

SUPSKY Curriculum Design Model*

SUPSKY Eğitim Programı Tasarımı Modeli

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Abstract

“Curriculum development” and “curriculum design” concepts are occasionally confused and substituted for one another. This issue brings about not only the problem of clear and detailed specification of curriculum design processes in research studies but also the use of these terms in the field. For this reason, in this article, firstly similar and different aspects of curriculum development and curriculum design concepts were explained and then the confusion resulting from the interchangeable use of the concepts was addressed.

Another issue is that although some curriculum theorists suggest curriculum development models with steps, there are limited descriptions of the design processes in detail for curriculum designers. The most widely-known of these curriculum development models are Tyler's Model, Taba's Model, Taba & Tyler's Model, Saylor, and Alexander & Lewis Model. SUPSKY curriculum design model, used in this study, is grounded on the steps of curriculum design, contributes to the field regarding defining design processes in detail, introducing the differences between curriculum development and curriculum design, and being named as a curriculum design model. To structure the model, two types of Delphi techniques, Conventional Delphi, and Policy Delphi, were used for data collection in this qualitative study. The structure of this model, which is based on a graphical projection of the theoretical model, was also discussed.

Keywords: SUPSKY Curriculum Design Model, stages of curriculum design, curriculum development.

Öz

“Eğitimde program geliştirme” ve “eğitim programı tasarımı” kavramları birbirine karıştırılan, birbirinin yerine kullanılan iki kavramdır. Bu durum, hem eğitim programı tasarımlının adımlarının açık bir şekilde ortaya konulması ile ilgili çalışmaların yapılmasını olumsuz etkilemeye hem de “eğitimde program geliştirme” ve “eğitim programı tasarımı” kavramlarının kullanımında karmaşaya neden olmaktadır. Bu nedenle, çalışmada öncelikle eğitimde program geliştirme ve eğitim programı tasarımı kavramlarının benzer ve farklı yanları açıklanmış ve daha sonra bu kavramların birbirinin yerine kullanılması ile ilgili karışıklık giderilmeye çalışılmıştır.

Bazı alan uzmanları program tasarım modellerini adım adım ortaya koymuş olsalar da program tasarım sürecinin adımlarını detaylı biçimde ortaya koyan sınırlı sayıda model vardır. Bu modeller program tasarımından çok program geliştirme modeli olarak adlandırılmıştır. Bu modellerden en yaygın olarak bilinenler Tyler Modeli, Taba Modeli, Taba&Tyler Modeli ve Saylor, Alexander& Lewis Modelidir. Program tasarım sürecinin aşamaları temel alınarak tasarlanmış olan SUPSKY Eğitim Programı Tasarımı Modeli; program tasarım modeli olarak adlandırılmasının, tasarım süreçlerini detaylı bir şekilde açıklaması, program geliştirme ve program tasarım arasındaki farkları ortaya koyması açısından alana katkı sağlayan bir çalışmaddedir. Nitel araştırma deseninin kullanıldığı araştırmada, model tasarlanırken Geleneksel Delphi (Conventional Delphi) ve Politika Delphi (Policy Delphi) olmak üzere iki tür Delphi teknigiden faydalansılmıştır. Çalışmada, görsellerle ve teorik açıklamalarla desteklenen modelin yapısı tartışılmıştır.

Anahtar sözcükler: SUPSKY Eğitim Programı Tasarım Modeli, eğitim programı tasarımı aşamaları, eğitimde program geliştirme.

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Introduction

Before reviewing SUPSKY Curriculum Design Model prepared within this study, the concepts of curriculum design and curriculum development should be discussed. Curriculum design and curriculum development concepts have both similar and different aspects. One of the most important differences between the two stems from their scope. Claiming that curriculum design concept is broader than curriculum development concept would not be wrong. In curriculum design studies, the important thing is to design curriculum which did not exist before. Curriculum development, on the other hand, is involved in the processes of both developing a new curriculum and making changes to an existing curriculum which became inoperative due to various reasons.

Curriculum design studies involve the desk-based design of newly designed curriculum, feedback and review work (reflective evaluation) realized by the teams during the development process, and editing, evaluating and pilot experiment of the curriculum. Therefore, the concept of curriculum design includes curriculum development. Based on this explanation, curriculum design shall be defined as a broader concept which occasionally covers the concept of curriculum development.

As explained above, curriculum development takes place in the various steps of designing new curriculum and covers the studies done to review the varied problems of an existing curriculum and its editing. The fundamental difference between these two concepts is that while curriculum design is to prepare and plan curriculum from scratch, curriculum development involves improving an existing but not properly functioning curriculum in practice via evaluation and development studies to make it functional again. As can be seen in Figure 1 which shows the structure of the SUPSKY Curriculum Design Model, curriculum design and curriculum development studies take place at different stages. However, at the beginning of the process, curriculum design studies can be seen more frequently while studies that can be called "curriculum development" are seen at later stages or steps in the model.

Curriculum development studies in curriculum design are realized at two different steps as seen in Figure 1. The first of them is "2.3 desk-based design". The second one is the piloting carried out at step "3.6 Pilot Experiment Evaluation and Draft Curriculum Development". The draft of the curriculum designed by experts in curriculum design and curriculum development is reviewed and improved based on the response received from the review board. Moreover, based on the results of curriculum evaluation studies done during and after the pilot experiment of designed curriculum, studies of curriculum development are conducted. Therefore, curriculum design studies and curriculum development studies are practiced together in the process of curriculum design, and curriculum development studies take place both during curriculum design and the process after the dissemination of curriculum in the country.

Curriculum evaluation studies are carried out during the curriculum design and curriculum development processes. However, while curriculum evaluation is conducted as the first step TO develop an existing curriculum, in curriculum design, curriculum evaluation studies are conducted following the draft curriculum prepared as a result of the desk-based design studies. Another common aspect of curriculum design and curriculum development is the similarity of expertise areas of the team members working on the design and development process. While desk-based design team, the review board, and pilot experiment evaluation and development team play a part in both curriculum design and curriculum development processes, curriculum evaluation team play a role only in the curriculum development process. Qualifications and members of the teams are described in the following sections in detail.

Curriculum design and curriculum development consist of successive procedures. Designing a new curriculum includes the procedures of curriculum design, and curriculum implementation, evaluation. This can be defined as designing new curriculum or draft curriculum development. After the studies related to draft curriculum development are completed, the decision about whether the curriculum should be developed by reviewing it again or whether it should be disseminated has to be made. All studies in this procedure are for the development of a draft curriculum. Upon

disseminating the draft curriculum, monitoring, evaluation, and redevelopment are needed. This procedure is called the development of an existing curriculum. The development and the review of the curriculum are carried out considering all four components of the curriculum.

Although the available curriculum development models cover some stages or steps of the curriculum design, they mostly put an emphasis on the curriculum development and not on the curriculum design. Bobbit and Charters are the initiators of the connection among goals, objectives, and activities. They suggest activity-analysis method to decide the objectives of the curriculum. Objectives are defined as the goals of education derived from the activity analysis. The activity analysis put forward by Bobbit and Charters is similar to the needs analysis because Bobbit insists on the use of the actual activities constituting the lives of the students, abilities, and qualities indicating the proper performance and a range of human experiences to determine the objectives. Similarly, Charters proposes generating the objectives and standards based on philosophy. Also, the occupations and subjects associated with the occupations should be used to decide on the content. After the objectives are determined, they are divided into activities and ideals and the activities are analyzed considering the limits of working units in the second and third stages, respectively. Bobbit and Charters do not focus on the stages related to the application of the curriculum. Lastly, they state the curricular activities can be planned, systematically studied and evaluated; which refers to the curriculum evaluation and development process beginning with the application of the curriculum (Ornstein and Hunkins, 2009).

Although Tyler does not explicitly state the needs-analysis, the studies on the learners, studies on the society and the suggestions of the subject matter specialists constitute the sources of objectives in his model. He suggested determining the general objectives via the mentioned sources filtered through psychology of learning and the school's philosophy to derive specific objectives. Afterward, learning experiences related to the objectives are determined and sequenced. The last stage of the Tyler's Model is the evaluation which includes the evaluation of the effectiveness of the curriculum according to the performance and the achievement of the students. The evaluation stage of Tyler's model can be associated with the curriculum evaluation and dissemination process (Tyler, 1993).

In addition to what Tyler suggested in his model, Taba added two more stages which are determining and organizing the content. Unlike Tyler, Taba explicitly stated the needs-analysis stage in her model and she emphasized the roles of the teachers in the process of curriculum development. Taba focused on the content dimension of the curriculum more than Tyler did (Hunkins and Hammill, 1994). Therefore, Taba suggested seven stages which are the formulation of the objectives, the selection and organization of the content, the selection and organization of learning activities and the evaluation and the means of evaluation. In the stage of evaluation and means of evaluation, achieved and failed objectives are analyzed and necessary changes are done in the curriculum, so this stage addresses the curriculum evaluation and dissemination process.

