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# AVICENNA

(370?-428 AH—980?-1037 AD)  
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This study attempts to present the educational aspects of an Arab thinker considered by ancient and modern scholars alike as the most famous of the Muslim philosophers.<sup>2</sup> Thus al-Dhahbi describes him as ‘the leader of Islamic philosophy’.<sup>3</sup> G.C. Anawati has prepared a full bibliography of Avicenna’s writings.<sup>4</sup> In 1950, to commemorate the thousandth anniversary of his birth, the Dar al-Kutub al-Misriyya (Egyptian National Library) published a printed list of the titles of his works and their commentaries which are preserved there. We need only consult this list, containing more than 150 printed works and manuscripts and including all the branches of knowledge in his day, even poetry, to evaluate the extent of the culture which Avicenna acquired and handed on to us.

Avicenna’s most famous works are those on philosophy and medicine. His philosophical views have engaged the attention of Western thinkers over several centuries, and his books have been among the most important sources in philosophy. In medicine, his great work, *al-Qanun* (The Canon), was translated into Latin towards the end of the twelfth century AD, and became a reference source for medical studies in the universities of Europe until the end of the seventeenth century.<sup>5</sup>

Avicenna has attracted the attention of scholars, past and present, who have written books, treatises and articles on him. One of these aspects, however, has not been very widely discussed, namely his views on education. Although Avicenna’s writings on this subject, in comparison with his vast output on other subjects, are in fact considered to be very scarce, we do nonetheless find he deals with the same problems that confront educators today. He speaks about humanity, society, knowledge and ethics. He devoted a treatise entitled ‘Politics’ to education; and he speaks at some length in ‘The Canon’ about the upbringing of infants. Thereby, Avicenna represents a lively illustration of the meeting between philosophy and education, for the educator and the philosopher are both faced with the same problems: truth, goodness, the nature of the world, the meaning of knowledge and human nature, and so on. Obviously, Avicenna the philosopher has his own views on education. In addition, if we consider that Avicenna undertook teaching on a practical level for a considerable length of time, we realize that we have here a thinker whose philosophy was transformed into an educational theory that he himself practiced.

## The man and his age

The Sheikh al-Ra’is Sharaf al-Mulk Abu ʿAli al-Husayn b. ʿAbd Allah b. al-Hasan b. ʿAli Ibn Sina (known in Europe as Avicenna) was born in the village of Afshana in the vicinity of Bukhara (in what is now Uzbekistan), in 370 AH (980 AD)—the generally accepted date<sup>6</sup>—of an Ismailian family concerned with intellectual sciences and philosophical inquiry, all of which had its effect upon the scientific career of Avicenna.<sup>7</sup>

So Avicenna lived in the fourth century of the Islamic era, the most flourishing ʿAbbasid period in respect of learning and knowledge, which stands in complete contrast to

the political situation at that time. Learning was much in demand, scholars were numerous, libraries were filled with the outpourings of the scholars of Islam, and with translations made from the sciences of other nations in accordance with the desires of caliphs and viziers.

It was just around the time of Avicenna's birth and in the subsequent years that Islamic Arabic culture reached its peak. Since the Arabic language was the accepted vehicle for the transmission of knowledge in this era, Avicenna studied Arabic under Abu Bakr Ahmad b. Muhammad al-Barqi al-Khwarizmi. As soon as he had mastered Arabic (his mother tongue was Persian), his father obtained for him a teacher of the Qur'an and another for literature. The young pupil learned quickly from his two teachers, and before he was 10 years old he knew the Qur'an and a considerable amount of literature as well, becoming 'almost a prodigy', as Avicenna says of himself.<sup>8</sup> Next he developed a leaning towards philosophy, geometry and Indian mathematics, so his father sent him to the school of Mahmud 'al-Massah' (the surveyor), a man learned in arithmetic, algebra and the movement of the heavens, as reported by al-Bayhaqi.<sup>9</sup> He also studied *fiqh* (Muslim law) and the Sufism movement with Isma'īl al-Zahid al-Bukhari. And no sooner had Abu 'Abdallah al-Natli, the philosopher, arrived in Bukhara than Avicenna's father invited him to his house, hoping that the boy would learn intellectual subjects from him. If al-Natli had any noticeable success, it is that he diverted the boy from a preoccupation with law and Sufism in favor of the theoretical sciences and philosophical studies.

Before long, the professor sensed that the boy no longer needed him, for Avicenna was very anxious to acquire learning and had a real craving for the sciences of wisdom. He was then attracted by medical science, and devoted himself to it for a brief time, until he surpassed all the scholars of his age in this science. Avicenna says: 'Then I desired to study medicine, and took to reading the books written on this subject. Medicine is not one of the difficult sciences, so naturally I became proficient in it in the shortest time, until the excellent scholars of medicine began to study under me. I began to treat patients, and through my experience I acquired an amazing practical knowledge and ability in methods of treatment'.<sup>10</sup>

Avicenna was not content with the theoretical study of medicine, but he also practiced it from humanitarian motives and in order to put his learning to good use. He achieved all this while still no more than 16 years of age. Then he devoted himself to intensive study and reading for a year and a half, in which time he read through logic and all known sections of philosophy. Before Avicenna had reached the age of 18, his scholarly fame for philosophical inquiries and medical knowledge had spread far and wide.<sup>11</sup>

It is clear from Avicenna's biography that he was quick to learn, with a vast memory, and wrote with ease. When he was 21 years old, he composed the book *al-Majmū'* (The Compendium), at the request of some of his pupils; in this he dealt with all of the theoretical sciences, except mathematics. Despite the political turmoil reigning in the land of Transoxania, which obliged him to move house a number of times, and the fact that he was acting as minister for certain princes, this did not prevent him from both studying and teaching science. He always had his own students and his study circles wherever he went, and this continued right up to the time of his death, on a Friday in Ramadan in 428 AH (1037 AD). He was buried at Hamadan in Persia.<sup>12</sup>

## **The philosophical foundations of Avicenna's educational views**

### HIS VIEW OF THE HUMAN BEING

The human being, in Avicenna's view, consists of both hidden (*sirr*) and open (*'alin*) elements. Known to us is the perceptible human body with its organs and its cells. 'Sensory perception stops at its exterior, while anatomy (dissection) enables us to learn about the interior; the

hidden part consists of the powers of its mind'.<sup>13</sup> These mental powers motivate the human being, and cause it to carry out its various activities and behave as a human being. To Avicenna, the human is a tangible body on the outside, revealed within by means of anatomy—as we see in his books, such as 'The Canon'—and we do not find any difficulty today in accepting this. We still have to look at the mental powers or faculties that motivate this body.

