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Hammond's Evaluation Model[1]

Hammond Değerlendirme Modeli

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Abstract

Curriculum evaluation is a way to make judgments about the effectiveness of a curriculum. No matter how well the curricula are prepared, it is necessary to continuously evaluate the curricula in order to check whether they meet the needs of the society in which they are applied, and the evaluation results should be reflected in curriculum development studies. For this very reason, curriculum evaluation studies are of great importance. There are different curriculum evaluation models proposed in the literature, one of which is Hammond's evaluation model which is among objectives-oriented evaluation approach that focuses on the extent to which educational goals are achieved in a curriculum. In this study, it is aimed to introduce Hammond's evaluation model, which is one of the curriculum evaluation models but is used in a limited number in the literature, thus contribute to the literature. Within this purpose, the conceptual framework of Hammond's evaluation model was explained, and the strengths and weaknesses of the model were revealed. As a result, Hammond's evaluation model can be used effectively in curriculum evaluation studies in which research areas require an in-depth examination, quantitative and qualitative data collection tools are used since it can be divided into smaller parts and adapted to the context. In addition, it is thought that the use of Hammond's evaluation model in the evaluation studies of newly developed curricula will provide a more comprehensive framework for curriculum development studies.

Keywords *Hammond's Evaluation Model, Curriculum Evaluation, Curriculum Evaluation Approaches, Objectives-Oriented Evaluation, Evaluation Cube*

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Öz

Program değerlendirme, bir eğitim programının etkililiği hakkında yargıda bulunma sürecidir. Programlar ne kadar iyi hazırlanırsa hazırlansınlar uygulandıkları toplumun ihtiyaçlarını karşılayıp karşılamadığının kontrol edilebilmesi için programların sürekli olarak değerlendirilmesi ve değerlendirme sonuçlarının program geliştirme çalışmalarına yansıtılması gerekmektedir. Bu nedenle program değerlendirme çalışmaları büyük önem taşımaktadır. Literatürde önerilen farklı program değerlendirme modelleri bulunmaktadır. Bunlardan biri bir programda eğitim hedeflerine ne ölçüde ulaşıldığına odaklanan amaç odaklı değerlendirme yaklaşımlarından Hammond değerlendirme modelidir. Bu çalışmada program değerlendirme modellerinden biri olan ancak alanyazında sınırlı sayıda kullanılan Hammond değerlendirme modelinin tanıtılması ve alanyazına katkı sağlanması amaçlanmıştır. Bu amaç kapsamında Hammond değerlendirme modelinin kavramsal çerçevesi açıklanarak modelin güçlü ve zayıf yönleri ortaya konmuştur. Sonuç olarak, Hammond değerlendirme modelinin daha küçük parçalara bölünerek kendini bağlama uyarlayabilmesi nedeniyle, araştırma alanlarının derinlemesine incelendiği, nicel ve nitel veri toplama araçlarının kullanıldığı program değerlendirme çalışmalarında etkili olarak kullanılabileceği tespit edilmiştir. Bununla birlikte yeni programların değerlendirilmesinde Hammond değerlendirme modelinden faydalanılmasının program geliştirme çalışmalarına daha kapsamlı bir çerçeve sunacağı düşünülmektedir.

Anahtar Kelimeler Hammond Değerlendirme Modeli, Program Değerlendirme, Program Değerlendirme Yaklaşımları, Amaç Odaklı Değerlendirme, Değerlendirme Küpü

Introduction

Evaluation is a process of judgment, comparison, and interpretation based on the comparison of two things. In other words, evaluation is to draw subjective conclusions with mental judgments from the measurement results obtained by observation or objective measures (Uşun, 2012). Evaluation in the educational process is carried out for two purposes (Erden, 1998): (1) To decide which students should repeat a course by evaluating the success of the students, (2) to make judgments about the effectiveness of a curriculum and to identify which element(s) of the curriculum are the cause of the deficiencies in the curriculum, and to make necessary corrections. While the object evaluated in the first statement is student, in the second statement it is curriculum. So, what is curriculum? Varış (1978) defines curriculum as all the activities carried out by an educational institution for students to achieve the objectives of national education and the institution. Marsh (2004) defines curriculum as topics covering necessary information. Taba (1962) defines curriculum as a learning plan. To put it another way, a curriculum can be regarded as "the mechanism of learning experiences provided to the learner through activities planned at school and outside the school" (Demirel, 2012: 4).

Curriculum evaluation, on the other hand, is a way to make judgments about the effectiveness of a curriculum. Tyler (2014) defines curriculum evaluation as a process that determines how much of a curriculum's predetermined objectives are achieved. Similarly, Erden (1998) defines it as a process of collecting data on a curriculum with various instruments, interpreting these data, and making decisions about the effectiveness of the curriculum. According to Milakovich and Gordon (2009) curriculum evaluation refers to systematic measurements to provide specific information about program outcomes

to decision-makers for use in management decisions. According to Uşun (2012: 10) curriculum evaluation can be described as the process of making decisions about the accuracy, adequacy, suitability, efficiency, effectiveness, usefulness, success, and executability of a curriculum by using scientific research methods based on systematic data collection and analysis. According to Melrose (1998: 37) curriculum evaluation refers to "the process by which a judgement is made about the worth or merit of a curriculum or its appropriateness for the individual, the group, the organization offering it or the society within which it operates." Curriculum evaluation can be regarded as a systematic analysis of all information about the curriculum to understand whether the curriculum is effective in fulfilling its objectives (Brown, 1995). That said, curriculum evaluation not only provides data that can be used to make the course more effective but also provides a basis for making decisions for the future and effective use of the curriculum (Welch, 1969). At this point, decision-makers take actions to continue, change or terminate the curriculum based on the data obtained.