Tyler and Taba model is among the widely-known models and it is formed via the combination of the Tyler and Taba Models. The model begins with the needs analysis similar to Taba's Model. Then, based on the needs analysis, the objectives, content, and learning activities are determined and organized. According to the model, the evaluation should occur at the beginning, in the ongoing process of the curriculum and at the end of the application. The process evaluation and the evaluation conducted at the end of the application of the curriculum refer to the curriculum evaluation and dissemination process (Demirel, 2012).

Another popular curriculum development model is the Backward Design Model. Firstly, the desired outcomes are stated in the model. The outcomes are determined in the light of the national and local standards at the first stage. Then, the content which includes valuable information and necessary skills is selected and narrowed down to decide on the specific courses to teach within the scope of the curriculum. In the second and third stages, the achievement indicators for the objectives and the learning activities are selected (Ornstein and Hunkins, 2009).

Saylor, Alexander and Lewis adopt an administrative approach to their curriculum development model. This model consists of four steps; goals and objectives, curriculum design,

curriculum implementation and curriculum evaluation. The goals and objectives are influenced by external forces, such as legal requirements, research data, professional associations and state guidelines. This step is also influenced by bases of curriculum, such as society, learner and knowledge. The second step of Saylor, Alexander and Lewis Model is curriculum design. In this step curriculum planners analyze the goals and objectives to create a curriculum design. The third step is curriculum implementation and this step is similar to "Performing Pilot Experiment" step. This step involves decisions about instruction which is the implementation of curriculum plan. The last step of Saylor, Alexander and Lewis Model involves the evaluation of both expected learning outcomes and the entire curriculum plan (Lunenburg, 2011).

Lastly, Demirel Curriculum Development Model begins with the needs analysis. Three sources, the results of the national research, the philosophy of the curriculum and the political decisions, are employed to determine the goals, objectives and the aims of the curriculum. Afterwards, the content of the curriculum is selected and organized; which corresponds to the "Desk-Based Design of Curriculum" step of the SUPSKY Curriculum Design Model. The next two steps of the model include the studies of piloting the curriculum and evaluating the results obtained at the end of the pilot study. The pilot study stage of the Demirel Model and the SUPSKY Curriculum Design Model is alike in many ways, because organization of the learning environments, selection of the multi-environments, selection of the schools where the pilot study will be conducted and introduction of the designed curriculum to the staff of pilot schools are the tasks carried out within the stage of the pilot study. The results of the pilot study indicate the effectiveness of the curriculum and the succeeding stages are determined in the light of the results of the pilot study. The Curriculum experts or the team may decide to disseminate the curriculum, to go back to different parts of the curriculum or to start over (Demirel, 2012).

In this research study, a model is suggested regarding the development of a draft curriculum. Therefore, procedures of designing a new curriculum / developing draft curriculum are described and explained. Procedures for the development of the present curriculum are beyond the scope of this study.

Method

The curriculum design model suggested in this study was prepared based on the discussions and reviewing the studies found in the literature in the course entitled, EPÖ613 Curriculum Development Models, during the fall 2014 semester at Anadolu University, Curriculum and Instruction Doctorate Program. Using the Delphi technique, the five doctoral students enrolled in this class and the lecturer developed an authentic curriculum design model which had not been previously studied in the literature. The first letters of the researchers' surnames constitute the name of the model, SUPSKY. In this article, SUPSKY Curriculum Design Model structure was designed theoretically based on expert opinion, but it was not tested in practice.

Delphi Technique is used to reach a consensus or agreement among a group of experts in a particular field. The technique is used to establish facts, generate ideas or reach a consensus on a wide-range of topics. In higher education, the technique is used to develop curriculum or criteria and to identify a number of competency criteria (Senyshyn, 2002). Gibson (1998) and Olshfski and Joseph (1991) believe that the Delphi method can act as a needs-assessment tool; however, in this case, the experts are defined according to their experience in an organization. As they work in the organization, they know the structure and the problems of the organization better than an outsider.

Unlike the above-mentioned purposes and usages, Linstone and Turoff (2002) define the technique as the process of structuring group communication to let the whole group effectively deal with a complex problem. Feedback from the personal views of the group members, and judgments of the group, the opportunity for the group members to revise their views and judgments and a degree of anonymity are the essentials of this structured communication. The researchers to employ the Delphi technique need to decide what is appropriate or useful for their studies and structure the technique in line with their context and needs. Lastly, Linstone and Turoff (2002) reported a variety of

application areas of the technique among which putting together the structure of the model is mentioned. Similarly, according to Semerci and Semerci (2001) the Delphi technique is used in all stages of curriculum design, development and evaluation in addition to developing curriculum policies.

Related to the application of the technique, Linstone and Turoff (2002) suggested three types of Delphi: conventional, real-time, and policy. Conventional delphi requires a team to design the curriculum and a group of respondents to express their opinions to the questionnaire sent by the delphi team. After receiving the responses of the respondent group, the delphi group revises the questionnaire and reforms it for the respondent group. Different from the conventional delphi, in real-time delphi the whole process occurs during a course of a meeting or conference so real-time delphi does not necessitate as much time as conventional delphi does. The last type is policy delphi in which not reaching a consensus among the group members but having all group members express their arguments and the supporting evidence is primary objectives. The policy delphi occurs in a non-delphi mode, through face to face communication of the group members.

SUPSKY Curriculum Design Model was designed using two of the delphi techniques based on delphi experts' opinions. For the first three rounds, the policy delphi was employed and the first draft of the model was developed based on the arguments, counter arguments and supporting evidence of the experts. In the 4th and the 5th rounds, the conventional delphi technique was used to get the opinions of a group of ten experts of on the draft model.

In the first round, written feedback about the stages, substages, and steps of curriculum design was taken from delphi group-1 experts (6 persons including 5 doctoral students and a lecturer). In the second round, evaluation and development studies were conducted based on the feedback taken in the first round, and stages, substages, and steps of curriculum design were sent back to all delphi group-1 experts. In the third delphi round, focus group discussion with experts was held, and stages, substages and steps on which a consensus was reached were defined. In the fourth delphi round, draft on which a consensus was made by delphi group-1 experts was sent to a 10-person delphi-2 group (10 Ph.D. students from a curriculum and instruction graduate program) and their opinions about the model's stages, substages, and steps were obtained. In the fifth and last round, opinions received from external assessors were analyzed by delphi group-1 experts and developmental studies were conducted on the model and the final form of the model was determined.

The Structure of the SUPSKY Curriculum Design Model

The curriculum design model suggested in this study is composed of the following three main stages: "Planning Curriculum Design, Desk-Based Design, Evaluation and Development of Curriculum, and Pilot Experiment." In the first step of this stage, teams responsible for tasks during the design are formed. These teams are named: 1- Desk-based design team, 2- Review board, 3- Pilot experiment evaluation team. Detailed information about the roles of these teams is given in the subtitle of team formation. In the second step, in order to plan time effectively, a work schedule is planned. In the final step, a relevant literature review is conducted to form a database for the curriculum to be designed.

After "Planning Curriculum Design" stage is completed, it continues with the second stage, which is "Desk-Based Design, Evaluation, and Development of Curriculum". Firstly, in this stage, needs analysis is conducted. Next, the first design of curriculum stemming from desk-based studies is prepared. In the next step, the formation of equipment needed for designed curriculum is done. Necessary changes are made based on the first feedback of the review board related to the initial design and at the end of the process a draft curriculum is shaped. In the final step, the pilot experiment is conducted if the draft program is approved. If it is partly approved, necessary changes are made in the incorrect parts. If it is rejected, all procedure has to be repeated all over again. Consequently, at this stage of the model, both curriculum design and curriculum evaluation and curriculum development studies take place.