## **What are the mental powers, and what is their function?**

Avicenna classifies these mental faculties for us into three groups.

First, the group of vegetative faculties, in which humans and plants both share. They are concerned with the survival of the human being, growth through nutrition, and preservation of the species through reproduction. They thus comprise three faculties: feeding, growth and reproduction.<sup>14</sup>

This group is followed by the faculties that make animals superior to plants, and are shared by human beings and animals. Typically, they allow the human being to be attracted to what it desires, and to be repelled by anything harmful arousing fear or anger. They comprise, in his view, two faculties: a faculty of motion and a faculty of comprehension or perception. Each is, in its turn, divided into other faculties: the motive faculty consists of an instinctive reaction, and a rational movement, permitting the human either to act or desist from action; comprehension is also divided into a perceptive faculty of the exterior world through the five senses—sight, hearing, smell, taste, touch—and one directed from within, by way of common sense, imagination, memory and reflection.<sup>15</sup>

Finally, there is the group of faculties which distinguish the human being from the animal; in Avicenna's view they comprise two faculties: an active faculty directing the human's practical conduct, and a cognitive faculty directing his intellectual conduct. Both are given the name 'intelligence', but the first is practical and the second is contemplative.<sup>16</sup>

## **The relationship between the mental faculties and the body**

All these faculties are merely different functions of the human soul. For the human soul is one, and those three powers are different functions of it.<sup>17</sup>

To Avicenna, the soul is immaterial, and is quite different from the substance of the body.<sup>18</sup> It is not pre-existent, coming into being together with the body;<sup>19</sup> but it survives and does not perish when the human being dies. Avicenna says: 'When the body dies and decays, the substance of the soul is released from its connection with the body; and if it is perfected in knowledge, wisdom and good deeds, it is drawn towards the divine lights, the lights of the angels and of the heavenly kingdom, just as a needle is drawn towards an enormous mountain by magnetic force; the divine presence flows over it, and it achieves real tranquillity, as the call comes to it from the heavenly beings: "Oh soul at complete rest, return to thy Lord, well pleased and well pleasing. Enter then among my devoted servants! Enter My heaven!".'<sup>20</sup>

## **Is the human being good or evil by nature?**

Avicenna is of the opinion that the human being is born 'upon the natural disposition' and is neither good nor bad by nature, although tending more to good than to evil; and this human being changes and adapts according to the influences of the environment and its education systems. If he is accustomed to evil, he will become evil; if accustomed to good, he becomes good. On this point, Avicenna says: 'When the child is weaned, then his education and his moral training begin, before he is attacked or overcome by blameworthy morals or

objectionable characteristics. For evil morals so quickly take over the young boy, and bad habits soon prevail; and if any of these gain influence over him they overcome him, and then he cannot separate himself from them nor struggle against them'.<sup>21</sup> Avicenna emphasizes this elsewhere by saying: 'All moral characteristics, the good and the bad, are acquired; and it is possible for the human being, when he has as yet no specific moral character, to obtain them for himself; and when his soul also chances upon some specific characteristic, he may move, by his own volition, away from it towards its opposite'.<sup>22</sup>

When we refer to Avicenna's writings on this subject, we are given an insight into an Avicennian social theory based on two clear fundamental principles:

## **The social nature of the human being**

The human being, as created by God, is not able to live in isolation but needs society for his survival, his growth and his education. Avicenna says: 'The human being differs from all other animals in being unable to live well as an isolated individual [...] with no partner to help him satisfy his needs. He must be supported by another of his kind, who, in turn, must also be supported by him and by his like, so that, for instance, one will provide vegetables for another, while the other makes bread; one will sew when the other provides the needle. When they join forces they are complementary. This is why human beings are compelled to found societies'.<sup>23</sup>

## **The divine nature of society**

The whole of society must submit to the righteous holy law of God, through the Prophet who legislates it, guided by divine revelation. For society needs someone to legislate its affairs, and this legislator must be a human being who stands out from the others through qualities which ensure that his word is obeyed and the whole people follow him. This is Avicenna's justification for the existence of the Prophet, the specific miracles with which God distinguished him, and the need for the prophecy. Avicenna says: 'So it is necessary that there should be a Prophet, and necessary that he should be a human being, and also that he should possess a special quality not found in other people, so that they are aware of something in him not found in themselves; thus he is set apart from them and has miraculous powers'.<sup>24</sup>

## **The gate of *ijtihad* must be left open**

Since the Prophet, in the Avicennian scheme of things, is the one to lay down laws governing society by revelation from God, it is necessary that the gate of *ijtihad* (personal interpretation of Islamic law) be left open to allow for any new events and circumstances in the following eras, and especially anything connected with political and practical affairs. The Prophet defines the general principles in these matters, while particular implementation is left to the circumstances. Avicenna says: 'A great deal of concerns, especially in social affairs, must be entrusted to personal interpretation; for there are judgements concerning special circumstances, which cannot be precisely determined. [...] Particular rules should not be laid down for them, and making such laws would lead to confusion, for they change with the times'.<sup>25</sup>

## **The choice of the caliph**

Since the Prophet was a human being with a limited life span, he must have a successor or *khalifa* (caliph). This successor is the one to rule after the Prophet, his mission being to implement 'the teachings of the Prophet'. This means that every ruler in Islam is a successor.