Fitzpatrick, Sanders and Worthen (2004) note that curriculum evaluation results can be used to empower teachers to have more say in how school budgets are allocated, make judgments about the quality of the school curriculum in specific content areas, accredit schools that meet or exceed minimum accreditation standards, assist families and students select a more effective school, inform the institutions that support the school financially on the effectiveness of the curriculum and help identify the deficiencies in teachers' professional development and overcome them. McChain (2005) asserts that for curriculum evaluation to be useful, evaluation results must be used to improve the learning experience, determine whether and to what extent the objectives of the learning experience were met, determine the adequacy of the content, assess the effectiveness and relevance of the instructional strategies, reinforce learning, provide feedback to the facilitator, provide feedback to participants on learning, identify which participants are experiencing success in the learning experience, identify the learning used on the job, assess the on-the-job environment to support learning, decide who should participate in this or future programs, and gather data for marketing purposes.

In conclusion, no matter how well the curricula are prepared, it is necessary to continuously evaluate the curricula in order to check whether they meet the needs of the society in which they are applied, and the evaluation results should be reflected in curriculum development studies. For this very reason, curriculum evaluation is of great importance. In the curriculum evaluation process, different curriculum evaluation approaches and models can be used considering the purpose and context of the curriculum evaluation study. These models guide researchers in carrying out curriculum evaluation. There are different curriculum evaluation models proposed in the literature. For instance, Gredler (1996) examined curriculum evaluation models under two headings as utilitarian and intuitionist/pluralist. Utilitarian evaluation approach provides quantitative data that will be useful to decision-makers and focuses on large groups such as the school district or the entire school (Özüdoğru & Adıgüzel, 2016). Examples of utilitarian evaluation approach are Provus's Discrepancy Evaluation Model, CIPP Model, Stake's Congruence-Contingency Model, and Goal-Free Evaluation Model. In intuitionist/pluralist evaluation approach, data are collected to evaluate the impact of a curriculum on individuals or small groups (Özüdoğru, 2016). Multiple criteria can be employed to assess a curriculum's worth. Everyone affected by the curriculum can express their opinions about it

(Fitzpatrick, Sanders & Worthen, 2004). Examples of intuitionist/pluralist evaluation approach are Eisner's Educational Criticism, Illuminative Evaluation, and Responsive Evaluation. Cronbach examined curriculum evaluation models under two headings as scientific and humanistic. Scientific evaluation approach focuses on learners. In this approach where research data tend to be quantitative, program decision is based on the comparative information collected (Ornstein & Hunkins, 2018). Examples of scientific evaluation approach are Stake's Congruence-Contingency Model and CIPP Model. Humanistic approach, on the other hand, although not completely rejecting experimental studies, emphasizes that researchers can utilize more naturalistic methods such as observation and interviews (Özüdoğru, 2016). Examples of humanistic evaluation approach are Eisner's Educational Criticism and Illuminative Evaluation. Scriven examined curriculum evaluation models under two headings as intrinsic and payoff. In intrinsic evaluation approach, evaluation criteria are not defined (Ornstein & Hunkins, 2018). Instead, the evaluators seek to answer to the question, "How good is the curriculum?" and examine the content, order of content, learning experiences, and learning materials (Özüdoğru & Adıgüzel, 2016). This approach assumes that if the content of a curriculum is accurate and has a solid basis for its organization, students will effectively learn (Ornstein & Hunkins, 2018). Examples of intrinsic evaluation approach are Eisner's Educational Criticism and Illuminative Evaluation. In payoff approach, the effect of the delivered curriculum is examined. Evaluators consider the curriculum's effect on students, teachers, administrators, and parents based on the differences between pretest and posttest and between experimental and control group tests (Ornstein & Hunkins, 2018). Examples of payoff approach are Provus's Discrepancy Evaluation Model and Tyler's Curriculum Evaluation Model. Fitzpatrick, Sanders and Worthen (2004) examined curriculum evaluation models under five headings as management-oriented, expertise-oriented, participant-oriented, consumer-oriented, and objectives-oriented evaluation approaches. In management-oriented evaluation approach, the evaluation of a curriculum is carried out in order to inform the decision-makers about the curriculum's worth (Yüksel & Sağlam, 2014). Examples of management-oriented evaluation approach are CIPP Model and UCLA Evaluation Model. Expertise-oriented evaluation is an approach that primarily depends on professional expertise to evaluate an institution, product, curriculum, or activity (Fitzpatrick, Sanders & Worthen, 2004). The main purpose of this approach is to examine and evaluate the quality of a curriculum from a professional perspective (Uşun, 2012). Eisner's Educational Criticism is an example of expertise-oriented evaluation approach. Participant-oriented evaluation approach deals with stakeholders who are interested in the program to assist in carrying out the evaluation (Fitzpatrick, Sanders & Worthen, 2004). Examples of participant-oriented evaluation approach are Stake's Congruence-Contingency Model, Responsive Evaluation, and Illuminative Evaluation. Consumer-oriented evaluation approach deals with developing product-related evaluation information to enable consumers to choose between similar products and services (Uşun, 2012). In this approach, the most used data collection methods are product evaluation forms and checklists. Example of consumer-oriented evaluation approach is Scriven's Checklists. Objectives-oriented evaluation approach focuses on the extent to which educational goals are achieved in a curriculum. This approach is based on determining the objectives of a curriculum and evaluating the outputs carried out in line with these objectives (Yüksel & Sağlam, 2014). Tyler's Curriculum Evaluation Model, Metfessel-

Michael's Evaluation Model, Provus's Discrepancy Evaluation Model, and Hammond's Evaluation Model can be given as examples to this approach.