In the third stage of the model is "Pilot Experiment". This stage is composed of three substages. In the first preparation substage, educators who will participate in the pilot experiment are trained about the new curriculum. In the second substage of the pilot experiment, pilot experiment conditions are decided, pilot experiment procedure evaluation is planned and practiced, and a pilot training program in selected schools is conducted. In the final substage, which is "Evaluation and Development of Pilot Experiment," necessary decisions are taken regarding the dissemination of curriculum development based on the results of the pilot experiment. "Curriculum Dissemination" stage shown in Figure 1 is excluded from SUPSKY Curriculum Design Model. Stages, substages and steps of recommended model can be listed as follows:

1. Planning Curriculum Design
 - 1.1. Formation of Teams
 - 1.2. Setting Work Schedule
 - 1.3. Literature Review
2. Desk-Based Design, Evaluation, and Development of Curriculum
 - 2.1. Context of Curriculum
 - 2.2. Conducting Needs Analysis
 - 2.3. Desk-Based Design of Curriculum
 - 2.4. Formation of Tools and Materials
 - 2.5. Evaluation and Development of Curriculum
 - 2.6. Decision
 - 2.6.1 Approval- Switch to Pilot Experiment Step
 - 2.6.2 Partial Approval – Go Back to Incorrect Part
 - 2.6.3 Rejection – Start over
3. Pilot Experiment
 - 3.1 Training of Trainers
 - 3.2 Preparation of Educational Environment
 - 3.3 Deciding on the Pilot Experiment Conditions
 - 3.4 Planning Pilot Experiment Procedure
 - 3.5 Performing Pilot Experiment
 - 3.6 Evaluation of Pilot Experiment and Developing Draft Curriculum
 - 3.7 Decision
 - 3.7.1 Approval – Dissemination Decision
 - 3.7.2 Partial Approval - Go Back to Incorrect Part
 - 3.7.3 Rejection – Start over
 - Curriculum Dissemination
 - Curriculum Evaluation during the process
 - Curriculum Development during the process

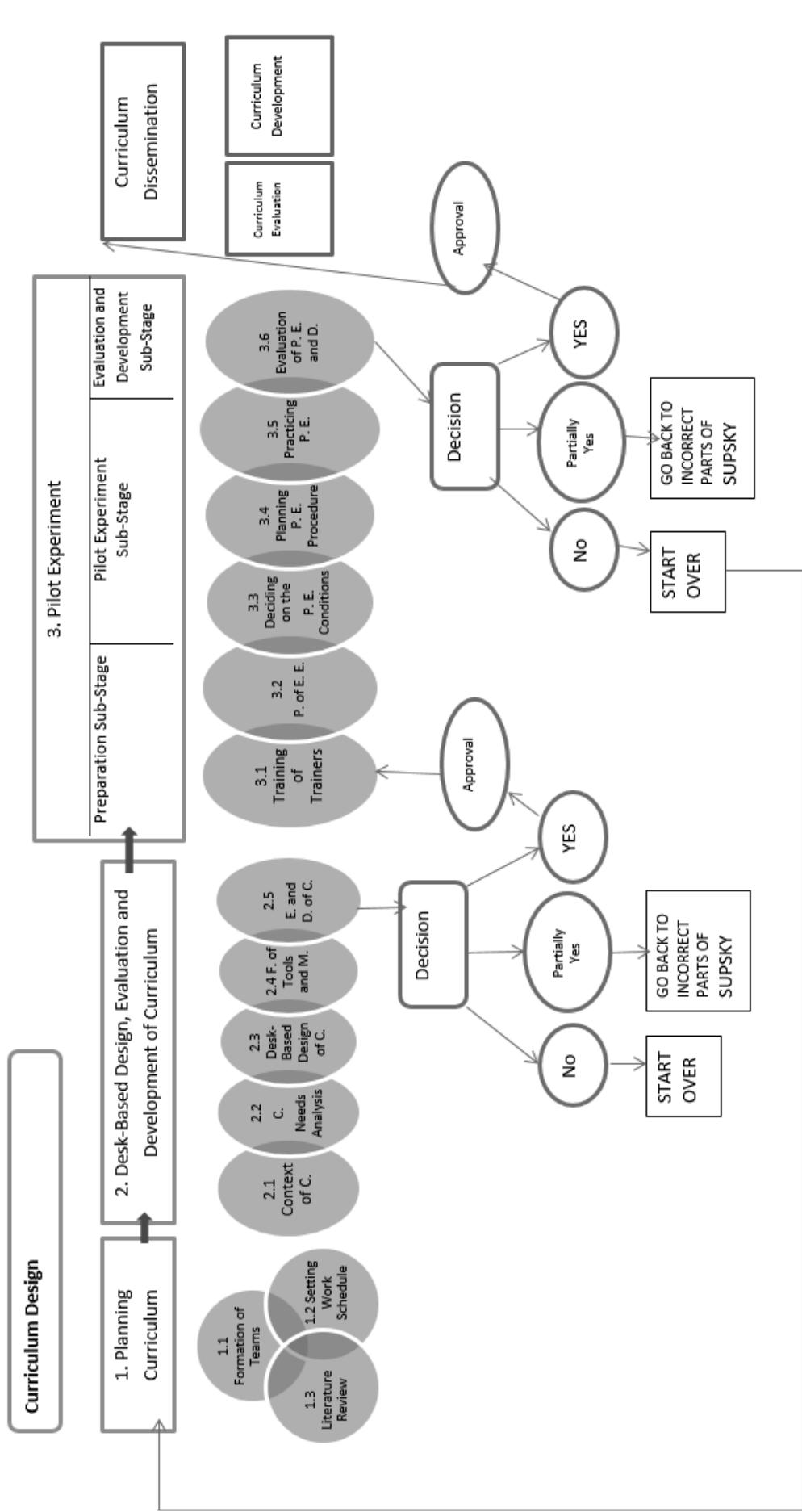


Figure 1. The stages, substages and steps of SUPSKY Curriculum Design Model

1. Planning Curriculum Design

The first stage of planning curriculum design of SUPSKY model is composed of three steps: the formation of teams, setting a work schedule and literature review.

1.1 Formation of Teams

The success of curriculum design studies depends on the sufficient preliminary work and completing them meticulously. As curriculum design process involves a quite complicated structure, this process cannot be executed by a single person or people working independently from each other. Therefore, curriculum design process should be carried out by study groups whose tasks and members are to be set. In the first step of "Planning Curriculum Design" stage of the design process, preparation related to the formation of team members and formation of study groups take place. Teams to be formed and their tasks are explained below:

Desk-Based Design Team: this team works around a table to make a very beginning of the designing curriculum. Its first task is to prepare the first draft of the curriculum in written form and present it to the review board. In the process of designing curriculum, desk-based design teams work in collaboration with the review board. Based on the feedback received from the review board, making necessary changes to curriculum is the second task of this team. In line with the prepared curriculum, this team is responsible for the preparation and/or selection of tools and materials which are to be used in pilot experiments, and development of the guide. Lastly, as seen in Figure 1, literature review, which is the third step of the first stage of the SUPSKY model, determining the philosophical, social, and political foundations in the context of curriculum, and conducting needs analysis, as the first two steps of the second stage, is also the task of this team.

The curriculum design team consists mainly of curriculum and instruction field experts, competent experts from educational philosophy, sociology, and economy; academicians and specialists from the fields of assessment and evaluation, education management inspection planning and economy, and guidance and psychology; academicians from the relevant field of curriculum to be prepared; education authorities and non-governmental organization (NGO) representatives from the relevant field, and teacher representatives from different types of school and education levels. Ultimately, a support team providing clerical services, graphics, typographic, design and drawing services must be available in this team as well (Demirel, 2012). This support team must be present at the meetings of the review board to provide clerical and other support services.

Review Board: This team works in collaboration with the desk-based design team in the process of design. In a sense, they act as external assessors for desk-based design team's curriculum preparation. They review the first draft of the curriculum in written form prepared by desk bound-desk based design team and report the missing or incorrect aspects of the draft to the first group. Final negotiations between the two teams continue until a final decision is made about the curriculum draft. Moreover, providing feedback to the first team about the draft equipment which is to be prepared in line with the draft curriculum is also this team's task. Like the first group, they are formed by academicians from educational sciences, experts from relevant fields, educational authorities and NGO representatives, teachers from different kinds of school and levels. In order to provide consultancy services to problems and needs encountered during the curriculum design procedure, experts mainly from different fields such as psychology, philosophy, sociology and economy are included in this group.

Turgut (1993) and Gözütok (1999) give reference to three types of curriculum evaluation approaches which are reflective, formative and summative. Evaluation procedures are conducted before putting the draft curriculum into practice are called reflective evaluation (Turgut, 1983). In this process, expert opinions are collected to ensure the consistency of curriculum objectives, the consistency and effectiveness of the topics and learning objectives, the suitability of the specified equipment and teaching methods, and the validity of assessment tools. Thus, curriculum is developed and improved before pilot experiment. Taking this into consideration, evaluation of a review board related to desk-based curriculum design is a reflective evaluation.

Pilot Experiment Evaluation Team: After the draft curriculum and relevant equipment is prepared, the pilot experiment of curriculum shall be practiced. The task of the third group - pilot experiment evaluation team - is to plan, follow, collect the results of the pilot experiment evaluation and to identify incorrect, inoperative or missing parts of the draft curriculum based on the collected results. This team shall evaluate the data collected by pilot experiment and reach a decision based on evaluation results. To do this, the team prepares a suitable evaluation plan and puts it into practice. As a result of evaluation, based on the team's decision, either curriculum is disseminated or its missing, incorrect parts are changed or the curriculum design process starts all over if seen that it is not working correctly. This core team is formed with the participation of academicians from first two teams, field experts, ministry representatives, and teacher representatives.

During the pilot experiment, both formative and summative evaluations are conducted. Formative evaluation is the one which is conducted during the implementation of curriculum with the aim of developing it. Before implementing the designed curriculum across the country, it is evaluated in pilot experiment stage and changed according to results. Formative evaluation makes immediate identification of the problems regarding all aspects of a curriculum possible. Necessary measures can also be taken without delay (Gözütok, 1999).