So how is this successor to be chosen? This has been one of the greatest problems in Islamic thinking throughout the ages. Avicenna's solution was for the choice to be made by the Prophet's command in his life time, and by consultation and consensus of those in authority after his time. 'The Prophet did not appoint a successor, and did not wish the people in authority to choose anyone unless they were sure he alone had political power; that he was able, courageous, virtuous and with an ability to organize, knowledgeable in the holy law so as to be unsurpassed in understanding its secrets and fathoming its depths.' Obedience will be paid to the ruler who fulfils these conditions and possesses these qualities. When these conditions are contravened, then it is obligatory for all to oppose him; if they do not, they disobey God and are unbelievers.<sup>26</sup>

From all the above it is clear that society, as seen by Avicenna, is a collection of individuals very differently endowed with skills and capacities. This differentiation requires some kind of specialization, and this demands co-operation between the individuals in society and interaction between them. If this co-operation and interaction take place haphazardly, the social system may break down. Thus there is a need for 'a ruler' who governs life in society. His task is to implement the principles of the law, wherever there is a text, and he is an independent interpreter (*ijtihad*) who consults people in authority where there is no text. The ruler or the prince has an urgent and very real need to conduct this consultation.<sup>27</sup>

Although this allegorical picture of society, as Avicenna saw it, differed in certain respects from the Iranian society in which he lived, this was in fact the society on which he based his educational thinking, for in this field we see him maintain the inheritance of this 'divine society' represented in its beliefs, rites of worship and its ethical code. He would recommend that this was the inheritance to be presented to the child in the first stages of his education.

#### HIS VIEW OF KNOWLEDGE

Avicenna considered that the soul, with its various faculties, is the path to knowledge or perception for it distinguishes between sensory perception and intellectual perception. The means of sensory perception, as already stated, are the five external senses and the five internal senses. These external and internal senses are especially relevant to sensory perception. Sensory perception occurs when sensory stimuli reach the organs of perception and are registered and comprehended by the sensory faculties. Avicenna says: 'It appears that every perception is the acceptance of the picture of the thing perceived, in one way or another'.<sup>28</sup> And he says of sensory perception itself: 'The pictures of all the things perceived by the senses are conveyed to the organs of perception and are impressed upon them, and are then perceived by the sensory faculties'.<sup>29</sup> Sensory knowledge, in Avicenna's view, is acquired knowledge, its source being the sensed stimuli, and its means the external and internal faculties of sense. The subject of intellectual knowledge is then simply the thing perceived, and its means is the human's speculative faculty entrusted to him by God, which is capable of acquiring that rational knowledge.

In order that intellectual knowledge should be effective, it must have a particular structure and an instrument to regulate its operation, and also to verify the soundness of the thought and reasoning; this instrument is logic. For logic is the theoretical art or the instrument which protects the intellect from making a mistake.<sup>30</sup>

#### HIS VIEW OF ETHICS

Avicenna saw moral character as an expression of 'a natural disposition whereby certain actions issue from the soul with ease, without prior thought'.<sup>31</sup> This means that character is

not merely the practice of good behavior, but the practicing of it at every appropriate occasion because the person has accustomed himself to it and is unable to act otherwise. We can describe a man as truthful only when he is habitually truthful in his speech, and the same applies for other admirable moral characteristics. In the same way, we can describe a man as a liar only when he habitually tells lies, and the same for other character failings.

For the human being to achieve an excellent morality, he must govern his reason well in all his conduct, and punish his soul if it departs from the right path, and reward and encourage it when it follows the path of virtue. Avicenna says: 'The human being must prepare for his soul both reward and punishment, and govern it thereby.'<sup>32</sup>

It is also obligatory for the human being, if his soul encounters a moral evil, to recognize its opposite, and force his soul go towards this excellent virtue and accustom it to that extreme path, in order that his soul shall eventually acquire the middle path.

In all this, the reference point is reason. When the human being knows how to obey the commands of reason, he is on the road to being educated or virtuous. Reason is what defines good conduct, and the standards by which it is defined are the middle path on the one hand and equity on the other. Reason can itself recognize the middle path for every virtue, since virtue stands in the middle between two bad characteristics. Reason recognizes equity from the harmony among these virtues, so that no virtue is dominant over the others, and the human being can maintain an even balance in all his morality, without exaggerating one virtue at the expense the others. It is to be noted here that, while the foundation of spiritual and ethical values found in the Qur'an and the *Sunna* (the words and deeds of the Prophet) is based on the religious constraint deep in the human soul, for Avicenna it arises from the domination of reason over the faculties of wrong-doing. Now it is clear that to comprehend moral values, their simple acceptance by reason is not enough. It is necessary rather that they should take root in the heart, where the 'moral sense' becomes a part of the human beings behavioral structure.

Avicenna did grasp the fact that such a conception of ethics is that of scholars or philosophers, or at least of an élite. He is not concerned with the common people in this ethical theory, since they do not act because they are persuaded by, or respect, reason, but rather through dread of punishments, in this world and in the hereafter.<sup>33</sup>

In Avicenna's view, then, morality is an acquired matter, not inborn, and it is within a person's capacity to acquire any such morality he wishes through 'habituation', 'imitation', 'fear' or 'wisdom'. Avicenna considered that the process of acquiring morality begins from 'the infant's birth', because the child is exposed to problems and difficulties soon after birth and in the early stages of childhood, and these influence his psychology and temperament, and hence his ethical development. For this reason Avicenna paid great attention to the early stages of childhood and everything connected with it: the morality and culture of the wet nurse, the teacher, and the child's companions in school or the place where he studies.