Hammond's evaluation model, one of goal-oriented evaluation approaches, is compatible with scientific and humanistic approaches in that research data tend to be both quantitative and qualitative. The model is of great significance in that it details the institutional and instructional variables that are often overlooked in other evaluation models. However, there is a limited number of studies that utilized Hammond evaluation model in the literature. It is thought this is due to the model is not known enough. Therefore, this study aims to give contribution to curriculum evaluation studies and literature by examining Hammond's evaluation model.

Conceptional Framework of Hammond's Evaluation Model

The need for a systematic approach to curriculum evaluation has been one of the most challenging problems. Hammond argued that over-simplified approaches to curriculum evaluation and insufficient data limit curriculum evaluation only to the aversion of teachers and students. The fact that schools do not consider evaluation as one of the basic criteria of curriculum development, and the lack of clear guidelence about curriculum evaluation have led to the lack of a clear framework about what should be evaluated and how. The guidelines in the literature, on the other hand, could not go beyond the recommendations for the application of achievement and intelligence tests (Hammond, 1967). Based on the need to develop evaluation guidelines, Hammond developed a more detailed curriculum evaluation model by developing Tyler's evaluation model (Gusky, 2000). While the objectives dimension in Hammond's evaluation model includes Tyler's views, the definition of instruction and institution dimensions is more clearly addressed in this model (Alkin & Christie, 2004). The main difference between Tyler's evaluation model and Hammond's evaluation model is that Hammond adds a third dimension to the evaluation approach. The purpose of Hammond's evaluation approach is to compare the data gathered from the students with the program's objectives and to determine the effectiveness of the program in achieving the predetermined objectives (Clark, 1974). As Hammond (1967: 2) notes:

> *The success or failure of innovations in modern programs of instruction is determined by the interaction of specific forces within the educational environment. The forces affecting innovation are described in terms of specific dimensions and variables operating in a three-dimensional structure. The interaction of variables from each of the three dimensions produces combinations of variables described as factors to be considered in the evaluation of a given program. The importance of any combination of variables is determined by the nature of the instructional program selected for study.*

Hammond's evaluation model, which consists of a total of 90 cells measuring 3 x 5 x 6 units, is informative, but complex and time-consuming. However, it is not necessary to evaluate each of the cells as part of the curriculum evaluation. Within the scope of the evaluation purpose, the relevant cells are taken into consideration, irrelevant cells are eliminated, and an in-depth examination is made within

the remaining cells (Fitzpatrick, Sanders & Worthen, 2004). In this model, evaluation approach is handled holistically, and a comprehensive evaluation is made on the three surfaces of the cube and the cells where these surfaces intersect (Hammond, 1967). Therefore, the model can be divided into smaller parts and adapted to the context, but it basically consists of three basic dimensions: behavior, instruction, and institution (Figure 1).

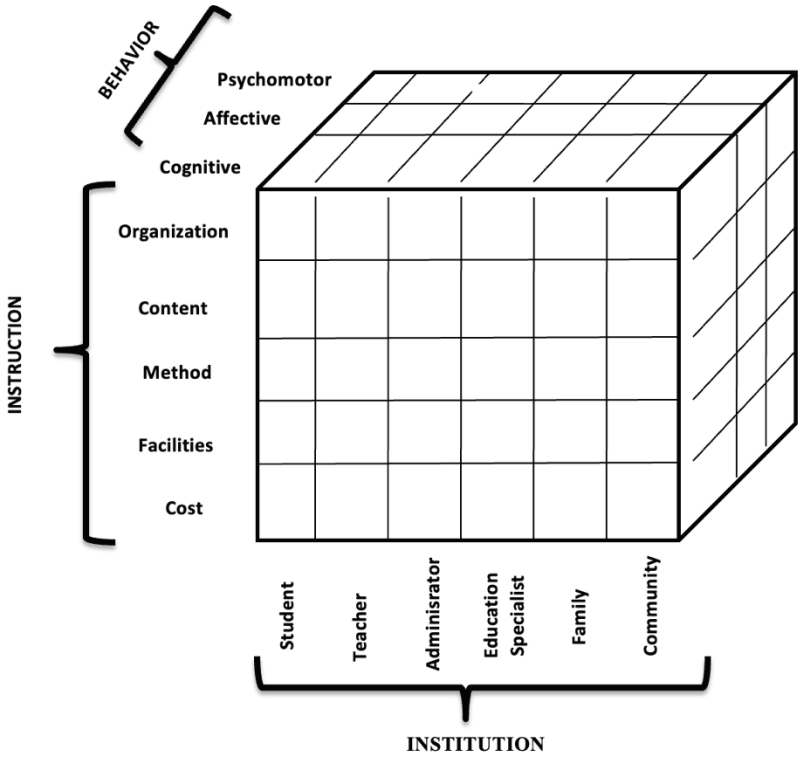

Figure 1. Hammond's Evaluation Model (Hammond, 1967: 3).

