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Evaluation of life sciences teachers' books according to teachers' opinions

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Abstract

The aim of this study is to examine the teachers' books prepared by Turkish Republic of Ministry of Education for primary education Life Sciences course according to teachers' opinions. 107 classroom teachers from 10 primary schools in Ankara province centre were included in this study. The questionnaire prepared by researcher was used with the aim of designating teachers' opinions about teachers' books. This study states that teachers' books of Life Sciences course are adequate in some topics however; they have some deficiencies in some topics. Basing on this result, suggestions were made on improving the teachers' books of Life Sciences course.

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Keywords: Primary education curriculum; natural sciences course; teacher's book; constructivism; teacher opinions.

1. Introduction

Life Sciences course's curriculum was evolved according to constructivist education concept by Ministry Of Education in 2004. In this concept, important changes and innovations were made in the aim, scope, content, learning-teaching process and evaluation dimensions of this course. Constructivism is the structuring of the knowledge by students. That is, knowledge is not taken directly. Individuals restructure the knowledge (Çınar, Teyfur and Teyfur, 2006). Constructivism is not a theory related with teaching, is the theory related to the knowledge and learning. And also the theory is based on establishing the knowledge from basis (Demirel 2008:223).

Constructivist approach provides students to be active by getting rid of being of passive to think independently, to be an individual solving problem, to divert thinking not memorizing, and using available knowledge (Şaşan, 2002:52). The first aim of this course's curriculum evolved with this concept is to guide the students to obtain fundamental life abilities and improve their positive individuals qualities. (Turkish Republic Ministry of Education, curriculum of primary education Life Sciences' course 2005:4). Life Science can be defined as an establishing relation process based on proving natural and social realities, and fresh knowledges obtained at the end of this process (Sönmez 2005:4). It is also highly important for teachers reciting this course to play effectively their teaching roles changed with this new programme in order make the course reach its aim. In this process, the teacher

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should prepare required environment for students to build up knowledge, give them experiment and exploring opportunities, and take a leading role (Akpınar 1999:32).

Ministry of Education classified the coursebooks prepared according to new primary education curriculum as being coursebook, workbook and teacher's book (Küçükahmet 2003:11). Coursebooks prepared for Life Sciences Course by Ministry of Education in 2005, started to be used throughout the country within the same year. Besides the coursebooks and workbooks prepared for the students, the teachers' books also play an important role with their contents in the process where wide dimensional changes take place like starting from teaching curriculum to coursebooks, from quality of classroom teaching to the process of evaluation and assessment (Kabapınar, 2007:37). Teachers need both the coursebooks having new approaches and methods, and also the books giving information about the usage of techniques and methods and designating the aims of these books (Ceylan and Yiğit, 2004:68). Furthermore teachers' books are useful for teachers to improve their teaching skills. Kılıç (2009) has designated that teachers' books are necessary for teachers to be able to use the coursebooks efficiently and correctly in the classroom, pre-lesson preparation and working plans. Books prepared for the teachers has been defined in Ministry of Education notifying journal as 'a written work' prepared for teachers and including variable examples, exercises, websites related to the studied units, reading sources and other activities which would provide efficient use of the coursebooks in accordance with targets and explanations taking place in related curriculum (Notifying Journal 2004, reference number: 2559). The research studied by Kılıç (2009) has discovered that Life Science course is one of the courses required teachers' books. Instructions and explanations corresponding to the study of activities in Life Science coursebooks and workbooks, additional activities regarding to accomplishment acquisition, explanations corresponding to teaching methods and techniques, assessment and evaluation activities, and scale samples in teachers' books were prepared according to the curriculum of primary education of activities in Life Science coursebooks and workbooks (Ministry of Education, primary education teachers' books 1,2,3 2005). The teacher book prepared well conduct the whole teaching process from planning to evaluation of the course (Kılıç and Seven, 2002:163-164).

Teachers' coursebooks must be prepared in a way that they must guide the teacher and supplement the teaching process. The aim of this study is to evaluate the teachers' books of Life Science courses according to the teachers' opinions. It is expected that the results of the study will make a contribution to quality development of Life Science teachers' books.

