

On the Exclusion of Evolution in the Updated Secondary School Biology Curriculum

19.07.2017

Late 2016 the Ministry of National Education announced plans to change the curriculum and published a draft curriculum, which had evolution (the last subject of 12th year Biology in the previous curriculum) removed. Early 2017 we voiced the necessity of covering evolutionary biology in the secondary school biology curriculum ([full text of the statement](#) in *Turkish* and a [Nature Correspondence Article](#)), stating that we would provide all the necessary scientific support to improve the curriculum in collaboration with the Ministry of National Education and its subunits.

In February 2017, together with leading biology and anthropology departments in Turkey, we compiled a report on biology curricula from various countries including Finland, Iran, England, USA and more ([full text of the report](#) in *Turkish*). This report on the importance and universality of teaching evolutionary biology during secondary school was signed by all three associations and department representatives and submitted to the Deputy Minister of Education, Orhan Erdem, and officials from the Board of Education during their curriculum preparation workshop in Antalya.

Despite the facts presented in our report, the Board of Education released a statement on 21.06.2017 indicating that the topic of evolution was going to be excluded from the curriculum on the basis of being too controversial and above the level of secondary school education. This statement has generated both national and international public opposition [1, 2]. The full text of the secondary school biology curriculum was released as of 18.07.2017, and we found that a few of our suggestions to the Ministry and the Board of Education were included in this statement [3]. Although we consider this a small positive step, the updated curriculum has overall created much disappointment in the life sciences community in our country. Suggestions listed in our report to the Ministry have been generally ignored, and in particular, fundamental terms and concepts such as “evolution”, “speciation”, “change through natural selection” excluded from the curriculum, all of which are crucial for understanding biological sciences as a whole.

Evolutionary biology, which was already poorly covered in the earlier curriculum in force since 2013, is thus now almost totally removed from the new curriculum. This makes it impossible for the secondary education system to fulfill its most basic principle: "educating people with the power of scientific thinking".

The Ministry's decision to decrease compulsory class hours for biology in the 9th and 10th grades from 3 hours in the weekly program (total of 108 lesson hours) to a mere 2 hours (total 72 lesson hours) is another poor choice. The unfortunate consequences of such decisions have been manifested in the past as the poor performance of Turkish students on international tests, such as PISA (The Programme for International Student Assessment) [4]. These decisions are at odds with the objectives of developing scientific literacy and promoting economic development in Turkey, and particularly of raising scientific productivity in the fields of medicine and biotechnology to international standards.

As mentioned above, we welcome as a positive step the fact that some changes have been made in line with our recommendations in the newly published secondary school biology curriculum. These amendments also demonstrate the importance of taking into account the opinions of relevant scientific experts while setting education curricula. However, this does not change the fact that, with the current update, our expert opinions have been mostly ignored and the resulting curriculum is far below universal standards.

As the below named organisations, we respectfully announce to the public that we will continue to share with the public and government officials all our effort to improve natural sciences and biology curricula in Turkey and to contribute our utmost to monitoring and evaluation activities to be carried out by the Ministry during the 2017-2018 academic year.

Ecology and Evolutionary Biology Society of Turkey

Molecular Biology Association of Turkey

Biologists Solidarity Association of Turkey

[1]

<https://www.theguardian.com/world/2017/jun/23/turkish-schools-to-stop-teaching-evolution-official-says>

[2]

<https://www.nytimes.com/2017/06/23/world/europe/turkey-evolution-high-school-curriculum.html>

[3] <http://mufredat.meb.gov.tr/ProgramDetay.aspx?PID=170>

[4] http://pisa.meb.gov.tr/wp-content/uploads/2016/12/PISA2015_Ulusal_Rapor1.pdf