In this three-dimensional evaluation model, it is of great importance why the curriculum's objectives are not achieved as much as how much they are achieved. Therefore, the model is useful in that it can create evaluation questions focusing on the connections between the three dimensions and allow the curriculum to be evaluated in terms of these three dimensions. The model also helps reach more detailed evaluation results by allowing to identify and examine the types of questions that may arise in curriculum evaluation studies. The sections of the evaluation model are as follows (Hammond, 1967):

Instructional Dimension

This dimension defines the innovations in terms of certain variables. The first of these is organization. Organization defines the environment in which teaching takes place. This structure is divided into two components as time and space. Time defines the amount of time devoted to the subjects taught. The duration of the lessons and the weekly time can be given as an example. Space refers to the vertical and horizontal organization of students. The vertical organization serves to categorize students and move

them upward from their entry into the program until they graduate. The horizontal organization divides students among teachers. Both classifications can be homogeneous and heterogeneous or mixed.

Vertical organization: Vertically, schools can be graded or non-graded.

Graded: The content and arrangement of a curriculum is determined according to the suitability of the subject and teaching materials to the grade levels.

Non-graded: In non-graded schools, content is determined by students' ability to cope with subject-specific challenges. It is important to ensure the development of each student in these schools, which focuses on students' readiness to perceive.

Horizontal organization: Schools can be organized horizontally in various ways. These horizontal structures take their source from four components: student, curriculum, school's philosophy, and teacher's qualification. Variables such as the physical condition of the classes, class size, school culture, the quality and the number of teachers and students, student readiness can be given as examples of these components.

The second variable is content. Content can be defined in terms of specific topics to be covered in a particular class. While determining the content of a curriculum individual and social benefits should be considered (Varış, 1994). It is important that the content determined in this direction is equipped with philosophical, contemporary, and scientific knowledge and suitable for the need and readiness of students (Sönmez, 2008). In addition, it is noted that while organizing the content, teaching principles such as from unknown to known, from near to far, from abstract to concrete, from simple to complex, from easy to difficult should be followed and new learning should be built on old learning (Şimşek, 2000).

The third variable is method which is the learning-teaching process designed to facilitate learning. This process includes teaching methods and techniques (lecturing, group discussion, project work, experiment, brainstorming, problem-solving, concept mapping, role-playing, demonstration, question-answer technique, round table, symposium, field trips, homework, storytelling etc.), types of interaction (teacher-student, student-student, media-student, teacher-teacher) and learning principles (Hammond, 1967). At this stage, it is necessary to organize the learning experiences that students need to get through to reach the predetermined goals (Erden, 2007). Moreover, in order to keep students at the center of the curriculum while organizing learning experiences, learning activities should be consistent with learning outcomes and attract students' attention and motivation (Demirel, 2012).

The fourth variable is facilities. Facilities include special equipment and materials, supplies, and space needed to support an educational program (Hammond, 1967). The physical condition of an educational institution in terms of technological equipment; the variety, number, and physical condition of the learning materials in the classrooms, the suitability of a learning environment for effective learning, the variety and number of in-class and out-of-class activities can be given as examples to facilities variable.

The fifth variable is cost. Cost is the financial resources required for services, equipment, and personnel expenses provided for learning activities. The financial resources required for various scientific, social

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and cultural activities such as seminars, workshops, conferences, concerts, exhibitions, panels, symposiums, festivals, trips, sports, competitions for students and the materials needed in the learning-teaching process can be given as an example to the cost variable.

Institutional Dimension

The characteristics of the people in an educational program fall into this group. The program is influenced by the characteristics of everyone in the program. For this reason, each of the variables is defined as sub-variables that can have a direct effect on the program. Students, teachers, administrators, education specialists, family, and community constitute the sub-variables of this dimension (Hammond, 1967):

Student: It includes age, gender, grade level, academic achievement, ability, interest, socio-economic variables, etc.

Teacher: It includes gender, age, work experience, educational background, personality traits, etc.

Administrator: It includes gender, age, work experience, educational background, personality traits, etc.

Education specialist: It includes gender, age, work experience, educational background, personality traits, etc.

Family: It includes the size of the family, marital status, economic status, education level and associations of family members, etc.

Community: It includes historical development, geographical setting; economics, social and political characteristics, etc.

Behavior Dimension

Evaluation as a process can best be accomplished through behaviorally stated goals. At this stage of the evaluation structure, the objectives are classified into three learning domains as cognitive, affective, and psychomotor. Cognitive domain includes using intellectual skills such as remembering, understanding, applying, analyzing, evaluating, and creating. Standardized achievement tests are the best example of tests in this field. Most educational programs use these tests to identify success and failure. Affective domain includes interests, attitudes, tendencies, feelings, and emotions. Lastly, psychomotor domain includes physical movement and motor skills.

Hammond's evaluation model provides a framework for identifying the elements that have a direct effect on an innovation. The elements created from the interaction of each variable in the three surfaces of the model can be examined and researched at the desired depth. Thus, the application of this evaluation model should be approached through carefully defined steps. The first step should be to start with a single subject area of the curriculum such as history, mathematics, and English. It is recommended that the first stage be limited to a certain number of classes due to the time factor. The second step is the process of defining the descriptive variables in instruction and institution dimensions.

The third step includes determining the objectives. This stage is one of the most important steps in the evaluation process.

Accurately stated objectives will:

- determines the behavior that will be accepted as proof that the student has achieved the objective.
- shows under what conditions the behavior will be expected to occur.
- specifies performance criteria by explaining how well the student should perform (Hammond, 1967).