## **Avicenna's educational views**

### THE AIMS OF EDUCATION

Avicenna sees the aims of education as the overall growth of the individual: physical, mental and moral; followed by preparation of this individual to live in society through a chosen trade according to his aptitudes. So Avicennian education does not neglect physical development and everything implied by it: physical exercise, food and drink, sleep and cleanliness.<sup>34</sup> It does not aim exclusively at intellectual development and the amassing of knowledge; likewise Avicenna does not devote his attention to the moral aspect alone, but aims at the formation of a personality complete in body, mind and character. He does not restrict the task of education

to creating the complete citizen, but rather sees that education must also prepare him for a profession whereby he can contribute to the social structure, because society, in Avicenna's view, is built entirely on 'co-operation', on the specialization of each individual in a craft or profession and on the mutual exchange of services between its individuals.

Although Avicenna was a philosopher and thus belonged to a group of people who believed that Greek thought was that of an educated élite such that philosophers had an undisputed superiority over all others, yet for him the aim of education was not restricted to the training of philosophers. This was particularly because he lived in the fourth century of the Islamic era, quite apart from the fact that this Greek idea was that of an élite. Therefore Avicenna makes 'the education of the philosopher' one of his educational aims among others at the specialization stage, to which anyone who wished could direct himself in accordance with his aptitudes and inclinations. This is the difference between his education system and that of al-Ghazali, for example, or al-Qabisi; for while we find that 'the education of the philosopher' was hardly included in their writings, Avicenna goes into great detail about it, the sciences which should be studied, and the aim and the benefits of each one of them.

We can say then that education in Avicenna's opinion is the making of an upright citizen, sound in body and mind, and preparing him for some intellectual or a practical work. Intellectual work could be connected to the traditional sciences or to the theoretical sciences that Avicenna esteemed so highly. He counts 'industry' or 'crafts' as a kind of instruction requiring vocational preparation and specialization. He says: 'Instruction and learning include the practical, like carpentry and dyeing, for it is only acquired by practice of that craft'.<sup>35</sup>

#### THE EDUCATIONAL STAGES

##### *The infant stage: from birth until the second year*

Avicenna's concern with the child begins from birth. 'When he is born, the child's umbilical cord must be cut at once, above four fingers' length, and tied with clean, fine wool twisted lightly, so as not to cause pain; if we wish to swaddle him, then the midwife must first massage his limbs gently; she must inspect his body where this is necessary, moving every limb into the best position; all of this by gentle touching with the tips of her fingers which should become a regular habit, and she should often wipe his eyes with silk or something similar'.<sup>36</sup>

Avicenna is greatly concerned with everything connected with this stage: sleep, bathing, suckling, exercise suitable to the infant's age. About the infant's sleep, Avicenna says: 'He should be put to sleep in a room with a mild temperature, not cold; the room should be fairly well shaded, with no direct rays of light. When he lies in his cot, he head should be higher than the rest of his body. Care must be taken that the cot does not allow his neck or limbs or his spine to be twisted in any way'.<sup>37</sup>

Avicenna is insistent that the infant should be bathed more than once a day, and that the mother should herself suckle her child: he speaks at length on the mother's milk, the normal length of breast-feeding, the number of feeds per day, and weaning, which should be undertaken gradually. From his long discourse we shall mention briefly the following extracts: When the infant sleeps after feeding, the cradle should not be rocked violently, which would disturb the milk in his stomach, but only gently. To cry a little before feeding is beneficial. Breast-feeding normally lasts two years, and when the infant desires something besides milk this should be given gradually without forcing him. When his teeth begin to appear, he can move in gradual stages from being fed on mother's milk to stronger food. At first this can be bread chewed by the nursing mother, then bread soaked in water and honey, juice or in milk. This should be given to him in small quantities and he should gradually be kept from the breast. As Avicenna says, 'weaning should be gradual and not take place all at once'.<sup>38</sup>

## The stage of childhood

This lasts from the third to the fifth year, at the time when ‘the child’s body strengthens, his tongue is free, and he is ready for instruction, and his hearing is attentive’.<sup>39</sup> In ‘The Canon’, he defines the start of the sixth year as the end of that stage, whereupon he enters ‘the stage of primary teaching’. Avicenna says: ‘And when he has reached the age of 6 years, he should be brought to the tutor and the teacher’.<sup>40</sup> We see Avicenna not concerned here with any specific kind of teaching, but merely with creating a happy childhood as regards physical, mental and moral health. Therefore he concentrates here on three educational concerns:

- (i) The child’s morals, and keeping him away from any harmful influences which might affect his soul and his morals.
- (ii) Development of the body and movement. Regarding the need for play and exercise in that stage, Avicenna says: ‘When the child wakes from sleep, it is best for him to be bathed, then let him play for an hour; then he is given a little food to eat, then he is allowed to play for a long time, then he is bathed, then fed. Children should not be allowed to drink water straight after food, for then it would go into their system raw without being digested’.<sup>41</sup> Games form a necessary element in the child’s life at this stage, whereby he acquires various physical and motor skills. He also learns how to live in a group and benefit from that life.
- (iii) The development of taste and behavior. Avicenna had an interest in music and considered it necessary for the child to listen to it, so that from the time he is in the cradle, he goes to sleep to the sound of music. That prepares him later to learn music; and this education in taste will be further refined in the next stage, when he learns simple poetry with easy rhymes, bringing the child pleasure as well as encouraging him to appreciate virtue.

