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БИБЛИОГРАФИЯ НА СТАТИИ ЗА МИСКОНЦЕПЦИИТЕ В ОБУЧЕНИЕТО ПО ПРИРОДНИ НАУКИ ВЪВ ВСИЧКИ ОБРАЗОВАТЕЛНИ НИВА

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Българско дружество за химическо образование и история и философия на химията

Резюме. Тази библиография съдържа избрани статии във водещи научни списания в областта на обучението по природни науки, публикувани в годините 2012 и 2013. Основната тема на тези статии са мисконцепциите (грешки, недоразумения, заблуждения) в преподаването и обучението по природни науки, намерили място в учебниците, учебната документация и учебната практика в клас за всички образователни степени.

Keywords: misconceptions, misunderstandings, bibliography

Увод

Вече бе съобщено (Toshev, 2014), че през 2014 г. четири теми от науката и практиката на образованието ще бъдат водещи в настоящия 23 том на „Природните науки в образованието“: природонаучна неграмотност, конструктивизъм, мисконцепции и историческа чувствителност. Тези теми имат солидно присъствие във водещите научни списания в областта на science education. Първата тематична библиография – върху грешките, недоразуменията и заблужденията в учебниците, учебната документация и учебната практика, вече е пред вас. Запознаването с избраните тук литературни източници ще покаже дълбочината на проблема в световната учебна практика и научни изследвания и може да даде полезни идеи за подобряване на българската учебна документация, както и за по-успешна учебна практика в българското училище.

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Заключение

Анализът на грешките в учебниците и учебната литература е особено важна задача. Отдавна е известно, че научените в ранна възраст грешни представи по-късно се променят трудно. Затова учебната литература трябва да се подлага на научна критика. Това е особено необходимо сега, когато сред ученици и учители битува мнението, че всичко, което е написано в учебниците, е безусловно вярно. Затова грешките в учебниците се повтарят години наред, поради което замърсяването на съзнанието на учениците се оказва трудно излечимо, особено в условията на среда, когато агресивната псевдонаука неудържимо разширява територията си. Невинаги обаче в България е било така. Навярно първият пример за анализ на грешките в един учебник е от 1890 г. Тогава Райков (1890а) е анализирал с големи подробности грешките, допуснати в „Учебник по физиката за долните класове на средното училище“ от Бракалов и Жилков.

При съставянието на единъ учебникъ могжтъ да се прослѣдватъ главно двѣ цѣли: или авторътъ се старае да прокара въ учебника си нови идеи на мѣсто на господствующитѣ, или пъкъ, придържайки се о програмитѣ на извѣстни учебни заведения, авторътъ излага въ опрѣдѣленъ редъ готовия материялъ, който намира въ съотвѣтствующата часть на литературата. Въ първия случай задачата на автора е свързана съ особенни трудности: чрѣзъ новитѣ разяснения, той трѣба да покаже, поне косвенно, несъстоятелностьта на старитѣ идеи. За това и читателътъ ще се отнесе по́снисходително къмъ всѣка сторена грѣшка, като къмъ грѣшка, направена при пръвъ опитъ за разяснение на извѣстни тъмни страни отъ нашитѣ познания. Въ втория случай задачата на автора се ограничава съ точно и ясно изложение на извѣстнитѣ фактове и тѣхното готово разяснение. Естественно е, че читателътъ трѣба да бжде по придирчивъ къмъ сторенитѣ въ втория случай грѣшки, понеже тѣ биватъ плодъ само на невнимателность, разбира се, като прѣдполагаме, че авторътъ владѣе нужднитѣ познания.

Откъс от първата рецензия на учебник за средното училище (1890 г.)

Почти по същото време е публикувана научна рецензия и за учебник по химия за средното училище (Райков, 1890б): „Учебник по химията за II и III клас на трикласните училища и гимназии“.

На фона на многобройните груби грешки в българската учебна литература, използвани в обучението по природните науки (за някои скандални примери вж. Тошев (2014)), подновяването на старата традиция учебниците да бъдат подлагани на професионален критичен анализ наистина не търпи вече отлагане.

ЛИТЕРАТУРА

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RECENT PAPERS ON MISCONCEPTIONS IN TEACHING AND LEARNING OF SCIENCE

Abstract. A list of selected papers on the misconceptions in science teaching and learning is presented. The papers are published in 2012 and 2013. It is expected this thematic bibliography to help the reader to realize the need of minimization of the false information in the school textbooks and manuals.

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