The fourth step is the performance evaluation stage. At this stage, various measurement and evaluation tools such as standardized achievement tests, observation, scale, and open-ended questions can be used. The fifth step is the analysis of the results and the comparison of the acquired results with the objectives in the curriculum. At this stage, changes can be made in the curriculum in line with the results obtained. The results obtained provide the school board and administrators with the necessary data to make important decisions in order to provide suitable learning experiences for each student's needs (Hammond, 1967).

Strengths and Limitations of the Model

Hammond's evaluation model has some strengths and limitations as in other evaluation models. The most important strength lies in the fact that it allows for an in-depth examination of the context through both qualitative and quantitative data, and for the researcher to conduct the research as comprehensively as possible. Since the relevant cells can be focused on within the scope of the evaluation study, it allows the cells to be handled comprehensively and to reach significant evaluation data. The model allows to create evaluation questions that focus on the connections between behavior, instruction, and institution dimensions and to examine the curriculum in depth in terms of these three dimensions. Since the implementation stages of the model are clear, it provides plenty of information to the decision-makers at all stages. Clearly stated objectives of the curriculum help evaluators see what criteria will be considered in making judgments about the curriculum. In addition, real-life situations can be described, and critical features of the curriculum can be revealed within the scope of the research.

As for the limitations of the model, it may ignore significant outcomes other than the objectives of the curriculum. The views and beliefs of the researcher may affect the interpretations in the analysis of qualitative data. In the analysis of quantitative data, researcher bias can affect sample selection, selection of statistical analyzes, and presentation of findings. Another limitation is related to time and economic resources. Since various data collection tools are used within the scope of the model, the collection and analysis of data can be spread over a wide period of time and may require financial support. In addition, the evaluator must be experienced in how to use multiple methods and approaches appropriately. Last but not least, creating interview questions that focus on the intersections of the cube's three faces can be challenging and take some time.

Conclusion

In this study, it is aimed to give contribution to curriculum evaluation studies and literature by examining Hammond evaluation model with its strengths and limitations. Hammond's evaluation model can be used effectively in evaluation studies where the context is examined in depth and both qualitative and quantitative data collection tools are utilized. The model is extremely handy in that the number of factors available can be reduced in each dimension in accordance with their applicability to the evaluation made.

Hammond evaluation model has some similarities and differences with other goal-oriented evaluation approaches such as Tyler's curriculum evaluation model, Metfessel-Michael's evaluation model, and Provus's discrepancy evaluation model. The main difference between the other goal-oriented evaluation model and Hammond's evaluation model is that Hammond adds a third dimension to the evaluation approach. The definition of instruction, institution, and behavior dimensions is more clearly addressed in this model. Whether or not a curriculum objectives were attained is significant in all goal-oriented evaluation approaches. However, Hammond believed that whether or not a curriculum objectives were achieved was important but equally important was also determining why those objectives were achieved or why those were not. Therefore, the purpose of Hammond's evaluation approach is to collect data regarding not only whether or not curriculum objectives are attained, but also the learning process and to determine the effectiveness of the program in achieving the predetermined objectives. The model, in this sense, can also be used as a tool by which evaluators generate a number of significant questions that can be explored in the evaluation, which allows for a comprehensive evaluation on the cells where three surfaces intersect (Barrett, 1998).

In the literature, Hammond's evaluation model was utilized in various but limited evaluation studies such as undergraduate programs, elementary school programs, and secondary education programs. For instance, Ünal (2019) aimed to evaluate the views of 8th-grade students on citizenship awareness in the context of responsibility, rights, and participation through Hammond's evaluation model. In the study in which mixed method was utilized, research data were collected through personal information form, citizenship awareness scale, interview, and scenario texts form. Within the scope of the research cognitive domain, content, and student dimensions were taken into consideration. Study results showed that students' citizenship awareness status was low and had a negative relation with gender. Altay (2018) aimed to evaluate the 9th-grade English curriculum through Hammond's evaluation model. Qualitative and quantitative methods were used together in the study. Research data were collected through a self-efficacy scale, observation, and semi-structured interviews. Within the scope of the research cognitive domain, affective domain, psychomotor domain, organization, content, method, facilities, student, and teacher dimensions were taken into consideration. Study results showed that 9th-grade English curriculum was functional and comprehensive. Ayuningtyas, Slameto and Dwikurnaningsih (2017) evaluated the instructional, institutional, and behavioral dimensions of the In-House Training (IHT) program through Hammond evaluation model. In the study in which qualitative and quantitative methods were used together, research data were collected through document review,