Moreover, it is necessary to provide an ongoing evaluation in the development stage before the implementation of the draft curriculum. Necessary changes might be done at this point and problematic parts of the curriculum can be identified before the implementation. Through formative evaluation, remedial actions can be taken by providing continuous feedback on curriculum and thus a control system can be established.

It is important to make summative assessment for the designed curriculum draft in final. It can be concluded that whether the curriculum on hand is sufficient or not in view of gaining the desired outcomes (Demirel, 2012).

1.2 Setting the Work Schedule

Because curriculum is the detailed planning of learning and teaching process, the work schedule which shows the steps to be followed during the curriculum design is the first and crucial aspect of this plan. To continue curriculum design procedure effectively, and prevent time loss and possible chaotic cases, it is necessary to set a work schedule to identify each of the subsequent steps and other relevant tasks. Work schedules at the same time provide a huge contribution to determine who will be included in which working group and at which step. In line with this, after the formation of curriculum design team, it is necessary for this team to set their work schedule and inform all team members about it. While setting work schedule, realistic timing shall be made and it must have a flexible structure taking into unforeseen occurrences.

While setting the work schedule, Gantt chart timeline, PERT (Planning Evaluation Research Technique) process network or flow chart can be used (Demirel, 2012). With the advance of information technologies, work schedules can be prepared on a number of software online.

1.3 Literature Review

Before starting desk-based design of curriculum, it is desk-based design team's responsibility to review literature about the relevant curriculum topics and subjects which might assumedly contribute to curriculum. Among the responsibilities of this team are reviewing relevant curriculum topics, analyzing their scope and content, and creating the theoretical basis and justification of curriculum. Furthermore, tools and materials that would be reached during literature review may also be used while preparing tools and materials for the curriculum. In short, a database needs to be created during literature review to be used for curriculum design. (Mooney and Mausbach, 2008).

2. Desk-Based Design, Evaluation and Development of Curriculum

The first step of Desk-Based Design, Evaluation and Development of Curriculum is the identification of the context of curriculum. The second step is to conduct needs analysis. In the third step, the first draft of the curriculum is designed at the desk, equipment needed for pilot experiment and country-wide implementation of curriculum is prepared, then necessary evaluation and development studies are conducted and the draft curriculum is prepared based on the decision as a

result of this procedure. At the last two stages of the SUPSKY Model the materials and the tools are composed and the curriculum is evaluated and developed.

2.1. Context of Curriculum

Throughout the curriculum design, it is important to decide firstly on the individuals', learners', and society's philosophical, social and political views. All these constitute the source of the curriculum. When designing the curriculum, science, especially learning theories and educational theories, society, individual, subject areas and even moral doctrine can be adopted as a source (Ornstein and Hunkins, 2009). These will be influential in determining curriculum objectives, content, learning experiences and evaluation. Demirel (2012) states that the sources of curriculum which are individual, society and subject areas are important in determining the needs. An individual's and society's need being consistent with each other is important with regard to adaptation of individual to society. Suitable objectives must be placed in curriculum and the other three elements of curriculum must be consistent with the objectives of the curriculum.

2.2 Conducting Needs Analysis

Needs analysis is conducted before desk-based design of curriculum by desk-based design team. While needs analysis is conducted, current and future needs of individuals, societies and subject area are taken into consideration. However, changes by decision-makers and policy-makers, and advances in science and technology are significant in identifying the needs. Needs analysis is conducted using different techniques and if needed, different techniques are used in order to complete the new needs analysis.

2.3. Desk-Based Design of Curriculum

After the needs analysis is conducted, the curriculum is designed by the desk-based design team. Curriculum design is related to selected educational philosophy and the implementation of it. One's philosophy influences interpretation and selection of objectives, selection and organization of content, decisions about how to teach or deliver the curriculum content, and judgments about how to evaluate the success of the developed curriculum (Ornstein ve Hunkins, 2009). Curriculum design can be explained as how curriculum elements (objectives, content, learning experiences and evaluation) are gathered and how they are associated with each other (Demirel, 2012).

In this step, if appropriate curriculum design approaches are adopted, the effectiveness and efficiency are increased. Although there are unlimited number of curriculum design approaches, each design shows its own way of which element to focus on and how the elements are connected to each other. Taking a look at the historical timeline, curriculum designs used at schools at different times are as follows: subject-centered curriculum design, broad field curriculum design, core curriculum design, spiral curriculum design, the Trump plan, mastery learning, blended learning and problem-solving curriculum design (Henson, 1995).

Ornstein and Hunkins (2009) categorized the curriculum design approaches into three regarding their themes (1) subject-centered curriculum design approaches; (2) learner-centered curriculum design approaches; and (3) problem-centered curriculum design approaches. Subject-centered curriculum design approaches are the oldest and most traditional ones. One of the most important advantages of these approaches is to transfer a huge load of information to learners at a short span of time. However, these approaches have been criticized for their disregard of the needs and interests of students (Henson, 1995). The curriculum cannot ignore the interests and needs of individuals (Ornstein and Hunkins, 2009). Learner-centered approaches are more effective in primary level education curriculums. This curriculum takes care of the student's development as a whole, not just in academic development. Therefore, learner's needs and interests are central to the curriculum (Ornstein and Hunkins, 2009; Demirel, 2012). In problem-centered curriculum design approaches, on the other hand, problems encountered by individuals in social life are highlighted. This approach can be expanded beyond the content of the subject areas.

Finally, some variables when designing curriculum shall be considered. These variables can be summarized as qualified human resources who will implement the curriculum, physical facilities,

and sufficient budgetary resources because the implementation of curriculum across the country is largely shaped in the curriculum design stage (Bone and Guthrie, 1990).

2.4. Formation of Tools and Materials

While setting standards in designing curriculum and reaching those standards, selection of tools and materials is an important and decisive step in achieving the objectives of the curriculum. Changing conditions requires the adaptation of tools and materials to adapt them. It is important to act responsibly in preparation, selection, and use of tools and materials which will support learners' development and contribute their learning process (Carlson et al., 2014).

In general, tools and materials are the most important elements of learning-teaching process. Tools and materials are also supportive of the teacher's personal development.

Curriculum is shaped in this step of curriculum design procedure. Then, tools and materials which will serve to curriculum objectives are prepared or selected and teacher's guide is prepared. In this step of the formation of tool and materials, it is better to start with the question "What are the necessary materials to reach the objectives stated in the curriculum?" At this point, it is crucial to use multiple sources instead of one source, to select various content-rich and informative tools and materials or develop them, and to integrate technology into the process. Another important detail is the effectiveness of the materials in realizing objectives (Guide to Curriculum Development, 2014).

Tools and materials to be used while implementing curriculum shall not be regarded independent from curriculum and teaching-learning setting. When these materials are used effectively, they can facilitate the learning-teaching process (Carlson et al., 2014).

Selection of materials to be used in learning and teaching process is one of the supplementary steps of curriculum design procedure. Learners are in interaction with the written, visual and multimedia resources in their daily lives. This interaction continues with the learning environment in which there are learning resources. At this point, tools-materials should be appropriate to the developmental characteristics of learners and it must support the learning outcomes. As well as the selection of these materials, they also must be accessible (Department of Education and Children's Services, 2004).

While selecting tools and materials, it is important to decide firstly about the type of materials that are necessary. Then, all accessible materials must be listed and a decision should be made about their advantages. Identifying whether these materials can meet the learner's changing learning conditions is also important. These can be listed in material list: digital materials, books, newspapers, maps, videos, magazines, photos, and figures etc.

The criteria need to be established for the selection of written, printed and visual tools and materials. These criteria must be detailed including learning and teaching criteria, background criteria, curriculum compliance, physical structures, accessing to tools and materials and etc.

Alongside with the tools and materials, a guide for teachers is needed for more effective process management. This provides guidance for the teacher as it can be understood on its own. The basic and main role of teachers can be conceived as regulating teaching-learning environment and guiding students in activities. Teacher's lesson plans are prepared to assist in performing this role is the teacher's guide, in a way.

No random action shall be taken in the selection of tools and materials in curriculum design. Selected or created tools and materials must reflect the content and status of materials and they must be authentic. Tools and materials must also be sensitive to the socio-cultural issues. In developing tools and materials, a specified method must be adopted and it is important to behave in accordance with it. Activities should encourage the learner's self-learning. The design of the visual tools should be prepared by taking the target group's features into account. In addition to theoretical knowledge, tools and materials should include practical information as well. Preparing or selecting tools and materials is a time consuming and difficult task. However, the selection and use of tools and materials prepared completely for commercial purposes might interfere with reaching the desired goals. Therefore, as the teachers are the individuals who interact with the tools and materials, it is absolutely

necessary to ask their opinions. Preparation and selection of materials are the products of a certain accumulation, therefore participation of experts in this process is very important (Kiai and Maroko, 2013).

