

БИБЛИОГРАФИЯ НА ПУБЛИКАЦИИ ВЪРХУ ПРИЛОЖЕНИЕТО НА КОНСТРУКТИВИЗМА В ОБРАЗОВАНИЕТО

Б. В. Тошев

Българско дружество за химическо образование и история и философия на химията

Резюме. Тази библиография съдържа избрани публикации (книги и журнални статии) върху теорията и практиката на конструктивизма в приложение към образователните системи на всички нива. Конструктивизмът е новата образователна парадигма и интересът към него нараства в целия свят. Библиографията включва основните литературни източници върху тези теми, публикувани през 2012 и 2013 години.

Keywords: bibliography, constructivism, teaching and learning, constructivist environment

Увод

Вече бе съобщено (Toshev, 2014a), 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, мiskonцепции и историческа чувствителност. Тези теми имат солидно присъствие във водещите научни списания в областта на science education. Първата тематична библиография – върху грешките, надоразуменията и заблужденията в учебниците, учебната документация и учебната практика, вече бе публикувана (Toshev, 2014b). Библиографията върху приложението на конструктивистката теория и практика в образованието сега 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.

Bibliography

- Aldridge, J.M., Fraser, B.J., Bell, L. & Dorman, J. (2012). Using a new learning environment questionnaire for reflection in teacher action research. *J. Sci. Teacher Educ.*, 23, 259-290.
- Anagun, S.S. & Anilan, H. (2013). Development and validation of a modified Turkish version of the teacher constructivist learning environment survey (TCLES). *Learning Environments Res.*, 16, 169-182.

- Artun, H. & Coştu, T. (2013). Effect of the 5E model on prospective teachers' conceptual understanding of diffusion and osmosis: a mixed method approach. *J. Sci. Educ. & Technol.*, 22, 1-10.
- Aydin, A. (2013). Learner acquisitions and its relationship with constructivist learner roles in secondary education chemistry curriculum in Quebec/Canada. *Intern. Educ. Studies*, 6(7), 88-99.
- Balim, A.G. (2013). Use of technology-assisted techniques of mind mapping in science education: a constructivist study. *Irish Educ. Studies*, 32, 437-456.
- Bertacchini, F., Billota, E., Pantano, P. & Tavernise, A. (2012). Motivating the learners of science topics in secondary school: a constructivist edutainment setting for studying chaos. *Computers & Education*, 59, 1377-1386.
- Bryant, F.B., Kastrup, H., Udo, M., Shefner, R. & Mallow, J. (2013). Science anxiety, science attitudes, and constructivism: a binational study. *J. Sci. Educ. & Technol.*, 22, 432-448.
- Chakraborty, A., Chand. B. & Mondal, B.C. (2013). Misconceptions in chemical bonding and its remedial measure through constructivist strategies. *J. Indian Chem. Soc.*, 90, 1269-1272.
- Chen, R.T.-H. & Bennet, S. (2012). When Chinese learners meet constructivist pedagogy online. *Higher Education*, 64, 677-691.
- Denton, D.W. (2012). Enhancing instruction through constructivism, cooperative learning, and cloud computing. *Tech Trends*, 56(4), 34-41.
- Duffy, T.M., Lowyck, J. & Jonassen, D.H. (2012). *Designing environments for constructive learning*. New York: Springer.
- Eskandari, Z. & Ebrahimi, N.A (2013). Learning environment of university chemistry in Iran. *Chemistry*, 22, 264-285.
- Forman, G. & Pufall, P.B. (2013). *Constructivism in the computer age*. New York: Psychology Press.
- Hartle, R.T., Baviskar, S. & Smith, R. (2012). A field guide to constructivism in the college science classroom: four essential criteria and a guide for their use. *J. College Biology Teaching*, 38(2), 31-35.
- Hollenbeck, J., Kirova, M., Boiadjieva, E. & Tafrova-Grigorova, A. (2013). Snapshot of science classroom teaching from the point of view of ideas of constructivism – secondary schools in Sofia, Bulgaria. *Chemistry*, 22, 676-681.
- Igwebuike, T.B. & Oriaifo, S.O. (2012). Nature of classroom environment and achievement in integrated science: a test of efficacy of a constructivist instructional strategy. *Intern. J. Res. Studies Educ. Technol.*, 1, 17-29.
- Iofciu, F., Miron, C. & Antohe, S. (2013). Studying advanced science concepts using constructivist strategies in middle and high school. *Romanian Rep. Phys.*, 65, 591-605.
- Khalid, A. & Azeem, M. (2012). Constructivist vs. traditional: effective instructional approach in teacher education. *Intern. J. Humanities & Soc. Sci.*, 2(5), 170-177.