interview, and questionnaire. Study results showed that instructional dimension was in good category. Hıdıroğlu, Kandemir and Tuncel (2016) aimed to evaluate the teaching principles and methods course in teacher training programmes through Hammond evaluation model. In the study in which mixed method was utilized, research data were collected through semi-structured interview form, multiple choice test, observation form, and personal information form. Within the scope of the research cognitive domain, affective domain, organization, content, method, facilities, cost, student, and teacher dimensions were taken into consideration. Study results showed that teacher candidates were aware of the importance of the course, and the contents of the course might help them acquire practical knowledge and skills that they would use in their classes. Hussin, Darusalam and Ali (2016) aimed to evaluate the Islamic Studies course given at a private university in Malaysia. The changes in student behaviors in terms of cognitive, affective, and psychomotor skills were examined through Hammond evaluation model. Study results showed that there were significant differences in the cognitive, affective, and psychomotor learning of learners based on educational level, age, and socioeconomic status. Ismail (2015) aimed to analyze the curriculum implementation in Islamic Education Study Program, Arabic Education Study Program, and elementary school teacher education through Hammond evaluation model. In the study which utilized qualitative research method, interview, questionnaire, observation, and document review were used as instruments. Study results showed that while students' mastery of teaching skills and attitudes were good, their mastery of pedagogical skills were low. Jumaeda, Djaali and Rahayu (2018) aimed to evaluate a training program in a boarding school. In the study, CIPP curriculum evaluation model developed by Stufflebeam (2002), and Hammond's evaluation model were used. Research data were collected through document review, interviews, questionnaire, and observation. Eser (2011) aimed to evaluate the science and art center's curriculum according to the opinions of students, teachers, classroom teachers, parents, and administrators through Hammond evaluation model. As instrument, a questionnaire was used in the study, in which the quantitative research method was utilized. Tenedero and Pacadaljen (2021) evaluated the learning experiences of the outcome-based education curriculum through Hammond's evaluation model. In the study in which convergent parallel design was utilized, research data were collected through a questionnaire. Study results showed that the number of cognitive, affective, and psychomotor objectives attained were high. Küçükkayhan and Adıgüzel (2021) evaluated the vocational open education high schools' programs through Hammond's Evaluation Model. In the study in which mixed research design was utilized, research data were collected through questionnaires, semi-structured individual interviews, and researcher diaries. Study results showed that the content of the courses in vocational open education programs was sufficient to learn the profession; however, the content was not suitable for the level of the student and the curricula were not up-to-date. Karagöl (2020) evaluated the elementary teaching program in the context of value, attitude, and academic motivation towards the teaching profession in terms of improving affective features through Hammond's evaluation model. In the study in which convergent parallel design was utilized, research data were collected through portrait values questionnaire, teaching profession attitude scale, academic motivation scale, document analysis, field notes, observation forms, and semi-structured interview forms. Within the scope of the research affective domain, organization, content, method, facilities, cost, student, teacher, and administrator

dimensions were taken into consideration. The study results indicated that although teacher candidates had high levels of attitude and motivation towards the profession, their attitude towards the course, thus motivation to attend classes, was low. While many teacher candidates found the course time to be enough, many faculty members found it insufficient. Results also showed that there was a limited number of objectives for affective learning domain.

Taken together, these studies support the notion that Hammond's evaluation model can be easily modified to incorporate relevant cells for any curriculum evaluation studies thus providing a good checklist for ensuring that significant categories or areas are not overlooked. In addition, the model is considered important in that it enables the opportunity to collect more in-depth data regarding the relevant cell using both qualitative and quantitative methods. Since the new curricula in Turkey are based on constructivist approach, process and product-oriented evaluation methods are advised to be used. In this regard, it is thought that the use of Hammond's evaluation model in the evaluation studies of newly developed curricula will provide a more comprehensive framework for curriculum development studies in that the model indicates how many of the objectives are achieved and what causes the unachieved ones. Therefore, it can be recommended both to generate elaborative questions and consider the opinions of all stakeholders (student, teacher, administrator, family, education specialist, non-governmental organization representatives, etc.) regarding the evaluated cells in order to obtain detailed information on why the objectives could/could not be achieved. Moreover, participant observation can be utilized to get detailed data about the cells evaluated and the alignment among the four dimensions of a curriculum, which are objective, content, method, and assessment. Exhaustive information about the learning process can also be obtained by conducting brief interviews with teachers and students about the course during the breaks shortly after the observations.

Author Contributions

1. Author: 50% 2. Author: 50% contributed to the study.

Conflict of Interest Statement

There is no financial conflict of interest with any institution, organization or person related to our article titled "Hammond's Evaluation Model".

References

Alkin, M. C., & Christie, C. A. (2004). An evaluation theory tree. In M. Alkin (Ed.), *Evaluation roots: Tracing theorists' views and influences* içinde (pp. 12– 65). Thousand Oaks, CA: Sage.

Altay, B. (2018). *Dokuzuncu sınıf İngilizce öğretim programının Hammond küp model ile değerlendirilmesi* [Unpublished doctoral dissertation]. Adnan Menderes Üniversitesi.

Ayuningtyas, A. E., Slameto, S., & Dwikurnaningsih, Y. (2017). Evaluasi program pelatihan in house training (IHT) di Sekolah Dasar Swasta. Kelola: *Jurnal Manajemen Pendidikan, 4*(2), 171-183.

Barrett, G. W. (1998). Educational evaluation: Two theoretical models in a corporate based application. [Unpublished doctoral dissertation]. The University of British Columbia.

Brown, J. (1995). *The elements of language curriculum*. Nashua, NH, USA: Heinle and Heinle Publishers.

Clark, D. C. (1974). *A prescriptive model of development or evaluation: Some needed maturity*. Northwest Regional Laboratory Paper Series No. 8.

Demirel, Ö. (2012) *Eğitimde program geliştirme: Kuramdan uygulamaya*. Ankara: Pegem Akademi.

Erden, M. (1998). *Eğitimde program değerlendirme*. Ankara: Anı Yayıncılık.

Erden, M. (2007). *Eğitim bilimine giriş*. Ankara: Arkadaş Yayınevi.

Eser, Y. (2011). *Bilim ve Sanat Merkezleri'nin eğitim programlarının Hammond modeliyle değerlendirilmesi* [Unpublished doctoral dissertation]. Fırat Üniversitesi.