2.5 Evaluation and Development of the Curriculum

At this step of the recommended model, the desk-based team for design and review board (as the teams of the curriculum design working group teams) work in cooperation. The desk team for design reconstitutes the curriculum design that they have created, with the feedback and corrections that come from the board of review. This process continues until the two teams come to an agreement and at the end of this process, the draft curriculum is created.

This process includes both the curriculum design and curriculum development studies. The draft curriculum created by the desk-based team for design is evaluated by the review board and the draft curriculum is developed by being reviewed and reformed by the desk team for design with the feedback from the review board. An applicable curriculum must be received at the end of this process. Specifications of an applicable draft curriculum can be specified as leading the teacher, ease in understanding and interpretation, suggesting a proper frame for the learning resources and practices in lessons, using the proper learning strategies and evaluation methods, and updatability (Bone and Guthrie, 1990). Along with these, tools and materials can be reviewed, evaluated and developed in parallel with the requirements in this process.

2.6 Decision

At this step, after the draft curriculum and equipment that are proper for the curriculum are evaluated and the necessary regulations are written, some decisions about the pilot experiment of the curriculum are arranged. Three types of decisions that need to be made are as follows:

2.6.1 Approval - Switch to Pilot Experiment Step:

If the desk based team for design, evaluation, and the development of curriculum finds the curriculum and the equipment suitable, it is possible to progress to the first stage of pilot experiment:

2.6.2 Partial-Approval - Back to Incorrect Part:

In case it is detected during the step "2.4 Evaluation and Development of the Curriculum" that a part of the curriculum does not function well or there is a missing part at the draft curriculum, that problematic part is re-evaluated and necessary arrangements are made.

2.6.3 Rejection – Start Over:

In case the draft curriculum and equipment are found totally insufficient by the review board, curriculum designed at the step of Desk-Based Design, Evaluation and Development of Curriculum and developed equipment are found insufficient; the first steps of the model are executed once again by returning to the "1. Planning Curriculum Design" which is the first stage of SUPSKY Curriculum Design Model.

3-Pilot Experiment

This stage involves sub-stages and steps about determining the missing or incorrect parts of the curriculum by practicing the curriculum that is designed at desk within the sample which is selected properly country-wide and developed by making necessary regulations.

3.1 Training of Trainers

Before implementing the pilot experiment, introducing the designed curriculum and the equipment prepared for the curriculum for the use of trainers who will implement it is important for the success of the pilot experiment. At this substage, points to take into considerations are selection of the schools, managers, trainers and experts' giving necessary training to them. It is important to ensure that practitioners who will carry out the pilot experiment are well informed about the curriculum (U.S. Department of Health and Human Services, 2014) because the success and effective practice of the curriculum depends on the readiness and attitudes of the trainers towards designed curriculum. According to Koszalka (2001), knowledge enables the attitude to change and positive attitude is an important factor to adopt innovation.

Collaboration with the school managers and trainers is the key provision for the success of innovations that curriculum has brought. Since the active participation of trainers will enhance this success, after the determination of the schools, the school managers and the trainers who are willing to participate in the pilot experiment studies should be interviewed; the trainers and the managers should be informed about the pilot experiment process, the draft curriculum and the draft equipment (Demirel, 2012).

Every innovation or period of change brings extra work such as adoption of new methods, preparation of new lecture notes and scanning new sources for trainers and for this reason a resistance against innovation may occur. To break this resistance, especially the school managers and trainers should be informed in detail about the curriculum, its materials, and practice processes and they should be convinced that they are the owners of this innovation. Prior to the curriculum, preparation of the "Introductory Guide for the Curriculum" brochure for the training of the trainers who will participate will help the process to continue more effectively and in an easier way (Demirel, 2012).

3.2 Preparation of Educational Environment

Another issue as important as the training of trainers in the preparation substage of the pilot experiment is the preparation of educational environment. The educational environment should have appropriate conditions to be able to practice the pilot experiment of designed curriculum. Otherwise, at the end of the pilot experiment, the evaluation about the curriculum design might not reflect reality.

Tuncer et al. (2012) states that educational environment which has lots of variables (one within the other) is a point to be emphasized and it has a great significance in fulfilling the instructional objectives. Sönmez (2010) points out the order of desks and tables which are the physical quality of the educational environment and declared that the objectives and behaviors should be considered on positioning.

Educational equipment is another factor to be noticed in the preparation of educational environment. According to Kildan and Unver (2011), educational equipment, which has a more important role in education and training process compared to the past, convey the messages to students in a more correct, concrete and understandable way. Thus, effective and accurate communication can be made. It will not be right to think only about the physical variables when it comes to preparation of educational environment. Using accurate teaching aids will not be enough for an effective communication in a classroom environment. Media that will provide a healthy communication between the trainer and the student should also be set to work. In addition, the usage of technological components to draw attention of students to the subject provides faster and more efficient transfer of the information and facilitates the training and teaching processes (Kildan and Unver, 2011).

3.3 Decision of Pilot Experiment Conditions

Curriculum should be reviewed with evaluation studies based on a scientific understanding and improved in order to function properly. Turgut (1983) states that after preparing a draft curriculum and assistive materials the draft must be tested on actual conditions by applying research processes, then these test data should be evaluated and the draft must be reformed by the evaluation result and generalized later on (cited in Ozdemir, 2009). In this context, after the training of trainers is completed and the educational environment is prepared, determination of the curriculum's pilot experiment conditions step can be initiated.

Demirel (2012), states that, for a curriculum pilot experiment that will be applied country-wide, schools must be selected with a proper sampling method. There are some specific criteria that should be considered during the pilot school and class selection where the pilot experiment will be applied. The facilities where the pilot experiment will be applied must represent the country and target audience inclusively.

To get useful results from the pilot experiment, it should provide the following three essential conditions: it needs to be performed with 1- experienced and successful trainers, 2- students who have prerequisite knowledge and skills and 3- proper educational environment (Demirel, 2012).

3.4 Planning the Pilot Experiment Process

In order to get valid results from the pilot experimentation, a good preparation should be made before pilot experimentation. A work program of including every step of pilot experiment should be prepared through mindful planning as in the beginning of design process and the process should go by this program.

A good curriculum evaluation and development plan should be scientific research based and it should reveal how well the curriculum functions enabling the pilot experiment evaluation team to do observations. In this context, since the pilot experiment is the best way to understand what goes right and what goes wrong. In this respect a control plan must be prepared to help track activities, give feedback during the pilot experiment and determine degree of attaining objectives of curriculum. It is important to apply the pilot experiment in the direction of the draft curriculum and equipment, and do regulations and development studies if necessary after evaluations. The aim of the pilot experimentation is to take precautions for possible problems to be encountered during the actual application. During the pilot experiment, the research that will be done before dissemination, points might be precluded by creating evidence that will help with making a decision on the program (U.S. Department of Health and Human Services, 2014).

3.5 Performing the Pilot Experiment

Once the necessary conditions are provided and the training sessions that are provided to teachers and managers who will participate in the pilot experiment are completed, the pilot experiment should be performed in a period that is equal to the duration of curriculum.

As a basis, pilot experiment study is a trial of draft curriculum in the field. Thanks to pilot experiment, the problematic or missing parts of the curriculum are detected. (U.S. Department of Health and Human Services, 2014).

In addition, pilot experiment sheds a light on the possible problems that will appear during the dissemination of the curriculum throughout the country. Therefore, it can be detected whether the team that will apply the pilot experiment have enough information about the curriculum or not, and it can be determined what kind of a path to follow on coping with situations that might appear during the real application. Teachers who participate in a pilot experiment of the designed curriculum give feedback for the context, teaching-learning process and suitability of the designed curriculum to students. Besides, through the pilot experiments, an opinion on how much time to spend on which parts of curriculum can be made. Whether the curriculum achieves the desired goals and whether the evaluation studies are suitable can also be evaluated (Corbett, Gardner & Taffaro, 2013; U.S. Department of Health and Human Services, 2014).

3.6 Evaluation of the Pilot Experiment and Development of the Draft Curriculum

At the substage of evaluation of pilot experiment, "pilot experiment evaluation team" works actively. In this substage, the failing or inoperative parts of the curriculum that is designed at the desk are reviewed according to the results of the pilot experiment (U.S. Department of Health and Human Services, 2014).

Ozdemir (2009) states that in recent years much more importance is placed on curriculum evaluation studies, with the purpose of determining the applicability of curricula. Data are collected usually through reflective evaluation especially in the step of piloting curricula and decisions about the curriculum are made by evaluating and analyzing these data.

The pilot experiment can be seen as a "maintenance and repair" study. An evaluation plan to test the effectiveness of the curriculum must be prepared after the piloting. It might seem like everything is going right during the pilot experiment. However, evaluation studies must be given a wide coverage to check if the designed curriculum is qualified enough for the changes required. With this purpose, the basic reference guide about the sufficiency or insufficiency of the curriculum is the experiences and comments of trainers and students. Just like the quality control of a product that is produced in the industry, to understand the quality of a designed program and whether it is working well or not, the students who went through the curriculum process need to be checked to see if they have the required behavior. By this way, the information that will enable the insufficient parts of the

curriculum to be reformed and reviewed by the evaluation results must be collected systematically and on a regular basis with a lot of techniques such as surveys, interviews, observations, teachers' notes, unit tests, comparisons with experimental and control group studies (Demirel, 2012).

