Project Practices in Elementary Schools

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Abstract

This study aims to discuss project applications carried out in elementary schools in terms of the planning, implementation and evaluation aspects. The data was collected through interviews with 18 elementary school teachers in this qualitative study. Analysis of the data was performed using Nvivo 10 program. Results showed that teachers highlighted the attainments and topics of the course, students, process and evaluation in the planning aspect and for the project implementation aspect, student-centeredness was emphasized as well as the effectiveness of parents. As for evaluation, teachers gave importance particularly to determining criteria to be used in project evaluation. In this regard, it is suggested that the curriculum, teacher, student and parents have an important impact on the success of the projects and thus these four variables should be handled in a coordinated way.

Keywords: Project- based instruction; interdisciplinary instruction; planning and evaluation of instruction

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1. Introduction

Project approach is learning and teaching model which is developed against the instruction of the curriculum as little information piles independent from each other. This model focuses on the basic concepts and principles of one or more fields. It involves the attainments of more than one course within one course scenario. It is an interdisciplinary method which enables students to put forward views and questions about their fields of interest, to make guesses and develop theories, to use various materials, and to apply the skills they have gained in a meaningful and real life context. The method also enables learners to solve problems inside and outside the classroom and find answers to the questions in a creative way.

Project approach encourages children to research many things about their environments. In this process, students improve and strengthen their basic reading-writing and counting skills, gain research skills, carry out a study in a field, and focus their individual interests and attention on various aspects of the related topic (Katz,& Chard, 2000, p. 4). Basic components of this model include a sample case which has a flexible structure, a problem which is associated with other topics, student-centered learning, and research together with little groups. While working on the course scenarios for the solution to real problems, students generally do activities such as thinking, solving problems, creativity, accessing to information, questioning, cooperating, and making an agreement. In the project approach, the teacher is the assistant and the leader; students are autonomous and they are constructors. In the end, each project creates a product which is realistic and which has been developed by students.

Project approach instruction consists of four phases: preparation, implementation, sharing and evaluation. The first phase of the project, preparation, includes introduction of the project to students, identification of the topic, and training about research skills. Students and the teacher conduct some discussion lessons for selecting and identifying the topics to be researched. The topic can be suggested by the teacher or students. Students remember their previous experiences, visualize events as well as objects and people related to the topic, and formulate questions or problems to be answered (Chard, 1992, p. 6). Once the topic has been identified, together with the group, a web and a concept map are created based on "brainstorming". Throughout the initial discussions, the teacher and students produce questions to which they will seek answers (Katz & Chard, 2000). The topic should be closely related to students' daily experiences. It should improve basic skills as well as research, sharing and practice skills. It should also enable to make interdisciplinary connections. The topic should be appropriate to be investigated at school and rich enough to work on it at least for a week.

Students to carry out a project should know what, why and how to make a research as well as how to report their study. Therefore, they should be provided with training about improving scientific research skills before starting to work on a project. In this process, students should be given training on developing skills such as expressing the problem they would like to research, collecting information, doing observations and experiments, interpreting and presenting the data collected, and writing the research topic as a report.

The second phase of the project, implementation, involves the processes which encompass planning the topic as a project, preparing a concept map, distributing the project topics, identifying the connection points of the project, researching, and reporting. While identifying the topics, special attention should be paid to letting students study the topics they are interested in and willing to work on. The topics which are in the program but which have not been chosen should be placed in the topics students would like to study. Once the topics are identified, what and when things will be done in the project should be planned. Connections should be made to the project content, process, technology, community resources, and receiving support. This planning both guides students and helps them effectively solve the problems they encounter. Students who complete the implementation process report their study and present it to their teacher.

The third phase of the project, sharing, involves the presentation of the projects in the class. In this phase, students review the quality of their work and share it. Individually or as a class or group, they summarize and reorganize what they obtained. Besides, they think critically and work creatively in order to represent the new information they obtained in the research process originally and efficiently (Chard, 1992, p. 45).

The last phase of the project is the evaluation phase; the process of measurement and decision making for identifying the level of reaching the objectives of the project. Students' working process and the product received at the end of this process are evaluated together. Evaluation is generally done through tools such as rubrics, rating scales, or checklists. Supplementary assessment and evaluations such as group evaluations, self and peer evaluations, observations, and interviews are also used.

Beside their roles in making students gain knowledge and skills, today, schools are expected to educate individuals who can use their knowledge and skills in real life. The fact that children think and learn differently from each other is not a problem for learning and teaching. What is important is to make the topic a need for students because it is much easier for students to learn the topics they need or they are interested. Teachers have great responsibility in making the topics in the curriculum a need for each student. Besides, there is a need for methods that will not make individual differences a problem and help students to study the topics in line with their interest areas and needs. With its flexible, and problem and student-centered nature, project approach is a key method in this issue. Using project management accurately and appropriately to its purpose in education is important in terms of educating individuals who can solve problems, question, and think creatively. Therefore, the present study aims to find answers to the questions a) how should project applications be carried out in elementary schools?, and b) what are the perceptions of elementary school teachers regarding the planning, implementation, and evaluation aspects of projects?