Fitzpatrick, J., Sanders, J. R., & Worthen, B. (2004). *Program evaluation: alternative approaches and practical guidelines*. Boston: Pearson Education.

Gredler, M. E. (1996). *Program evaluation*. USA: Pearson Education, Inc.

Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA, Corwin Press.

Hammond, R. L. (1967). *Evaluation at the local level*. Arizona: U.S. Department of Health, Education & Welfare, Office of Education.

Hıdıroğlu, Ç. N., Kandemir, A., & Tuncel, İ. (2019). Hammond'un değerlendirme küpü çerçevesinde öğretim ilke ve yöntemleri dersinin değerlendirilmesi. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi, 1(*37), 47-68.

Hussin, M. K., Darusalam, G., & Ali, N. A. N. (2016). Evaluation on Implementation of Islamic Studies Course in Private Higher Learning Institutions in Malaysia. *Advanced Science Letters, 22*(8), 2062-2065.

Ismail, F. (2015). The evaluation of curriculum implementation at Tarbiyah Faculty Iaın Raden Fatah Palembang. *JISAE (Journal of Indonesian Student Assesment and Evaluation), 1(*1), 12-27.

Jumaeda, S., Djaali, H., & Rahayu, W. (2018). Evaluation of the program management education Ma'had Al-Jamiah IAIN Ambon. *Medwell Journals, 13*(5), 1014-1019.

Karagöl, İ. (2020). Sınıf öğretmenliği lisans programının duyuşsal özellikler kazandırması bakımından Hammond değerlendirme küpü modeli ile değerlendirilmesi [Unpublished doctoral dissertation]. Anadolu University.

Küçükkayhan, S., & Adıgüzel, O. C. (2021). An evaluation of vocational open education high school programs in Hammond program evaluation model. *Anadolu Journal of Educational Sciences International, 11*(2), 704-736.

Marsh, C. (2004). *Key concepts for understanding curriculum*. London: RoutledgeFalmer.

Melrose, M. (1998) Exploring paradigms of curriculum evaluation and concepts of quality. *Quality in Higher Education, 4*(1), 37-43.

McChain, D. V. (2005). *Evaluation basics*. Alexandria: American Society for Training & Development.

Milakovich, M. E., & Gordon, G. J. (2009). *Public administration in America*. Boston: Wadswort.

Ornstein, A. C., & Hunkins, F. P. (2018). *Curriculum foundations: principles and theory*. Boston: Allyn and Bacon.

Özüdoğru, F. (2016). İlkokul 2. sınıf İngilizce öğretim programının diller için Avrupa ortak başvuru metni doğrultusunda aydınlatıcı değerlendirme modeli ile değerlendirilmesi [Doctoral

dissertation]. Anadolu University.

Özüdoğru, F., & Adıgüzel, O. C. (2016). Aydınlatıcı program değerlendirme modeli. *Anadolu Üniversitesi Sosyal Bilimler Dergisi, 16*(Özel Sayı), 25-34.

Sönmez, V. (2008). *Gelecekteki olası eğitim sistemleri.* Ankara: Anı Yayıncılık.

Stufflebeam, D. L. (2002). The CIPP model for evaluation. In D. L. Stufflebeam, D. L. Madaus, & T. Kelleghan (Ed.), *Evaluation models viewpoints on educational and human services evaluation* içinde (pp. 279-317). London: Kluwer Academic Publishers.

Şimşek, A. (2000). Öğretim tasarımında yeni yaklaşımlar. *Kurgu Dergisi,* 17, 157-170.

Taba, H. (1962). *Curriculum development: Theory and practice.* New York: Harcourt, Brace & World.

Tenedero, E. Q., & Pacadaljen, L. M. (2021). Learning experiences in the emerging outcomes-based education (OBE) curriculum of higher education institutions (HEI'S) on the scope of Hammond's evaluation cube. *Psychology and Education Journal, 58*(2), 10325-10332.

Tyler, R. W. (2014). *Eğitim programlarının ve öğretimin temel ilkeleri*. (Çev. Eds. M. E. Rüzgâr ve B. Aslan). Ankara: Pegem Akademi.

Uşun, S. (2012). *Eğitimde program değerlendirme: Süreçler yaklaşımlar ve modeller*. Ankara: Anı Yayıncılık.

Ünal, F. (2019). *Ortaokul 8. sınıf öğrencilerinin hak, sorumluluk ve katılımcılık bağlamında vatandaşlık bilincine ilişkin görüşlerinin Hammond modeliyle değerlendirilmesi* [Unpublished master's dissertation]. Bartın University.

Varış, F. (1978). *Eğitim bilimine giriş.* Ankara: A. Ü. Eğitim Fakültesi Yayınları.

Varış, F. (1994). *Eğitimde program geliştirme*. Ankara: Alkım.

Welch, W. W. (1969). Curriculum evaluation. *Review of educational research, 39*(4), 429-443.

Yüksel, İ., & Sağlam, M. (2014). *Eğitimde program değerlendirme*. Ankara: Pegem Akademi.