### *The first stage of teaching*

This begins at the age of 6 and ends approximately at 14 years of age. It is on reaching this age that the child must begin receiving education of a more serious kind, gradually moving away from games and sport, and beginning organized study. ‘Until [children] complete their fourteenth year, they must gradually decrease their sporting activities’.<sup>42</sup>

At this stage, children learn ‘the principles of Islamic culture’, from the Qur’an and Arabic poetry, calligraphy, and Islamic rules of good conduct. This is a common stage for all children, since preferences have not yet appeared. Later, aptitudes make their appearance, and in accordance with these every individual can be given particular instruction.

Avicenna considers that group instruction and not individual instruction is best at this level. He advises that the child be brought up with others, saying: ‘The child should be taught alongside the children of the nobility (the great or the rulers) whose conduct is good and whose habits are acceptable. For one child will teach another, learning from him and becoming his friend. If one child is left alone with the teacher, that is most likely to be unsatisfactory for them both; when the educator moves from one pupil to another, the risk of boredom is less, the pace of activities is more rapid and the child is eager to learn and succeed’.<sup>43</sup>

### *The specialized education stage (age 14 onwards)*

This comes after the child has completed general primary teaching, and his aptitudes have become apparent either to continue in the field of education or to learn a craft and earn a living. In the light of these aptitudes, the young person defines for himself the type of study or the type of vocational work that appeals to him during the higher or specialized stage.

Avicenna emphasized the need to have regard for the young person's preferences at this level when defining his future, his studies and the choice of profession; he insists that young people should not have any kind of study or work forced on them that does not correspond to their abilities and inclinations. The teacher must know 'that not every craft the child desires is possible nor opportune for him, but the one that conforms to his nature and suits him. If skill and crafts were simply obtainable on demand, without question of appropriateness or suitability, then no one would be devoid of them, and people would all agree to choose the most noble skills and the highest of crafts'.<sup>44</sup>

What then are the standards for defining educational and vocational inclinations among students at this stage? And how can the teacher direct the student to a type of learning or profession that he sees as suitable for him?

Avicenna considers that this is evident directly from the conduct of the child, and 'the boy's guide', either his father or his teacher, will notice specific inclinations. From the practical angle, this can be ascertained by observing the student's conduct. Defining the true origin of inclination or ability is for Avicenna a difficult matter: 'These choices and these suitabilities and conformities have obscure and hidden causes which tax human understanding, and are too subtle to be measured or identified, so only the Almighty knows them'.<sup>45</sup>

Avicenna remarks that students differ in their aptitudes and abilities, and sees the need of educational and professional guidance at that stage. There is nothing unusual about that in an age when science and knowledge were in full expansion, when crafts and professional groups abounded, and when trade guilds were found everywhere. Likewise Avicenna was aware of the 'mentally retarded' and the 'simple-minded', who were incapable of benefiting from any kind of theoretical or practical education. He considers that they and their like must be given a special place apart where they would live under the supervision of a warden. Those for whom there was no hope of improvement should have their care and their sustenance guaranteed. Avicenna says: 'It may happen that a person's nature is incompatible with any culture or attention, and he learns nothing from them. This can be seen from the fact that people of intelligence have wished to educate their sons, and have expended much effort and expense on that purpose, without attaining their objective'.<sup>46</sup>

Avicenna points out very clearly the necessity for educational and vocational guidance. He appreciated the very close connection between education and the economic and social needs of society, as well as the role of individual aptitudes and abilities in defining the type of learning or trade in which each student should specialize; thus, he makes the higher stage of education that of specialization. Each student would then specialize in the science or the trade which he wished to be his future occupation, and the source of his income in working life. Avicenna perceives too that this specializing stage comes only after a period of general education in which all students participate, and where they learn the principles of Islamic culture, before allowing their talents and special aptitudes to come to the fore when all that is completed. So it is on this basis that the higher specialized stage follows.

## TEACHING METHODS

### *Infants under 6 years*

We have pointed out that Avicenna is concerned at this stage with the child's sensory and motor development and with moral and emotional training. We are not aware of Avicenna having indicated any specific methods at this stage, apart from physical exercise and music; one for the child's growth and his physical and motor development, so that he should acquire thereby a great many moral and mental habits; and the other to refine his feelings and to heighten his emotions.

Avicenna is very much concerned with games at this age, as well as in primary education. He shows us the role of exercise in education and its necessary place in the child's life, and explains that exercise differs according to age, and also with the child's ability. For exercise may be much or little; it can be very vigorous, demanding considerable physical strength; it can also be slight; swift or slow; it can be rapid, combining strength and speed; and again it can be relaxing. Each of these types has its own appropriate place and necessity in the life of the young child.<sup>47</sup>

But Avicenna is as concerned with play and exercise at this level of education as he is with 'musical education'. We know that Avicenna was skilled in this art, both as a composer and a performer.<sup>48</sup> So it is in the capacity of an expert that he mentions the feelings of pleasure, joy, purity and the sense of exaltation which music brings about in the child: and also the way the child can learn to perceive harmony and discord, treble and bass, and how this comes about. Avicenna speaks at length about music, its composition and rhythm, and the instruments used.<sup>49</sup>

So sport and music are the most important components of the method in this stage. They are the two methods of instruction which prepare the child for organized 'primary teaching' in the next stage, when he reaches 6 years of age.

#### *Methods at the 'primary' stage (6 to 14 years)*

The components of study in this stage are the Qur'an and its memorization, learning to read and write, acquiring the outlines of religion and study of some Arabic poetry; besides which he is again aware of the need for play and exercise. Avicenna says: 'When the boy's joints strengthen, and his tongue is apt, and he is ready for instruction, and his hearing is attentive, he begins to learn the Qur'an, and is shown letters of the alphabet, and is instructed in the outlines of religion. The boy should recite the *rajaz* (poetic verse), then the *qasida* (classic ode); the *rajaz* is easier and is more quickly learned because its stanzas are shorter and its rhythm lighter'.<sup>50</sup>

The child should first recite the *rajaz*, since it is easier to remember. The verses the child memorizes must make plain the usage of good manners and of learning, and the disgrace of ignorance and foolishness; it must encourage respect towards parents, acceptable behavior, hospitality to guests, and high moral standards.<sup>51</sup> This means that the poetry which Avicenna wants to be presented to the child at this stage is literature with a message, which contributes to the boy's training, and giving him that moral education which Avicenna considers to be the human being's goal and the source of his happiness.

