between 1104 and 1106 when he temporarily stayed in Tūs and then in Nishapur.
 - 21 *The Aims of the Philosophers* is believed to have been written in about 1094 in Baghdad—that is, before al-Ghazālī’s spiritual crisis in 1095 (Lazarus-Yafeh 1975: 46–48; and Chelhot 1955–7: 7–98, esp. 92–4).
 - 22 Surprisingly enough, as M.E. Marmura noted, in the *Tahāfut* there is no mention or even an allusion to the earlier *Maqāṣid* (1997: xvii). What is significant is that while in the *Maqāṣid* al-Ghazālī is explaining many of the philosophers’ ideas to which he objects in the *Tahāfut*, this does not include logic, which he discussed elsewhere, including the first part of his most important legal work, *The Quintessence of the Science of the Principles* [*of Jurisprudence*] (*al-Mustasfā min ‘ilm al-uṣūl*). It is noteworthy also that in this late work al-Ghazālī discourages the study of arithmetic, geometry, and astronomy, since they would concern pure rational knowledge that holds no practical applications; this stance stands in stark contrast to what he says in the *Ihyā’* (1322–4/1904–6: 3). The passage in *al-Mustasfā* reads:

Knowledge is of three kinds: One is the purely rational, which the *sharī’a* neither incites nor invites to; such as, arithmetic, geometry, astronomy, and other such kinds of learning. This is situated between false uncertainties, which are unworthy—‘indeed, some conjecture (*ẓann*) is sin’ (Qur’ān 49: 12)—and that knowledge which is true but has no benefit. We seek refuge in Allāh from knowledge which has no benefit. Benefit does not reside in the satisfaction of worldly passions and luxurious blessings, for these are transitory and must pass. On the contrary, benefit is the reward of the Hereafter.

(al-Ghazālī 1987: 303)

- 23 Assent, that is, propositions or declarative statements which can either be affirmed or denied.
- 24 More literally, “being sought after.”
- 25 See, for example, Marmura 2005.
- 26 For the complexity of al-Ghazālī’s views on secular learning, especially logic and physics, see Michael Marmura 1975: 100–11.

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