2. Method

107 classroom teachers from 10 primary schools in Ankara province centre in 2008-2009 academic year spring term were included in this study. The questionnaire prepared by the researcher was used with the aim of designating teachers' opinions about the teachers' book of Life Science Course. Scales related to teachers' books taking place in 'Notifying Journal' of Ministry of Education, June 2005, 2597, were taken into account while preparing and developing this questionnaire. Furthermore, the scale corresponding to teachers' books of Life Science were examined by the researcher, and questionnaire's items were designed according to these scales. The opinions of 4 instructors in the field of educational sciences were taken with the aim of evaluating the questionnaire in terms of its scope and statement. Application were experimented with 24 classroom teachers working in 5 primary schools chosen from provinces of Ankara with the aim of designating whether the questionnaire is understandable or not in accordance with these opinions and recommendation. At the end of this application, some items were rectified in terms of statement, and the questionnaire finalized. Thus, the scope validity of questionnaire was verified. There are 19 questions related to the teachers' books in the questionnaire. SPSS programme was used for analyzing the data, and frequency of the answer marked as 'yes', 'partially' and 'no' by the teachers obtained one by one and their percentages were calculated.

3. Findings

Table 1 represents the percentages of participants' responses regarding Life Science teachers' books and obtained findings were interpreted.

Table 1. The teachers' opinions related with the life science teachers' books

Items	Yes		Partially		No	
	f	%	f	%	f	%
1. In teachers' books, is the information adequate enough which guides the teacher and makes the learning easy?	54	50.46	43	40.18	10	9.34
2. Are the attractive samples and activities adequate enough which make learning easy in teachers' books?	38	35.51	42	39.25	27	25.23
3. Is it identified which teaching method-techniques and tools will be used while reciting in teachers' books?	46	42.99	45	42.05	16	14.95
4. Is the time limit adequate enough for acquisition?	31	28.97	57	53.27	19	17.75
5. Are the pre-preparations appropriate for performing the lesson?	50	46.72	37	34.57	20	18.69
6. Are the learning-oriented reminders and questions taking students attention adequate enough in teachers' books?	22	20.56	59	55.14	26	24.29
7. Are the activities adequate enough which take the students' individual differentials into consideration in teachers' books?	47	43.92	44	41.12	16	14.95
8. Are the sample questions and activities adequate enough to evaluate whether intended knowledge, ability, attitude and values are acquired to the students or not?	34	31.77	48	44.85	25	23.36
9. Do the teachers' books have adequate studies guiding teacher to supply students' deficiencies at the end of evaluation?	42	39.25	44	41.12	21	19.26
10. Are the studies adequate enough like homework, project directing students to produce knowledge and technology?	40	37.83	44	41.12	23	21.49
11. Is the yearly plan draft prepared in the quality of guiding teaching and learning studies throughout the year?	35	32.71	48	44.85	24	22.42
12. Is the glossary adequate enough for the terms used in the programme of the teachers' books?	36	33.64	48	44.85	23	21.49
13. Are the sample information sources adequate for the teacher to get detailed information for acquisition?	54	50.46	39	36.44	14	13.08
14. Is there any connection to other lessons in the study procedures of the topics when it's assumed to be necessary?	43	40.18	51	47.66	13	12.14
15. Are the sample activities adequate enough for students to connect them with real life?	42	39.25	40	37.83	25	23.36
16. Are the activities applicable in the classroom environment?	30	28.03	59	55.14	18	16.82
17. Do the activities have the quality of improving students' basic life skills(problem solving, critical thinking and creativity)	55	51.40	35	32.71	17	15.88
18. Do the activities have the quality of providing students to learn actively?	44	41.12	52	48.59	11	10.28
19. Do the teachers' books have the quality of supporting the activities in coursebooks and workbooks?	56	52.33	42	39.25	9	8.41