The curriculum put forward by Avicenna reminds us of society's concern at that time with Islamic culture and its basic elements: the Qur'an, poetry, devoutness and ethics. On the other hand, he does not ignore the child's need for play, movement and diversion, so that his curriculum does not really differ very much from that followed by the modern child in the majority of Islamic countries today, except for its concentration upon 'memorizing the Qur'an' and in giving this learning 'absolute priority'.

#### *Methods of higher instruction (age 14 onwards)*

Instruction at this stage is specialized according to the pupil's future occupation that has been chosen depending on his inclinations and aptitudes. This is an open-ended education, meaning that it continues throughout life. Avicenna says: 'When he has finished learning the Qur'an and memorizing the fundamentals of the language, at that time one should look into what occupation is desired for him, and he should be directed on this path; if [his teacher or guardian] wishes him to study literature, then to the study of language he adds that of epistles,

speeches, argument and dialogue, and similar subjects; calculation is explained, and he is initiated into administration through a practical course; care is taken with his handwriting; and if he seems destined for another discipline, he is guided accordingly'.<sup>52</sup>

Avicenna divided the education of his day into theoretical instruction and manual or practical instruction (trade, jewelry making or another craft). This practical learning 'is acquired by diligent practice in the activity of that craft',<sup>53</sup> or by being trained in it. Theoretical education, on the other hand, is that which is acquired from 'speech heard or understood, which naturally conveys a belief or an opinion, or creates an impression which did not exist before'.<sup>54</sup> This theoretical teaching is also made up of two kinds: 'transmitted' theoretical teaching, and intellectual or philosophical theoretical teaching. Each type of theoretical or practical teaching—and likewise every form of transmitted or intellectual teaching—has its means and methods which prepare the individual for specialization in the chosen field. We would wish that Avicenna had spoken in greater detail about these three methods of teaching (transmitted, intellectual and vocational). Unfortunately, he restricted himself to drawing attention to them, which does, however, indicate their existence at that time. His subsequent writings speak at greater length about the methods by which the students of the intellectual sciences were taught.<sup>55</sup>

#### THE TEACHING OF GIRLS

Avicenna did not speak about girls as much as he did about boys. However, the fourth century of the Islamic era witnessed great activity in the field of education from which women shared to a certain extent since there were some outstanding women lawyers, poets and singers at that time.<sup>56</sup> Perhaps this is due to the fact that, in Avicenna's view, a woman did not need to earn her living like a man, but he made it clear that the man was expected to protect and care for her, and support her financially.<sup>57</sup> Thus women did not need to follow specialized or higher education, such as the man needed in order to prepare him for work or a craft from which he would earn his living in the future.

The teaching required by a woman was such as to fit her to be a wife, mother and sister. It appears that it was customary in Avicenna's day for this education to be carried out at home and to be taken care of by the girl's family or by a private tutor assigned to this task. It is clear that Avicenna acknowledged this individual style in teaching girls, and left their teaching to their families, who would give them whatever moral, religious and cultural preparation they desired.

#### METHODS OF INSTRUCTION

##### *The method of learning the Qur'an, calligraphy and arabic literature*

In the lands of Transoxania in Avicenna's day, handwriting was taught by the Qur'an teacher, as Ibn Khaldun makes clear in his *Muqaddima*.<sup>58</sup> It appears that when Avicenna says: 'When the boy's joints strengthen, and his tongue is apt, and he is ready for instruction, and his hearing is attentive, he begins to learn the Qur'an, and is shown letters of the alphabet [...]',<sup>59</sup> he refers to the practice current in his day for teaching 'handwriting' by drawing on a wooden 'slate'. The teacher would draw the letters of the Arabic alphabet, and the child would have to learn them, both by heart and by hand, until he could write and pronounce them perfectly. Then came the next stage —composing individual words and sentences. After that the pupil could begin writing with his own 'slate' the Qur'anic verses which he had to learn by heart.

Avicenna says: 'And when he has reached the age of 6 years, he should be brought to the the tutor and the teacher';<sup>60</sup> to the tutor so that he can memorize some Arabic poetry and

to the teacher to memorize the holy Qur'an. Avicenna considers that the tutor should choose poems that are simple in expression and language, with short stanzas and a light meter so that students can easily memorize and understand them. The tutor must be careful to select poetry which has been composed with a high moral purpose, praising noble virtues and condemning misdeeds, because the child during these years is strongly influenced by what he reads and hears.<sup>61</sup>

### *Styles of moral education*

Avicenna shows a profound understanding of the psychological bases of moral education. Here he has a double approach, since he is interested both in a concern for incentives, as represented by good examples, a healthy environment, encouragement, persuasion and kindness; and also in preventive measures, such as admonition with anger and punishment.

Avicenna is much concerned about the harm that could result from physical punishment, permitting it only in cases of necessity, considering that excessive beating includes an element of revenge and does not achieve the desired educational effect.<sup>62</sup>

### *Various methods of higher education*

When we read accounts of the teaching methods followed by Avicenna himself in his study circles and in imparting learning to his students, we find that he did not restrict himself to any one method. Sometimes he dictated his lessons to the students, sometimes he held discussions with them; most often he gave them explanations, composed treatises or books to present his point of view, or replied to some epistle, and he would advise his students to read, investigate and study, indicating to them particular reference books for every branch of learning.