- Kinger, S., Tas, Y., Gik, G. & Vural, S.S. (2013). Relationships among constructivist learning environment perceptions, motivational beliefs, self-regulation and science achievement. *Res. Sci. & Technol. Educ.*, 31, 205-226.
- Kong, S.C. & Song, Y. (2013). A principle-based pedagogical design framework for developing constructivist learning in a seamless learning environment: a teacher development model for learning and teaching in digital classrooms. *British J. Educ. Technol.*, 44, E209-E212.
- Liang, G. (2013). Teacher evaluation policies in the United States: implementation and impact on constructivist instruction. *Intern. Persp. Educ. & Soc.*, 19, 179-206.
- MacPhail, A., Tannehill, D. & Goc Karp, G. (2013). Preparing physical education preservice teachers to design instructionally aligned lessons through constructivist pedagogical practices. *Teaching & Teacher Educ.*, 33, 100-112.
- May, S.R., Cook, D.L. & May, M.K. (2013). Biological dialogues: how to teach your students to learn fluency in biology. *Amer. Biology Teacher*, 75, 486-493.
- Morphew, V.N. (2012). *A constructivist approach to the national educational technology standards for teachers*. Moorabbin: Hawker Brownlow.
- Moustafa, A., Ben-Zvi-Assaraf, O. & Eshach, H. (2013). Do junior high school students perceive their learning environment as constructivist. *J. Sci. Educ. & Technol.*, 22, 418-431.
- Ng'ambi, D. & Lombe, A. (2012). Using podcasting to facilitate student learning: a constructivist perspective. *Educ. Technol. & Soc.*, 15, 181-192.
- Nie, Y., Tan, G.H., Liau, A.K., Lau, S. & Chua, B.L. (2013). The roles of teacher efficacy in instructional innovation: its predictive relations to constructivist and didactic instruction. *Educ. Res. Policy & Practice*, 12, 67-77.
- Orlando, J. (2013). ICT-mediated practice and constructivist practices: is this still the best plan for teachers' uses of ICT. *Technology, Pedagogy & Education*, 22, 231-246.
- Paily, M.U. (2013). Creating constructivist learning environment: role of "web 2.0" technology. *Intern. Forum Teaching & Studies*, 9, 39-52.
- Petko, D. (2012). Teachers' pedagogical beliefs and their use of digital media in classrooms: sharpening the focus of the 'will, skill, tool' model and integrating teachers' constructivist orientations. *Computers & Education*, 58, 1351-1359.
- Rand, J. (2013). Action learning and constructivist grounded theory: powerfully overlapping fields of practice. *Action Learning: Res. & Pract.*, 10, 230-243.
- Richardson, M.L., Richardson, S.L. & Hall, D.G. (2012). Using biological-control-research in the classroom to promote scientific inquiry and literacy. *Amer. Biology Teacher*, 74, 445-451.
- Riegler, A. (2012). *Paradigms in theory construction*. New York: Springer.
- Roth, W.-M. (2013). Toward a post-constructivist ethics in/of teaching and learning. *Pedagogies: Intern. J.*, 8, 103-125.