According to Turgut (1983), the period from the designing of the curriculum to its dissemination after being tested and improved is also a curriculum development process and involves the following stages: 1. Preparation of the draft curriculum and auxiliary materials (equipment), 2. Testing of the draft in real conditions (pilot experiment), 3. Testing and evaluation of data, and 4. Improving of the draft based on evaluation results and then dissemination. The final step of the SUPSKY model is to make necessary corrections, changes and improvements in the curriculum after the pilot experiment and evaluation. These corrections, changes or improvements can be on objectives, context, learning - training processes, materials or evaluation of the curriculum. The draft curriculum that goes through this process is ready for "Decision" step.

3.7 Decision

At this step, after the curriculum's pilot experiment is reviewed, some decisions about the curriculum are made. At this step, three types of decisions can be mentioned. These decisions are;

3.7.1 Approval and Dissemination: If there is no problem found in the curriculum after pilot experiment and the curriculum is found adequately efficient by the authorized organization, the curriculum is disseminated throughout the country.

3.7.2 Partial-Approval: The probable decision that will be made after the pilot experiment of curriculum and evaluation of the application results. The failure and problematic parts of the curriculum are determined based on the results obtained after the pilot scheme. Then, necessary improvements are made by returning to the incorrect part. After all the improvements about the failing parts of the curriculum are completed, it can be decided that the curriculum can be disseminated.

3.7.3 Rejection: If the curriculum that is reviewed after the pilot experiment is seen as completely dysfunctional, it might be decided for the curriculum to not be applied; or it might be decided that there would be a return to the beginning of the curriculum design process. However, this is an unlikely decision for a well-designed curriculum.

Conclusion and Discussion

When the dissertations and articles about curriculum design, curriculum development and curriculum evaluation were analyzed, it was seen that while there were a great number of articles about curriculum development in education and curriculum evaluation models, the number of resources about the curriculum design and models were very limited. As the database of research studies between October 1, 2014 and February 1, 2015 were looked into, it was noticed, that there was no research or article that explained the complexity between these concepts. This complexity actually causes incomprehensibility for people who are not experts in field of educational sciences and are writing articles about the curriculum. Curriculum design, is a difficult and complicated activity to be understood and practiced (Ornstein and Hunkins, 2009). This study tries to reveal the differences and similarities of the concepts of curriculum design and curriculum development in education by determining the steps and context of the curriculum design. With this study, the elimination of the incomprehensibility that is observed between the concepts of curriculum design and curriculum development in education in the literature is targeted.

In this study, we tried to create a model that has all curriculum design stages, substages and steps in a detailed way. By providing a new perspective in addition to existing information about these two concepts in articles and books written, an alternative point of view was offered for the lack of resources, problems which arise from not being clear on the concepts of curriculum design and curriculum development in education. In addition, a guide for people who want to design curriculum or to explain the content of the curriculum design stages, which are usually only mentioned as titles, is created with this study.

Most of the curriculum theorists such as Tyler, Taba, Ornstein, Hunkins and Demirel agree on the fact that the curriculum development in education must be in line with objectives, content, learning experiences and evaluation. However, not mentioning the curriculum development in education process in detail; skipping some stages; studying mainly on curriculum development models in education in the literature; considering curriculum design stages and curriculum development in education stages as equals reduces the awareness of the curriculum design process, constitutes an impediment for the people who want to design a curriculum.

Table 1 indicates the comparison of the stages, substages and steps of SUPSKY Curriculum Design Model with some of the available curriculum development models. As seen in the table, some stages of SUPSKY Curriculum Design Model match the stages of available curriculum design models. However, there is no available model covering all stages of SUPSKY Curriculum Design Model. Firstly, Charters suggests activity-analysis to decide on the objectives of the curriculum which is the goals of education derived from the activity analysis. The activity analysis put forward by Bobbit and Charters is similar to the needs analysis because Bobbit insists on the use of the actual activities constituting the lives of the students, abilities, and qualities indicating the proper performance and a range of human experiences to decide on the objectives. Similarly, Charters proposes that philosophy should supply the objectives and standards, which matches the context of curriculum step of the SUPSKY Curriculum Design Model. In Bobbit's and Charter's model, the work of analyzing the activities into units covers the "Formation of Tools and Materials" step of the SUPSKY Curriculum Design Model. Besides, all stages of the model generated by Bobbit and Charters address the "Desk-Based Design of Curriculum" step of the SUPSKY Curriculum Design Model, because they suggest a way showing how to decide on the objectives and then the content, activities and testing methods basing on the objectives.

SUPSKY Curriculum Design Model begins with the needs-analysis step and this step is similar to Tyler Model because the needs of the learners, society, and the subject matter result in the selection of the objectives. However, curriculum design involves not only practical issues, but also philosophical and theoretical ones. Therefore, identification/clarification of context of curriculum comes just before the needs-analysis as the first step of SUPSKY Curriculum Design Model. Afterwards, learning experiences related to the objectives are determined and sequenced; which refers to the "Desk-Based Design of Curriculum" step of the SUPSKY Curriculum Design Model. Lastly, the evaluation stage of the Tyler's model can be associated with the curriculum evaluation and dissemination process in the SUPSKY Curriculum Design Model.

Taba explicitly stated the needs analysis in her model, and this stage is available in SUPSKY Curriculum Design Model. Additionally, Taba's stages of formulating objectives, selection and organization of the content, selection and organization of learning activities and evaluation and the means of evaluation are equal to the "Desk-Based Design of Curriculum" step of the SUPSKY Curriculum Design Model. In the stage of evaluation and means of evaluation, achieved and failed objectives are analyzed and necessary changes are made in the curriculum, so this stage addresses to the curriculum evaluation and dissemination process in the SUPSKY Curriculum Design Model.

In Tyler and Taba's Model, the needs analysis step matches to the one in SUPSKY Curriculum Design Model. The stages related to the selection and the organization of the objectives, content and the learning experiences also match to the "Desk-Based Design of Curriculum" step of the SUPSKY Curriculum Design Model. Lastly, while the first evaluation step suggested in Tyler and Taba's model refers to the "step 2.6 decision" of the SUPSKY Curriculum Design Model, the process evaluation and the evaluation conducted at the end of the application of the curriculum refers to the "step 3.6 decision" and "curriculum dissemination" in the SUPSKY Curriculum Design Model.

Backward Design model has some similar stages with the SUPSKY Curriculum Design Model. Although the needs analysis are not explicitly stated in the model, the desired outcomes of the curriculum are determined as a result of the needs analysis step, which is also the same in the SUPSKY Curriculum Design Model. The outcomes determined in the light of the national and local standards partially cover the context of curriculum step of the SUPSKY Curriculum Design Model.

Besides, the model includes the selection and the organization of the content, instructional courses and the activities, which can be matched with the "Desk-Based Design of Curriculum" and "Formation of Tools and Materials" steps of the SUPSKY Curriculum Design Model.

Saylor, Alexander and Lewis Curriculum Development Model consists of four steps. The first step "goals and objectives" can be matched with the "Context of curriculum" and "Conducting Needs Analysis" steps of the SUPSKY Curriculum Design Model because the goals and objectives are influenced by external forces, such as legal requirements, research data, professional associations and state guidelines. In addition, the sources of curriculum such as society, learner and knowledge are used while determining the objectives. The second step of Saylor, Alexander and Lewis Model is curriculum design which corresponds to the "Desk-Based Design of Curriculum" and "Formation of Tools and Materials" steps of the SUPSKY Curriculum Design Model. The third step is curriculum implementation which is similar to "Performing Pilot Experiment". The last step of Saylor, Alexander and Lewis Model, which is curriculum evaluation, can be matched with "Evaluation of Pilot Experiment and Developing Draft Curriculum" step of the SUPSKY Curriculum Design Model.

Demirel Curriculum Development Model is the one covering most of the stages of the SUPSKY Curriculum Design Model. Demirel Model differs from the SUPSKY Curriculum Design Model in two aspects. Initially, Demirel Model was put forward as a curriculum development model not as a curriculum design model. The stages and steps in the two models are also sequenced distinctively. The formulation of teams and setting work schedule equally match the ones in the SUPSKY Curriculum Design Model. The needs analysis step of the Demirel Model includes the determination of the objectives according to some sources, which is similar to the context of curriculum step of the SUPSKY Curriculum Design Model. Afterwards, the content of the curriculum is selected and organized; which corresponds to the "Desk-Based Design of Curriculum" step of the SUPSKY Curriculum Design Model. The pilot study stage of the Demirel Model and the SUPSKY Curriculum Design Model is alike in many ways because organization of the learning environments, selection of the multi-environments, selection of the schools where the pilot study will be conducted and introduction of the designed curriculum to the staff of pilot schools are the tasks carried out within the stage of the pilot study. After this stage, the curriculum experts or the teams have to make some decisions about the dissemination or the development of the curriculum, which is similar to the stages followed after the pilot study in the SUPSKY Curriculum Design Model.