### *Practical application*

After he has chosen the particular branch of learning in which he was going to specialize and has made some progress, Avicenna advised the student to put this learning into practice. If the student was studying medicine, he should try to apply himself in a practical way to this profession. If he was studying literature, calligraphy and composition, he should try to earn his living by his pen. Avicenna's intention is for the student to become more responsive to his studies and to have greater faith in their usefulness, as well as perfecting them through practical application, at the same time as learning to earn a living. Avicenna says: 'If the boy is immersed in his craft to some extent, then it is a good moment for him to earn his livelihood from it, because it brings two advantages: first, when he is rewarded by the enjoyment of earning through his own craft and recognizes its potential, he will have esteem for it, and will be all the more motivated to excel in it and to explore all its secrets, and, secondly, he becomes accustomed to earning his own livelihood'.<sup>63</sup>

## TEACHER TRAINING

Avicenna perceives how important it is to make a good choice of teacher, and to give him a good theoretical and moral training. Indeed, the teacher's role in educating young people goes beyond presenting them with facts, for students acquire from their teachers a great many habits, ideas and values. Therefore, Avicenna requires that the teacher should be an excellent person, discerning the values of society and moral virtues so that the students will follow him as a guide and model. Avicenna says: 'The educator must be intelligent, a man of religion, [...] skilful at instructing children, dignified, calm, far removed from foolishness or pleasantries, not

given to levity or slackness in the youth's presence; neither rigid nor dull; on the contrary, he should be kind and understanding, virtuous, clean and correct. He is one who has served the leaders of the nation, knows the kingly virtues in which they take pride and the correct manners used in society.'<sup>64</sup>

Avicenna noticed that the teacher not only conveys knowledge and facts to his students, but brings them into contact with those values and ideas in which he believes, and those manners and virtues with which he is endowed. If he for his part transmits knowledge with care and feeling, then the students will copy his manners and his virtues, effortlessly and without realizing it, in the process of 'learning by imitation'.<sup>65</sup>

This glance at Avicenna's educational thinking shows him as an original thinker, with distinctive educational views. In addition, he was the leader of a philosophical school which influenced education both in the Islamic east and the Christian west.<sup>66</sup> For these many reasons, we still have a great deal to learn from him today.

## Notes

1. *Abd al-Rahman al-Naqib (Egypt)*. Professor and director of the Department of Educational Fundamentals at Mansoura University. Author of numerous articles and books; has participated in several national and international conferences on education. Among his works are: *Avicenna's Educational Philosophy; Muslim Theoretical and Practical Medical Training; Studies on Islamic Education; The Degree of Islamic Involvement among Students; and Islamic Education: Vocation and Structure* (in Arabic).
2. A.F. al-Ahwani, *Ibn Sina*, Cairo, Dar al-Ma'arif, 1958, p. 17; p. Sa'd, *Ibn Sina al-faylasuf ba'd sittmi'a sana'ala wafatih*, Beirut, 1937, p. 62.
3. al-Dhahbi, *Siyar al-alam al-Nubala*. Dar al-Kutub al-Misriyya, no. 12195/2, Part I, p. 119. (Photocopy/microfiche)
4. G.C. Anawati, *Mu'allafat Ibn Sina*; Cairo, Dar al-Ma'arif, 1950.
5. A. Wolf, *'Ard ta'rikhi lil-falsafa wa-l-ilm*, trans. by Muhammad 'Abd al-Wahid Khalaf, Cairo, Lijnat al-ta'lif wa-l-tarjama wa-l-nashr, 1944, p. 38; A. Mielli, *al-Ilm 'ind al-'Arab wa-athruhu fi tatawwur al-ilm al-'alami*, trans. by 'Abd al-Halim al-Najjar, Muhammad Yusuf Musa, Cairo, Dar al-Qalam, 1962, p. 197-98.
6. Baihaqi related this in *Tarikh Hukama al-Islam*; al-Qifti in *Akhbar al-'Ulama*, and Ibn Khallikan in *Wafayat al-A'yan*. Ibn Abi Usaybi'a in *'Uyun al-Anba* is alone in saying that he was born in the year 375 AH. There is another source saying he was born in 373.
7. Ibn Abi Usaybi'a (IAU), *'Uyun al-Anba*, Cairo, al-Matba'a al-Wahhabiyya, 1299 AH, Vol. II, p. 2.
8. Ibid.
9. al-Bayhaqi, *Tarikh hukama al-Islam*, Damascus, Matba'at al-Taraqqi, 1946, p. 53.
10. IAU, op. cit., p. 3.
11. Ibid. See: A. Sohiel, *Avicenna: His Life and Works*, London, Unwin, 1938, Vol. 8, p. 201.
12. A. al-Naqib, *Falsafat al-Tarbiyya 'ind Ibn Sina*, Cairo, Dar al-Thaqafa, 1954, 38.
13. Ibn Sina, *Risalat al-Quwwa al-Insaniyya wa Idrakatuha*, in: *Majmu' al-Rasa'il*, Cairo, Matba'at Kurdistan al-'ilmiyya, 1328 AH, p. 212; *Tis' Rasa'il fil-hikma wat-Tabi'iyat*, Bombay, Kalzar Husna, 1318 AH, p. 30.
14. Ibn Sina, *al-Najat*, Cairo, al-Babi al-Halabi, 1357 AH, p. 158; and *al-Shifa*, Tehran, Hajar, 1353 AH, Vol. I, p. 294.
15. Ibn Sina, *al-Najat*, op. cit., p. 159-63; *al-Isharat wal-Tanbihat*, Leiden, 1892, Vol. I, p. 125; *al-Shifa*, op. cit., Vol. I, p. 333; Muhammad 'Uthman Najati, *al-Idrak al-hissi 'ind Ibn Sina*, Dar al-Ma'arif, 1961, p. 117.
16. Ibn Sina, *al-Najat*, op. cit., p. 164; *Risalat al-Quwwa al-Insaniyya wa Idrakatuha* op. cit., p. 215-16.
17. Ibn Sina, *Ahwal al-Nafs*, ed. by A.F. al-Ahwani, Cairo, Dar Ihya al-Kutub al-'Arabiyya, 1371 AH, p. 108-10; *al-Najat*, p. 189 ff.
18. Ibn Sina, *al-Shifa*, Vol. I, p. 248-57; *Risalat fi ma'rifat al-Nafs al-Natiqa*, ed. by A.F. al-Ahwani, Cairo, Dar Ihya al-Kutub al-'Arabiyya, 1371 AH, p. 183-85.
19. Ibn Sina, *Risalat al-Quwwa al-Insaniyya wa Idrakatuha*, op. cit., p. 97-98.
20. Ibn Sina, *Risala al-Shifa min Khawf al-Mawt wa-Mu'alajat al-Ihtimam bihi*, in the collection *Jami' al-badi'*, Cairo, Matba'at al-Sa'ada, 1335 AH, p. 37-38.
21. Ibn Sina, *Kitab al-Siyasa*, ed. by Louis Maaluf, *Majallat al-Sarq* (Cairo), 1906, p. 1074.