2. Purpose of the Study

The present study, which aimed to discuss project work carried out in elementary schools in planning, implementation and evaluation aspects, and investigated teachers' perceptions regarding these aspects. In line with this purpose, the study aimed to find answers to the following questions:

1. What are the teachers' views concerning the planning aspect of the project management?
2. What are the teachers' views concerning the implementation aspect of the project management?
3. What are the teachers' views concerning the evaluation aspect of the project management?

3. Method

This study which is qualitative in nature was designed as a phenomenological study. Phenomenological studies provide a good research base for investigating the cases which are familiar to people but are not fully comprehended (Yıldırım&Simsek, 2008). The participants of the study are 18 teachers who worked in elementary schools in different cities of Turkey in the 2014-2015 education year and who indicated to know and use project approach in their classes. The teachers participating in the study, 10 females and 8 males, were coded as T1, T2, T3…..and T18. Years of experience in profession ranged between 5 and 25 years. The data were collected through interviews, using an interview form as the data collection tool. Expert opinions of five academicians working in the field of Educational Sciences were received in order to increase the construct validity of the data collection tool. The codes and themes were created using Nvivo 10 program. Nvivo 10 enables to code comprehensive content easily, complicated information is organized in a smooth way, and thus the researcher can have full idea of all the data collected. For coding reliability, two researchers coded the data separately and decided on common codes.

4. Findings and Discussion

Findings and discussion of the study were presented under three main sub-titles called planning, implementation, and evaluation.

4.1. Findings and discussion regarding planning

In line with the first research question, the teachers were asked "How do you plan the project management?" Figure 1 demonstrates the model which was created with the codes about the teachers' views regarding this question.
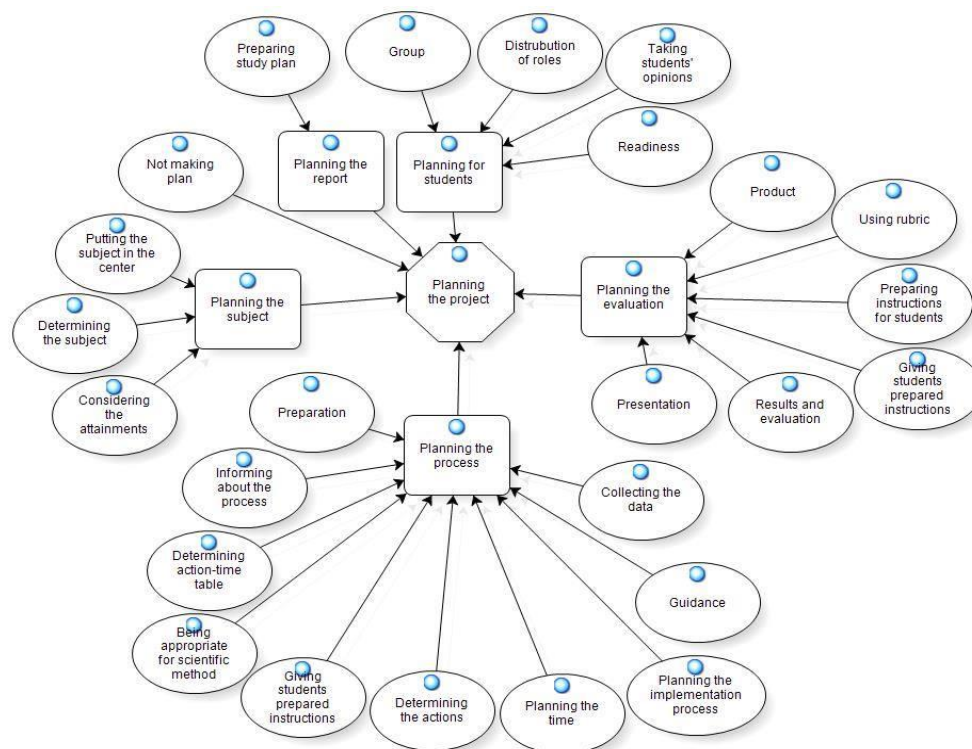

Figure 1. Model about the planning of the project approach

Codes in relation to the planning of the project management were collected under the themes putting students into centre, process, topic, report, and evaluation. Not making a plan is also taken as another theme. Depth of the codes under the planning the process theme is worth noting. Some of the teachers' views concerning planning are as follows:

T1: *"I prepare a plan about project topics and attainments, how to conduct the projects, from whom the students will benefit and how; and then I give it to students".* **T2:** *"As I give very easy projects, I do not spend much time on planning".* **T5:** *"…..The thing I am most careful about planning is timing. I let students know about all the phases, timing, expected behaviours, and how I would evaluate them".* **T6***: "I make my planning as identifying the objectives, gathering information and researching, writing a*

report, and project presentation and evaluation". **T8:** *"I search from internet and apply whatever plan is appropriate to my classroom".* **T14: "***There are problems about project planning. I choose randomly according to the topic".* **T18:** *"Project steps are identified: first, identifying a topic that would provoke interest and curiosity, stating the problem, creating the groups, planning preparedness, product, duration, tasks, evaluation, and presentation".*

As seen through findings, the most important component that attracts attention in planning the project is planning the process. Teachers give importance to handling the process step by step, according to the timing identified. Analysis of the steps shows that they are appropriate to scientific management. This case is appropriate to the nature and purpose of the project (Erdem, 2002).

Besides, there are some teachers who do not give importance to planning and thus do not make plans. The teachers who stated that they did not make plans were usually those with higher years of experience in profession. This case can be associated with professional burnout (Cemaloglu&Sahin, 2007).

4.2. Findings and discussion regarding implementation

In line with the second research question, the teachers were asked "How do you conduct the implementation process of the project management?". Figure 2 displays the codes concerning the teachers' views about this question.
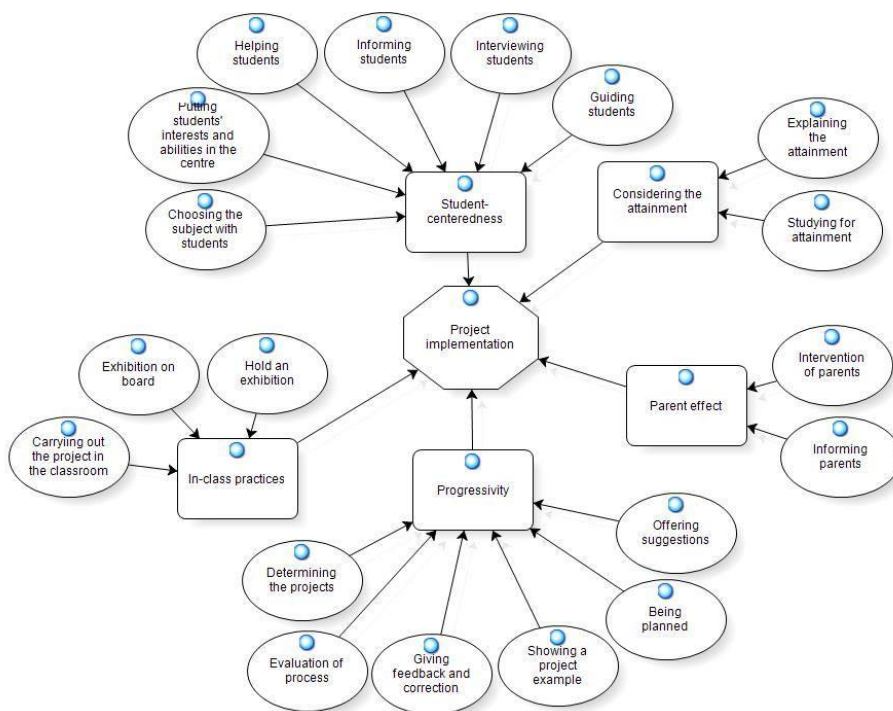

Figure 2. Model about the implementation of the project approach

The codes in relation to the implementation of the project management were collected under themes "in-class practices, student-centeredness, attainments, progressivity, and parent effects". Frequency of the codes under student-centeredness and progressivity are worth noting. Some of teachers' views in relation to the practice are as follows:

T1*: "I give verbal information to students about how to do the program as well as to the parents who are interested".* **T6:** *"We evaluate and conduct the pre-study about the topic chosen*

together". ***"T9:*** *"I guide students about what they should do in order to access information".* **T12:** "*I distribute the projects according to their interests and abilities. While monitoring the process, I guide them when it is necessary.I show them some sample projects*". **T18:** *"I do only ... guidance. I give feedback and corrections about the flow of the project".*

Analysis of the findings in relation to the implementation process of the project indicates that teachers follow a student-centred and guidance-oriented process. Efficiency of the project increases by teachers' giving importance to student interests and abilities and providing accurate feedback and correction in the right time (Korkmaz&Kaptan, 2000).

