From mathematics to literature – an interdisciplinary approach

Abstract:

Multi-, inter- and transdisciplinary approaches function as the key to adapt to the new challenges of our continuously changing world. Despite the deepening gap and the unequal fight between soft and hard sciences, the former have not lost their importance in interdisciplinary approaches. In this respect, Edwin A. Abbott's Flatland (2003) becomes particularly revealing. Passed into oblivion shortly after its publication, the novel was rediscovered after Einstein's demonstration of the theory of relativity and following the development of scientific research involving quantum mechanics. As a teacher of mathematics and a theologian, the author of Flatland was a keen observer of Victorian society, which he transposed in Euclidean geometry. This type of exercise allowed him to underline the positive and negative traits of Victorian mentalities.

We are therefore dealing with a world in two dimensions in the diversity of its manifestations – social organization, inhabitants, behaviour, education – in an interesting intermingling of geometric demonstrations and political, cultural and religious interpretations. Thus the inconveniences and the advantages of this system and subsequently their level of reality can be viewed parallel to other levels of reality represented by the world of the Point, the world in one dimension or even the world in three dimensions. The goal is to underline the importance of interdisciplinary and transdisciplinary approaches, which are able to offer a better and more coherent understanding of our own level of reality.

Keywords: *Interdisciplinarity; Transdisciplinarity; The axiomatic method; Levels of reality; Modern education; Flatland.*