- Roth, W.-M. (2013). To event: toward a post-constructivist of theorizing and researching the living curriculum as event*-in-the-making. *Curriculum Inquiry*, 43, 388-417.
- Savasci, F. & Berlin, D.F. (2012). Science teacher beliefs and classroom practice related to constructivism in different school settings. *J. Sci., Teacher Educ.*, 23, 65-86.
- Seimears, C.M., Graves, E., Schroyer, M.G. & Staver, J. (2012). How constructivist-based teaching influences students learning science. *Educ. Forum*, 76, 265-271.
- Stefanova, Y. (2013). Explanation of facts and phenomena in chemistry education – constructivist approach. *Chemistry*, 682-694 [In Bulgarian].
- Sternberger, C.S. (2012). Interactive learning environment: engaging students using clickers. *Nursing Educ. Persp.*, 33, 121-124.
- Sun, H., Chen, A., Zhu, X. & Ennis, C.D. (2012). Curriculum matters: learning science-based fitness knowledge in constructivist physical education. *Elem. School J.*, 113, 215-229.
- Tang, S.Y.F., Wong, A.K.Y. & Cheng, M.M.H. (2012). Professional learning in initial teacher education: vision in the constructivist conception of teaching and learning. *J. Educ. Teach.*, 38, 435-451.
- Tafrova-Grigorova, A., Boiadjeva, E., Emilov, I. & Kirova, M. (2012). Science teachers' attitudes towards constructivist environment: a Bulgarian case. *J. Baltic Sci. Educ.*, 11, 184-193.
- Tafrova-Grigorova, A., Kirova, M. & Boiadjeva, E. (2012). Science teachers' views on the constructivist learning environment in the Bulgarian school. *Chemistry*, 21, 375-388 [In Bulgarian].
- Temiz, T. & Topcu, M.S. (2013). Preservice teachers' teacher efficacy beliefs and constructivist-based teaching practice. *Eur. J. Psychol. Educ.*, 28, 1435-1452.
- Toshev, B.V. (2012). Constructivism: theory and practice. *Chemistry*, 21, 463-468 [In Bulgarian].
- Tsai, P.-S., Tsai, C.-C. & Hwang, G.-J. (2012). Developing a survey for assessing preferences in constructivist context-aware ubiquitous learning environments. *J. Computer Assisted Learning*, 28, 250-264.
- Ultanir, E. (2012). An epistemological glance at the constructivist approach; constructivist learning in Dewey, Piaget, and Montessori. *Intern. J. Instruction*, 5, 195-212.
- Von Glasersfeld, E. (2013). *Radical constructivism: a way of knowing and learning*. London: Routledge.
- Wang, C.-h., Ke, Y.-T., Wu, J.-T. & Hsu, W.-H. (2012). Collaborative action research on technology integration for science learning. *J. Sci. Educ. & Technol.*, 21, 125-132.
- Xu, F. & Kushnir, T. (2013). Infants are rational constructivist learners. *Curr. Direct. Psychol. Sci.*, 22, 28-32.
- Zandvliet, D.B. (2012). Development and validation of place-based learning and constructivist environment survey (PLACES). *Learning Environ. Res.*, 15, 125-140.

Заклучение

В наши дни конструктивизмът се възприема като новата образователна парадигма, която има все по-широка употреба в световната учебна практика. В България, обаче, не е така. Конструктивистките идеи не намират място в нашата учебна документация – няма ги и в държавните образователни изисквания за учебно съдържание. Създаването на конструктивистка учебна среда не среща активната подкрепа на специалистите по образование, а нагласите на методичите и педагозите са по-скоро отрицателни, напр. Радев (2009).

Настоящата библиография има за цел да стимулира интереса на учители и изследователи към тази тема. Между другото, представлява интерес и изясняването на въпроса дали конструктивистките идеи в съвременния си вид имат допирни точки с широко прилагания в миналото, но отречен по-късно, учебно-изследователски подход (Огнянов & Илиев, 1940).

ЛИТЕРАТУРА

- Огнянов, В. & Илиев, К. (1940). *Методика на химията (върху основите на учебно-изследователския метод)*. София: собствено издание.
- Радев, П. (2009). Взаимните отношения между общата училищна дидактика и методиките на обучение (предметните училищни дидактики). *Педагогика*, 19(3-4), 16-25.
- Toshev, B.V. (2014a). Science illiteracy – constructivism – misconceptions – historical sensitivity. *Chemistry*, 23, 9-17 [In Bulgarian].
- Toshev, B.V. (2014b). Recent papers on misconceptions in teaching and learning of science. *Chemistry*, 23, 444-451.

RECENT PAPERS ON CONSTRUCTIVISM IN EDUCATION

Abstract. A list of selected papers on the constructivism in education is presented. The sources are published in 2012 and 2013. It is expected this thematic bibliography to help the reader to understand the meaning and use of this new educational paradigm that seems to be hard to introduce in the Bulgarian school practice.

✉ **Professor B.V. Toshev**
University of Sofia
1, James Bourchier Blvd.
1164 Sofia, Bulgaria
E-mail: toshev@chem.uni-sofia.bg