As it is seen in Table 1, while 50.46 % of the teachers designate that teachers' books have adequate information which guides teachers and makes the learning easy, 40.18 % of the teachers state that it is partially adequate, and 9.34 % of them point out that it is not adequate. 50.46 % of the teachers have marked 'yes', 36.44 % of them have marked 'partially' and 13.08 % of them have marked 'no' for the 13th question 'are the sample information sources adequate for the teachers to get detailed information for acquisition. While 52.40 % of the teachers designate that activities in the teachers' books have the quality of improving students' basic life skills like problem solving, critical thinking and creativity are adequate, 32.71 % of them state that they are partially adequate, and 15.88 % of them point out that they are not adequate. While 52.33 % of the teachers designate that teachers' books have the quality of supporting the activities in the course book and workbook, 39.25 % of them state that they are partially supporting, and 8.41 % of them point out that they are not supporting. While 28.97 % of the teachers designate that determined time in the course book is adequate enough for acquisition, 53.27 % of them point out that it is partially adequate, and 17.75 % of them state that it is not adequate. 20.56 % of the teachers have marked 'yes', 55.14 % of them have marked 'partially', and 24.29 % have marked 'no' to the question of whether the learning oriented reminders and questions taking students' attention adequate enough in teachers' books or not. While 28.03 % of the teachers state that the activities in teachers' books are applicable in the classroom environment. 55.14 % of them state that they are partially applicable, and 16.82 % of them designate that they are not applicable. 35.51 % of the teachers have marked as 'yes', 39.25% of them have marked as 'partially' and 25.23 % of them have marked as 'no' to the

question of whether the attractive samples and activities which make the learning easier are adequate or not in the teachers' books. When the responses of the teachers as 'no' and 'partially' are evaluated together, it is seen that majority of the teachers (64.48%) state that the attractive samples and activities are not adequate enough. While 31.77% of the teachers have found the evaluation questions and activities adequate in the teachers' books, 44.85% of the teachers have found them partially adequate, and 23.36% of them have found them inadequate. When the responses of the teachers as 'partially' and 'no' are evaluated together, it is seen that 61.19% of the teachers state that the sample activities are not adequate enough to connect them with real life.

4. Discussion

When the opinions of the classroom teachers were examined about the teachers' books of Life Science, the findings state that the teachers' books cover the information which guides the teacher and makes the learning easier, and they have sample information resources, activities improving students' basic life skills, and also they support the activities in the coursebook and workbook. The opinions of the teachers on this issue show the appropriateness of the teachers' books to the constructivist education concept. The research of Turan and Karabacak (2008) indicates that the majority of the teachers found the Social Sciences teachers' books adequate in terms of appropriateness to the aims and objectives of the constructivist theory.

On the other hand, it is understood from the findings of the research that the majority of the teachers found some insufficiencies in teachers' books like time-limit to study, applicability of the activities, and attractive reminders and questions. It is seen that the teachers generally have found time-limit for studying inadequate, so some activities in the teachers' books are not applicable in the classroom environment. Inapplicability of some activities indicated in the teachers' books means that the curriculum will not reach the aimed objectives. According to the other findings obtained from the research about the teachers' books, it is seen that the majority of the teachers have found the teachers' books inadequate in terms of the attractive samples and activities, evaluation questions and activities related to the daily life. Also in the research study of Turan and Karabacak (2008) about the Social Sciences teachers' books, it is seen that the majority of the teachers have found the teachers' books inadequate in terms of not responding to the expectation of evaluation and assessment. Moreover, in the research study of Erdoğan (2007) about Turkish course's teachers' books, it is seen that activity samples related to the real life are not explanatory enough for the teachers. However, according to the constructivist education theory, the relation of the activities done in the classroom to the real life is very important for permanent learning.

5. Conclusion and Recommendation

In the research study, findings point out that while Life Science teachers' books are adequate in some issues like sample knowledge sources and activities improving students' basic life skills, they are inadequate in some issues like assessment and evaluation, real life activities and attractive samples and questions making learning easier. Basing on this result, it is recommended that Life Science teachers' books should include more activities which are attractive and make the learning easier, and also some activity samples should be reorganized in terms of real life based, and time-limit for the activities should be overviewed, moreover the number and types of the evaluation questions should be increased.

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