Genişletilmiş Özet

Program değerlendirme bir eğitim/öğretim programının etkililiği hakkında yargıya varma sürecidir. Tyler (2014) program değerlendirmeyi, programın belirlenmiş hedeflerinin ne kadarını kazandırdığını belirleyen bir süreç olarak tanımlamaktadır. Program değerlendirme, dersi daha verimli hale getirmede kullanılabilecek verilerin elde edinmesini sağladığı gibi programın geleceğine ve etkin kullanımına yönelik kararlar alınmasına dayanak oluşturur (Welch, 1969). Bu noktada karar vericiler elde ettikleri verilere dayanarak programı kabul etme, değiştirme ya da sonlandırmaya yönelik eylemlerde bulunurlar. Programlar ne kadar iyi hazırlanırsa hazırlansın, uygulamaya konulduktan sonra birtakım eksiklikler ortaya çıkabilir. Bu nedenle hazırlanan programların değerlendirilmesi büyük önem taşımaktadır. Alanyazında çok farklı ve çeşitli program değerlendirme yaklaşım ve modelleri mevcuttur. Bu program değerlendirme modellerinden biri de amaç odaklı program değerlendirme yaklaşımları içerisinde yer alan Hammond program değerlendirme modelidir. Model, diğer değerlendirme modellerinde sıklıkla gözden kaçan kurumsal ve öğretimsel değişkenleri detaylandırması bakımından büyük önem taşımaktadır. Ancak alanyazında Hammond değerlendirme modelini kullanan sınırlı sayıda çalışma bulunmaktadır. Bunun, modelin yeterince bilinmemesinden kaynaklandığı düşünülmektedir. Bu nedenle bu çalışmada Hammond değerlendirme modelinin tanıtılması ve alanyazına katkı sağlanması amaçlanmıştır.

Hammond değerlendirme modelinde değerlendirme yaklaşımı bütüncül bir şekilde ele alınır ve küpün yüzeylerin kesiştiği hücrelerde kapsamlı bir değerlendirme yapılır (Hammond, 1967). 3 x 5 x 6 birim ebatlarındaki toplam 90 hücreden meydana gelen model bilgilendirici, ancak karmaşık ve zaman alıcıdır. Bu nedenle program değerlendirme kapsamında hücrelerin her birini değerlendirmek gerekmez. Değerlendirme amacı kapsamında ilgili hücreler dikkate alınır, ilgisiz hücreler elenir ve kalan hücreler kapsamında derinlemesine inceleme yapılır (Fitzpatrick, Sanders & Worthen, 2004). Model bu noktada daha küçük parçalara bölünerek kendini bağlama uyarlayabilmekte fakat temelde davranış, öğretim ve kurum olmak üzere üç temel boyuttan oluşmaktadır. Davranış boyutu bilişsel, duyuşsal ve psikomotor öğrenme alanı; öğretim boyutu organizasyon, içerik, yöntem, imkanlar ve maliyet; kurum boyutu öğrenci, öğretmen, yönetici, eğitim uzmanı, aile ve toplum değişkenlerinden oluşmaktadır. Modelin diğer amaç odaklı program değerlendirme modellerinden temel farkı, Hammond'un değerlendirme yaklaşımına üçüncü bir boyut eklemesidir. Öğretim, kurum ve davranış boyutlarının tanımı bu modelde daha açık bir şekilde ele alınmaktadır. Amaç odaklı değerlendirme yaklaşımlarında programın amaçlarına ulaşılıp ulaşılmadığı önemlidir. Hammond'un program değerlendirme modelinde programın amaçlarına ulaşılıp ulaşılmadığı kadar, bu amaçlara neden ulaşıldığı ya da neden ulaşılamadığı da önemlidir.

Hammond değerlendirme modelinin diğer program değerlendirme modellerinde olduğu gibi bazı güçlü yönleri ve sınırlılıkları bulunmaktadır. Hem nitel hem de nicel veriler aracılığıyla bağlamın derinlemesine incelenmesine ve araştırmanın olabildiğince kapsamlı bir şekilde yürütülmesine olanak sağlayarak önemli değerlendirme verilerine ulaşılmasına imkan vermesi modelin güçlü yanını oluşturmaktadır. Bununla beraber model kapsamında çeşitli veri toplama araçları kullanıldığından, verilerin toplanması ve analizinin geniş bir zaman dilimine yayılabilmesi ve finansal destek gerektirebilmesi modelin önemli sınırlılıklarındandır.

Türkiye'de yeni öğretim programları yapılandırmacı yaklaşıma dayalı olduğu için süreç ve ürün odaklı değerlendirme yöntemlerinin kullanılması tavsiye edilmektedir. Yeni geliştirilen öğretim programlarının değerlendirme çalışmalarında Hammond'un değerlendirme modelinin kullanılmasının, modelin hedeflerin ne kadarına ulaşıldığını ve ulaşılamayan hedeflere neyin sebep olduğunu göstermesi bakımından program geliştirme çalışmaları için kapsamlı bir çerçeve sağlayacağı düşünülmektedir. Bu nedenle, model kapsamında değerlendirilen boyutlar hakkında önemli veriler elde etmek için hem detaylı sorular üretilmesi hem de tüm paydaşların (öğrenci, öğretmen, yönetici, aile, eğitim uzmanı, sivil toplum kuruluşu temsilcileri vb.) görüşlerinin dikkate alınması önerilebilir. Ayrıca, değerlendirilen hücreler ve öğretim programının dört boyutu olan amaç, içerik, öğrenme süreci ve değerlendirme arasındaki uyum hakkında ayrıntılı bilgiler elde etmek için katılımcı gözlemden yararlanılabilir. Gözlemlerden hemen sonra teneffüslerde öğretmen ve öğrencilerle ders hakkında kısa görüşmeler yapılarak öğrenme süreci hakkında detaylı bilgiler elde edilebilir.

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