Curriculum design models, curriculum development models and curriculum evaluation models are built upon one another or original new models are designed. It is crucial to design new models by considering latest needs and developments after revising current models and determining the deficient parts. SUPSKY Curriculum Design Model is a new model designed by considering the emerging needs and developments of the models in the pertinent literature.

The criteria used for the comparison in Table 1 were derived from the stages, substages and steps of SUPSKY Curriculum Design Model. The differences and similarities of current curriculum development and design models can be seen in Table 1. As a result of these comparisons, it can be seen that Demirel Model shows a strong similarity to SUPSKY Curriculum Design Model. There is also a medium level similarity between SUPSKY and Saylor, Alexander & Lewis Model, Tyler and Taba Model respectively while there is a low similarity with, Bobbit and Charters Model, Backward Design Model, and Tyler Model and Taba Model. As it is seen in Table 1, SUPSKY Curriculum Design Model has been compared with widely-discussed models in the field in terms of 16 criteria, and it has been found that it shows no similarity in the steps like Literature Review, Decision, and Training of Trainers. Moreover, the steps found in SUPSKY Curriculum Design Model such as Formation of Teams, Setting Work Schedule, Preparation of Educational Environment, Deciding on the Pilot Experiment Conditions, Planning Pilot Experiment Procedure are either explained very briefly or very inadequately. Although these explanations were included in other models, there are no models designed based on these explanations. Thus, as it is evident that SUPSKY Curriculum Design Model shows no similarity in the stages, substages or steps with other models in terms of explanations, it can be said that it is an original curriculum design model.

Planning Curriculum Design		Desk-Based Design, Evaluation and Development of Curriculum		Pilot Experiment	
SUPSKY		Literature Review	Schedule of Teams	Formation of Teams	Formation of Teams
		Context of Curriculum	Needs Analysis	Design of Curriculum	Design of Curriculum
		Conducting Needs Analysis	Design of Curriculum	Design of Curriculum	Design of Curriculum
		Formation of Tools and Materials	Evaluation and Development of Curriculum	Evaluation and Development of Curriculum	Evaluation and Development of Curriculum
		Training of Trainers	Preparation of Educators	Preparation of Educators	Preparation of Educators
		Deciding on the Pilot Experiments	Pilot Experiments	Pilot Experiments	Pilot Experiments
		Planning Pilot Experiments	Planning Pilot Experiments	Planning Pilot Experiments	Planning Pilot Experiments
		Evaluation of Pilot Experiments Draft	Evaluation of Pilot Experiments Draft	Evaluation of Pilot Experiments Draft	Evaluation of Pilot Experiments Draft
		And Evaluation Dissemination	And Evaluation Dissemination	And Evaluation Dissemination	And Evaluation Dissemination
Bobbit and Charters C.D.M.		+	+	+	+
Tyler C.D.M.		+	+	+	+
Taba C.D.M.		+	+	+	+
Tyler and Taba C.D.M.		+	+	+	+
Backward Desing M.		+	+	+	+
Saylor, Alexander & Lewis C.D.M.		+	+	+	+
Demirel C.D.M.	+	+	+	+	+

Table 1. Comparison of the SUPSKY Curriculum Design Model with some of the existing curriculum development models

N: No PY: Partially Yes Y: Yes

Moreover, in the course of discussions on SUPSKY Curriculum Design Model, the study attempted to reveal the differences between the terms "curriculum design" and "curriculum development". Drawing attention to contradiction in terms, developing this model more, which may also ignite further discussions on the subject, and designing new curriculum design models are essential for the field of curriculum. Therefore, it is suggested that new models be proposed by doing studies in this field.

It is hard to comment or make precise statements about the curriculum design and curriculum development in terms of the features of curriculum. The reason for this is that the educational policies, philosophies, needs, objectives, goals, content, learning experiences and evaluation states or criteria are in state of flux and continuous development.

The in-depth discussions aimed at clarification of the curriculum design stages, substages and steps are needed. Therefore, since there are some stages, substages and steps that need to be followed while preparing curriculum, in order to have these not skipped, a brochure that has the characteristics of a guide must be prepared by education experts for the curriculum design and curriculum development.

References

- Bone, J. and Guthrie, H. (1990). Approaches to Curriculum Development: A discussion Paper.
- Carlson, J. Davis, A. E. Buxton, C. (2014). "Supporting the Implementation of NGSS Through Research: Curriculum Materials. Retrieved from http://www.narst.org/NGSSpapers/Curriculum_Materials_061914.pdf on 15.05.2015.
- Corbett, K., Gardner, C. and Taffaro A. J. Jr., (2013) "Piloting a New Curriculum: A View from the Trenches" <http://www.nicerc.org/wp-content/uploads/2014/12/TrenchesFinal.pdf> Retrieved from on 23.05.2015.
- Demirel, Ö. (2012). Eğitimde Program Geliştirme. Ankara: Pegem Publishing.
- Department of Education and Children's Services (2004). " Choosing and Using Teaching and Learning Materials." Retrieved from http://www.decd.sa.gov.au/policy/files/links/Choose_use_booklet_FA.pdf on 15.05.2015.
- Gibson, J.M.E. (1998). Using the Delphi Technique to Identify the Content and Context of Nurses' Continuing Professional Development Needs, Journal of Clinical Nursing, 1998, 7: 451-459.
- Gözütok, F. D. (1999). Program Değerlendirme. Cumhuriyet Döneminde Eğitim II, (p:160-174) Ankara: MEB Press.
- Guide to Curriculum Development. (2014). A Guide to Curriculum Development: Purposes, Practices, Procedures. Retrieved from http://www.sde.ct.gov/sde/lib/sde/pdf/curriculum/currnde_generic/curguide_generic.pdf on 15.05.15.
- Henson, K. T. (1995). Curriculum Development For Education Reform. Boston, MA: Pearson/Allyn and Bacon.
- Hunkins, F. P. & Hammill, P. A. (1994). Beyond Tyler and Taba: Reconceptualizing the curriculum process. Peabody Journal of Education, 69(3), 4-18.
- Kıldan, O. and Ünver, N. (2011). Öğretim Araçları. Doğanay, A. (Edt.) Öğretim İlkeleri ve Yöntemleri. Ankara: PegemA Publishing 6th Edition.
- Kiai, A. W. and Maroko, G. M. (2013). "Textbook Selection Experience Among Secondary School Teachers Of English In Kenya." International Journal of Education and Research Vol. 1 No. 12 December 2013. Retrieved from <http://www.ku.ac.ke/schools/humanities/images/stories/docs/Research/Textbook-selection-experiences-among-secondary-school-teachers-of-english-in-kenya.pdf> on 12.03.2015.
- Koszalka, T. A. (2001). Effect of Computer-Mediated Communications on Teachers' Attitudes Toward Using Web Resources in the Classroom. Journal of Instructional Psychology, 28 (2), p: 95- 103.
- Linstone, H. A. and Turoff (2002) The Delphi Method, Techniques and Applications
- Lunenburg, F. C. (2011). Curriculum Development: Inductive Models. *Schooling*. Volume 2, No 1
- Mooney, N. J. and Mausbach, A. T. (2008). Align the Design: A Blueprint for School Improvement. USA: Association for Supervision and Curriculum Development.
- Olshfski, D. and Joseph, A. (1991) Assessing Training Needs of Executives Using the Delphi Technique, Public Productivity & Management Review, Vol. 14, No. 3 (Spring, 1991), pp. 297-301. <http://www.jstor.org/stable/3380739>
- Ornstein, A. and Hunkins, F. (2009) Curriculum Design. In Curriculum: Foundations, Principles and Issues (5th Ed.). Boston, MA: Pearson/Allyn and Bacon.
- Özdemir, S. M. (2009). Eğitimde Program Değerlendirme ve Türkiye'de Eğitim Programlarını Değerlendirme Çalışmalarının İncelenmesi, Yüzüncü Yıl University, Journal of Faculty of Education. 1 (2), p: 126-149.
- Semerçi, Ç. and Semerçi, N. (2001) Program Geliştirmede Delphi, Dacum Ve Meslek Analizi (Delphi, Dacum and Task Analysis in Curriculum Development), Fırat University Journal of Social Science Cilt: 11 Sayı: 2, Sayfa: 241-250, ELAZIĞ-2001
- Senyshyn, Roxanna M.,(2002) "Cross-Cultural Competencies in International Management Curricula: A Delphi Study of Faculty Perspectives. " PhD diss., University of Tennessee, 2002. http://trace.tennessee.edu/utk_graddiss/2209

- Sönmez, V. (2010). Program Geliştirmede Öğretmen Elkitabı. Ankara: Anı Publishing 16th. Edition.
- Tuncer, M., Bal, S., Özüt, A. and Köse, N. (2012). Ortaöğretim Kurumları Öğrenme Ortamlarının Çeşitli Değişkenler Açısından Değerlendirilmesi. Gaziantep University Journal of Social Sciences. 11 (1). p: 85-101
- Turgut, M. F. (1983). Program Değerlendirme. Cumhuriyet Döneminde Eğitim, (p: 215–234). İstanbul: Milli Eğitim Press.
- Tyler, W. Ralph. (1993). Basic Principles of Curriculum and Instruction. The University of Chicago Press,
- U.S. Department of Health and Human Services. (2014). Tips and Recommendations for Successfully Pilot Testing Your Program. Retrieved from http://www.hhs.gov/ash/oah/oah-initiatives/teen_pregnancy/training/tip_sheets/pilot-testing-508.pdf on 27.12.2014.