22. Ibn Sina, <sup>c</sup>Ilm al-Akhlaq, in *Majmu<sup>c</sup> al-Rasa'il*, op. cit., p. 198.
23. Ibn Sina, *al-Najat*, op. cit., p. 303; *al-Sifa*, op. cit., Vol. II, p. 556-57.
24. Ibn Sina, *al-Najat*, op. cit., p. 304.
25. Ibn Sina, *al-Shifa*, op. cit., Vol. II, p. 563.
26. *Ibid.*, p. 564.
27. Ibn Sina devotes a long account of the consultation and on the sciences which 'people of consultation' should master. See: *al-Majma<sup>c</sup> aw al-Hikma al-<sup>c</sup>Arudiya fi Ma<sup>c</sup>ani Rituriqa*, Cairo, Maktabat al-Nahdha al-Misriyya, 1950, p. 34-42.
28. Ibn Sina, *al-Shifa*, op. cit., Vol. I, p. 295.
29. Ibn Sina, *al-Najat*, op. cit., p. 160.
30. Ibn Sina, *al-Isharat wal-Tanbihat*, p. 2-3.
31. *Ibid.*, p. 296.
32. Ibn Sina, *Kitab al-Siyasa*, op. cit., p. 1039.
33. Ibn Sina, *al-Shifa*, op. cit., Vol. II, p. 565.
34. A. al-Naqab, *Falsafat al-Tarbiya<sup>c</sup> ind Ibn Sina*, op. cit., p. 109-12.
35. Ibn Sina, *al-Burhan min al-Shifa*, Cairo, al-Matba<sup>c</sup>a al-Amiriyya, 1375 AH, p. 57.
36. Ibn Sina, *al-Qanun*, Vol. I, Cairo, Matba<sup>c</sup>at Bulaq, 1294 AH, p. 150.
37. *Ibid.*, p. 151.
38. *Ibid.*, p. 153.
39. Ibn Sina, *Kitab al-Siyasa*, op. cit., p. 1074.
40. Ibn Sina, *al-Qanun*, op. cit., Vol. I, p. 150.
41. *Ibid.*, p. 157.
42. *Ibid.*, p. 158.
43. Ibn Sina, *Kitab al-Siyasa*, op. cit., p. 1074-75.
44. *Ibid.*, p. 1075.
45. *Ibid.*
46. *Ibid.*, p. 1075-76.
47. Ibn Sina, *al-Qanun*, op. cit., Vol. I, p. 159.
48. Z. Yusuf, Musiqat Ibn Sina, in: *al-Kitab al-Dhahabi lil-Mahrajan al-alfi li Ibn Sina*, Cairo, Matba<sup>c</sup>at Misr, 1952, p. 123-35.
49. Ibn Sina, Risalat al-Musiqa, in: *Majmu<sup>c</sup> al-Rasa'il*, op. cit., p. 2-12.
50. Ibn Sina, *Kitab al-Siyasa*, op. cit., p. 1074.
51. *Ibid.*
52. *Ibid.*, p. 1075.
53. Ibn Sina, *al-Burhan min al-Shifa*, op. cit., p. 57.
54. *Ibid.*
55. Avicenna wrote at length on these sciences in his book *Aqşam al-<sup>c</sup>Ulam al-<sup>c</sup>Aqliyya*, in: *Majmu<sup>c</sup> al-Rasa'il*, op. cit.
56. A. Fahmi, *Mabadi' al-Tarbiya al-Islamiyya*, Cairo, Lajnat al-Ta'lif wal-Tarjama wal-Nashr, 1366 AH, p. 148-50.
57. Ibn Sina, *al-Shifa*, op. cit., Vol. II, p. 562-63.
58. *Muqaddima* of Ibn Khaldun, Vol. III, Cairo, Matba<sup>c</sup>at Bulaq, 1350 AH, p. 950.
59. Ibn Sina, *Kitab al-Siyasa*, op. cit., p. 1074.
60. Ibn Sina, *al-Qanun*, op. cit., Vol. I, p. 157.
61. Ibn Sina, *Kitab al-Siyasa*, op. cit., p. 1074.
62. *Ibid.*, p. 1074-75.
63. *Ibid.*, p. 1076.
64. *Ibid.*, p. 1074.
65. A. Zaki Saleh, *al-Usus al-Nafsiyya lil-Ta<sup>c</sup>lim al-Thanawi*, Cairo, al-Nahda al-Misriyya, 1959, p. 401-02.
66. For more details on the influence of Avicenna in both East and West, see: A. al-Naqib, *Falsafat al-Tarbiya<sup>c</sup> ind Ibn Sina*, op. cit., p. 156-77.