4.3. Findings and discussion regarding evaluation

In line with the third research question, the teachers were asked "How do you evaluate the projects?" Figure 3 displays the codes concerning the teachers' views about this question.
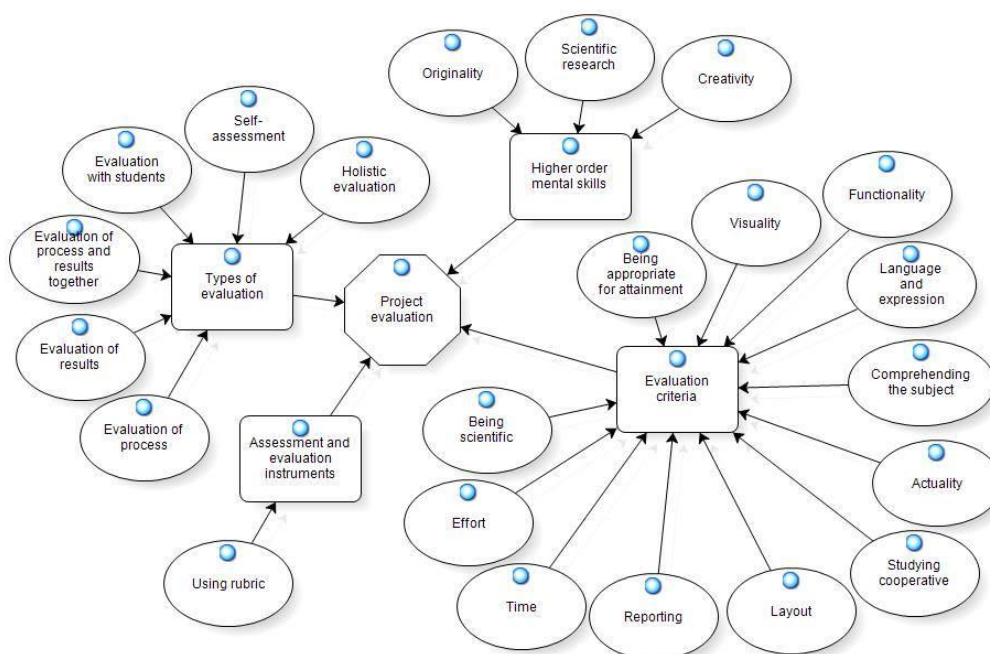

Figure 3. Model about the evaluation of the project approach

Codes in relation to the evaluation aspect of project management were collected under the themes "type of evaluation, higher order thinking skills, assessment and evaluation instruments, and evaluation criteria". Depth of the data under the evaluation criteria and evaluation type themes is worth noting. Some of teachers' views in relation to the practice are as follows:

T1*: "After evaluating all the projects together with the students, I display them on the board".* **T6***: "…I make evaluations according to the criteria given to students before….I use a grading key.. I want students to evaluate themselves".* **T8***: "As I find the projects from internet, I can find a ready-made evaluation. I also check whether the students or their parents did the project".***T16***: "I make evaluations at certain intervals throughout the process, according to the phases of the project".* **T18***: "…I prepare materials such as rubrics and rating scales. Together with the students, I make evaluations through discussions on how much of the expected behaviours are completed, how well the students followed the project steps,… consistency between the product and the results obtained".*

As the findings suggest, the most important components that catch the attention are identification of the assessment and evaluation criteria and the evaluation of the process and product together. In this respect, rubric is the most frequently mentioned tool. As the projects are graded subjectively, rubrics seem to be found important in terms of increasing objectivity. As for the evaluation of the process and product together, it seems to be given importance in terms of universal evaluation. Besides, it is important to note that as an important information and communication source, internet has an important role in projects, as well. However, similar to other areas, incorrect use of internet for the evaluation aspect of the project is also worth noting.

5. Conclusions and Recommendations

A general evaluation of the data collected from the study indicates that the teachers mostly focused on the gradual planning in the planning aspect of the project management. Other important variables in terms of planning were found student, topic, evaluation and report. The most important problem in relation to planning is that some teachers tend to conduct projects without planning. This finding may indicate that these teachers do not give importance to projects or ignore them. In the implementation aspect of the projects, guidance in the project application process and students' preparedness for the projects are the two things featured by the teachers. Another remarkable finding about the application process is informing parents and helping them to guide the students, not to do the projects themselves. In the evaluation aspect of the projects, the teachers were found to give importance to making the holistic evaluation of the process and product and increasing the objectivity of grading.

In line with these findings, four different suggestions can be made in terms of curriculum, teachers, students, and parents. Curriculum should be designed in an interdisciplinary and student-centred way. Problem solving should be taken as a basic skill, and there should be critical and creative thinking skills under this basic skill. Teachers should know the project approach well and apply it efficiently. One should bear in mind that a good teacher is the one who can create a learning need for her students. Students should be active in the education process and take the responsibility of learning. Finally, parents should be provided with information meetings on effective and accurate guidance.

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