Geniş Özeti

SUPSKY Eğitim Programı Tasarımı Modeli

“Eğitimde program geliştirme” ve “eğitim programı tasarımları” kavramları zaman zaman birbirine karıştırılan, birbirinin yerine kullanılan ve bu nedenle de ayrimı netleştirilememiş iki farklı kavramdır. Alanyazında var olan tanımlar incelendiğinde eğitimde program geliştirme kavramına yönelik tanımların pek çoğunun eğitim programı tasarımları kavramını da içерdiği görülmektedir. Eğitimde program geliştirme kavramının hem yeni bir eğitim programının tasarımlına hem de uygulanmakta olan mevcut programların geliştirilmesine yönelik yapılan çalışmalara karşılık kullanıldığı görülmektedir. Ancak “eğitimde program geliştirme”nin boyutlarına ve yapılan araştırmalara bakıldığı zaman daha çok mevcut programların geliştirilmesine vurgu yapılmış olduğu görülmektedir.

Taba, Tyler, Oliva, Ornstein ve Hunkins ve Demirel gibi program teorisyenleri önerdikleri eğitim programı tasarımları modellerinde, tasarım sürecinin aşamalarına rağmen, süreçlerin detaylandırıldığı bir model alanyazında bulunmamaktadır. Çalışmanın amacı; mevcut durumda kavram karmaşasına yol açan eğitim programı tasarımları ve eğitimde program geliştirme kavramları arasındaki benzerlikleri ve farklılıklarını ortaya koymak, kavramların tanımları ve kullanımları ile ilgili karmaşayı gidermek ve eğitim programı tasarımlarının adımlarını, program tasarımcılara yol göstererek şekilde ayrıntılı açıklayarak eğitim programı tasarımları ile ilgili bir model önermektir. Eğitim programı tasarımlarının aşamalarına dayanarak hazırlanmış ve grafiksel bağlamda da açıklanmış SUPSKY Eğitim Programı Tasarımı Modeli, süreçleri ayrıntılı olarak açıklayan, program tasarımcıları için kılavuz olabilecek nitelikteki ilk modeldir.

Nitel araştırma deseninin kullanıldığı bu araştırmada, model tasarlanurken Geleneksel Delphi (Conventional Delphi) ve Politika Delphi (Policy Delphi) olmak üzere iki tür Delphi teknigiden faydalananmıştır. Uzman görüşüne dayalı kuramsal olarak tasarlanmış olup uygulamada henüz test edilmemiş kuramsal bir model olan SUPSKY Eğitim Programı Tasarımı Modeli üç farklı Delphi grubundan alınan görüşlere dayalı olarak tasarlanmıştır. EPÖ alanında doktora yapan beş öğrenci ve bir öğreticiden oluşan toplam altı kişilik ekip birinci Delphi grubunu, Eğitim Programları ve Öğretim alanı doktora öğrencileri ve öğretim üyelerini kapsayan on kişilik uzman grubu ikinci Delphi grubunu, program geliştirme alanında görev yapmakta olan 15 kişilik öğretim elamanı ise üçüncü Delphi grubunu oluşturmuştur. Beş ayrı Delphi turunda bu gruppardan görüşler toplanmıştır.

Bu çalışmada önerilen eğitim programı tasarımlı modeli üç ana aşamadan oluşmaktadır. Modelin ilk aşamasını “Program Tasarımını Planlama” oluşturmaktadır. İlk adımda eğitim programı tasarımlı süresince görev alacak ekipler oluşturulur. Bu ekipler 1-Masa başı tasarımlı ekibi, 2-Gözden geçirme ekibi, 3- Pilot uygulama değerlendirme ekibi şeklinde isimlendirilmektedir. İkinci adımda, zaman planmasını doğru yapabilmek amacıyla çalışma takviminin belirlenmesi yer almaktadır. Üçüncü adımda ise tasarlanacak eğitim programıyla ilgili alanyazın tarama çalışmaları bulunmaktadır. Program tasarımlını planlama aşamasının ardından “Programın Masa Başı Tasarımı, Değerlendirilmesi ve Geliştirilmesi” aşamasına geçilir. Bu aşamada ilk adımda programın bağlı tanımlanır ve ardından ihtiyaç analizi yapılır. Daha sonra programın masa başı çalışmasına dayalı olarak ilk tasarımlı yapılır, araç ve gereçlerin oluşturulmasından sonra programın değerlendirilmesi ve geliştirilmesi adımda gözden geçirme ekibinin ilk tasarım üzerindeki incelemeleri ve bu incelemeler doğrultusunda verdikleri dönütlere göre gerekli düzeltmeler yapılır. İkinci aşamanın son adımda sürecin sonunda bir taslak program oluşturulur ve taslak program için onay verildiği takdirde pilot uygulamaya geçilir. Modelin bu aşaması bir anlamda hem eğitim programı tasarımlı, hem eğitimde program geliştirme hem de eğitim programı değerlendirme çalışmalarını kapsar. Modelin üçüncü aşaması “Pilot Uygulama” aşamasıdır. Bu aşama kendi içinde 3 alt aşamadan oluşmaktadır. İlk alt aşama olan hazırlık alt aşamasında eğiticilerin eğitimi ve eğitim ortamının yeni eğitim programına uygun şekilde hazırlanması yer alırken, pilot uygulama alt aşamasında pilot uygulama koşullarına karar verilmesi, pilot uygulama sürecinin planlanması ve pilot uygulamanın gerçekleştirilmesi adımı, değerlendirme ve geliştirme alt aşamasında ise pilot programın değerlendirilmesi ve ortaya çıkan

taslak programın geliştirilmesi adımları yer alır. “Programın Yaygınlaştırılması” aşaması SUPSKY Eğitim Programı Tasarımı Modelinin dışında olup eğitim programı tasarımı sürecinden sonraki aşamayı yansıtma amacıyla şekilde eklenmiştir.

Alanyazında çeşitli eğitimde program geliştirme modelleri vardır. Bunların büyük bir kısmı Tyler'in görüşlerine dayanmaktadır ve birbirine benzemektedir. Bu modellere göre eğitimde program geliştirme sürecinin ilk aşamasında ekiplerin oluşturulması, felsefe ve yaklaşımının belirlenmesi, genel hedeflerin oluşturulması, analizler doğrultusunda ihtiyaçların saptanması aşamaları vardır. Aynı zamanda Tyler, Taba, Ornstein ve Hunkins, Demirel gibi eğitim programı teorisyenlerinin birçoğu, eğitimde program geliştirmenin hedefler, içerik, öğrenme yaşıntıları ve değerlendirme ekseninde dönmesi gerektiğinde hemfikirdirler. Ancak bu geliştirme süreçlerinden ayrıntılı olarak bahsedilmemesi, bazı basamakların atlanması ve farklı isimlendirilmesi, eğitimde program geliştirme modellerinin ile eğitim programı tasarımını modelinin basamakları arasındaki farklılık ve benzerliklerin açıkça tartışılmamış olması hem kavram kargasasına neden olmakta hem de eğitim programı tasarımını sürecinin anlaşılması olumsuz yönde etkilemektedir.

Alanyazındaki araştırmaların büyük bir bölümünde program ekibinin kurulması/toplanması, çalışma takviminin oluşturulması, alanyazın taraması gibi basamaklar göz önünde bulundurulmamış veya eğitimde program geliştirilmeye odaklanıldığı için bu konu atlanmış olabilir. Bu makalede önerilen SUPSKY Eğitim Programı Tasarımı Modelinde bir eğitim programının tasarım aşamaları ve alt adımları yansıtılmış ve tasarım basamaklarının eksiksiz olarak yer aldığı bir model oluşturulmaya çalışılmıştır. Bu makalede önerilen SUPSKY Eğitim Programı Tasarımı Modelinde ise alanyazında ilk defa, uygulamada var olmayan bir eğitim programının tasarımını aşamaları yansıtılarak, uygulamada var olan bir programın geliştirilme sürecinden farklılıklarına degenmiş ve eğitim programı tasarımını basamaklarının eksiksiz olarak yer aldığı bir model oluşturulmaya çalışılmıştır.

