thermore, the research findings surprisingly show that the teachers’ attitudes to practical work are more encouraging in less economically developed areas. We expected the other way round. We are not aware of any studies in Slovenia about a correlation between the socio-economic development of the region and teachers’ attitudes to practical work. However, we can cite many international studies (e.g., Posnanski, 2010; Meichtry and Smith, 2007; Piwowarski, 2010; Milner, et al., 2012;), which claim that the efficiency of teaching is based on the belief about one’s own qualifications, based on the following factors: (1) professional, course-related knowledge, (2) teaching methodology knowledge, (3) professional training, (4) teamwork, etc. Aaltonen and Sormunen (2003) list the aspects of teacher efficiency that comprise the following four knowledge areas: (1) teaching plan, (2) pedagogical methods, (3) pupils (4) resources, including material.

We can conclude that material support for Primary Science is indeed important, particularly from the point of view of choosing appropriate methods; however, it is not decisive for achieving the objectives (Wilson and Harris, 2003), which consequently prevents teachers from blaming objective criteria such as teaching materials as the only reason and excuse for poor results. The experience of most European countries (Dow, 2006) shows that teachers have to undergo training in all of the following three areas when changing course descriptions (in Slovenia with the introduction of nine-year primary school five years ago): (A) Subject Matter Knowledge (SMK), (B) Pedagogical Content Knowledge (PCK), and (C) Attitude (Parkinson, 2001; Davis et al., 2002; Pišová, 2005).

The results of our study (obstacles, attitudes) provide the basis for developing effective models of professional training of classroom teachers, on the one hand, and the establishment of a scientific center as material support to carry out experimental work in science teaching. The study also raises dilemmas about the impact of the environment on teachers’ attitudes and perception of obstacles, which would be interesting to examine with an international study also in the countries where there are differences in economic development between regions and to ask ourselves how to reduce them.

References

Analysis of the Implementation of Practical Work


