

## Needs Analysis in Program Development

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**Abstract:** *The needs analysis, which is used in the field of education and is considered as the first and most effective step for the program development, has a great proposition in contemporary and real education. Especially during the last two decades, it has been used by many educational institutions in the assessment of educational needs. Because of its widespread use and increased prevalence, this study's purpose is to explain the needs analysis in program development with its different dimensions and holistic reality. This research is a qualitative study based on the descriptive analysis of the documents that are obtained by using the snowball sampling technique. In the current research, efforts to provide validity and reliability were tried to be carried out objectively, colleague confirmation was taken and expert examination was carried out. In the research, the definition, history, purpose, approaches, types, techniques and stages of needs analysis are explained. In the research, it has been reached that needs assessment is not a matter of preference but a necessity. That is why it is necessary to critically focus on needs analysis in program development. A number of suggestions are presented considering the importance of this topic.*

**Keywords:** *Education, Needs analysis, Program development.*

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### I. Introduction

The need for education has gained importance in our world where globalization is increasing, competition is increasing, technology is used more frequently, investment is differentiated, service has changed in size and especially information is consumed quickly. One of the main reasons for this is that the business world, educational institutions, social service institutions, non-profit organizations, health organizations, etc. need to have quantitative and qualitative human resources. Qualified human resource is the factor, which distinguishes various institutions and organizations from others with the strategic plans and policies they have adopted in the competitive business world, and takes them a step further from the position they are in. Hence, investment in human resources is increasing day by day. However, this investment must be logical in order to move the institutions forward and to make a difference. That is, the budget allocated for education should be transmitted to the right channels. Among these channels - especially when we look at the framework of human resources – there are variables such as staff's motivation, development, adaptation to innovation, etc. The optimal way to keep development and change constant, by detecting these variables and taking the necessary precautions is needs analysis. In other words, needs analysis is carried out in order to make the development and change of human resource permanent, to reach institutional goals, to increase productivity and to compete better.

As can be seen, needs analysis can be done by many organizations to achieve different purposes in various fields. However, needs analysis is indispensable, especially for educational institutions. The educational institutions are complete in themselves with their vision, mission, academic staff, culture, history and students. One of the most important elements that keep this unity together is a quality curriculum. Continuous needs analysis studies are needed to maintain the effectiveness of that curriculum. In fact, the first and most important step of the program development in education is to carry out the study of needs analysis in a comprehensive way. The most important elements of a curriculum are the objectives, content, learning-teaching process and evaluation. From this point of view, the elements of a quality training program require a comprehensive needs analysis study. In other words, needs analysis is a prerequisite for program development and sustainability of the program. Therefore, this study aims to explain the need analysis of program development with its different dimensions and holistic reality. In this context, what the needs analysis means is to be well defined.

### 1. Needs Analysis -Definition

Needs analysis has different definitions. Brinkerhoff and Gill (1994) define needs analysis as determining the knowledge and skills necessary to achieve an organization's goals and objectives. According to another definition (Molenda, Pershing and Reigeluth, 1996), needs analysis is a process aimed at understanding the nature of performance problems and developing solutions. Noe (1999) states that needs analysis is a process

that determines whether training is necessary in an institution. One of the most cited needs analysis definitions was made by Brown. According to Brown (1995), needs analysis is the process of gathering information. Needs analysis, particularly in the field of education, is an integral part of the systematic development of curriculums (Brown, 2001). According to the definition of Dudley-Evans and St John (1998), needs analysis is a process to determine in what condition an institution or staff is and what the reasons are for their condition. In addition to this definition, Pratt (1980) refers to the process in which various information gathering techniques are used, needs are identified, the necessity of needs is proven, and needs are listed in order of priority. In short, needs analysis is the process of finding solutions to these needs by identifying needs in the process in order to make individual or institutional development possible in the short and long term and to make it permanent. Having an idea on the historical development of needs analysis to better understand this process can facilitate practices or shed light on them.

## **2. History of Needs Analysis**

When we examine the history of needs analysis, we can go back to the first half of the 20th century. This concept, which is particularly referred in language teaching, emerged in the 1920s (White, 1988; West, 1994). However, needs analysis has become popular in the 1970s and 1980s, particularly in the field of English for General Purposes and English for Specific Purposes (Richterich and Chancerel, 1980; Munby, 1978). Needs analysis, which is frequently used in business and industry today, is also based on the 1965 Elementary and Secondary Education Act of 1965 (Witkin, 1984). In the United States, from 1960 to 1980, needs analysis, particularly in areas such as health, education and social services, was conducted by various institutions and organizations via federal support programs. Since the 1980s, when the support for grant schemes for needs analysis has been cut off, the quality and quantity of such studies have declined, but the public and private sectors, particularly those who have recognized the importance of need analysis, have continued to use needs analysis. In short, needs analysis has emerged as a concept of education. However, in our developing and changing world, different types of needs analyzes are made according to the structure of different public and private sector organizations (Witkin, 1984). These needs analyses made in different types have various roles especially in the context of education. These roles or objectives provide a comprehensive picture of why needs analysis is being done.

## **3. Purpose of Needs Analysis**

Needs analysis has many purposes. For example, needs analysis can be used to identify the specific needs of the institution and individuals (Brown, 2002). If we approach it from the perspective of education, needs analysis can lead us to what should be taught and how (Salas and Cannon-Bowers, 2001). In addition, needs analysis can increase the satisfaction degrees of employees or consumers in the organization, decrease the expenses of a company, or help improve a hospital's quality standards (Bowman, 1987). What is important here is to be able to determine well the process between the purpose and the end of the needs analysis. In other words, the reason why the need analysis is done and what its purpose is should be ascertained (Taylor, O'Driscoll and Binning, 1998). In this context, Lee and Nelson (2006) explained the purposes of needs analysis. Need analysis is done with the aim of gathering information about perceived needs. By this means, problems or deficiencies related to knowledge, skills and behaviors are determined. Identifying the problem and seeking solutions does not only support collaboration with stakeholders, but it also helps the development of needs analysis specialists, human resource specialists, managers, employees and students. This directly or indirectly affects the institution positively. Depending on the purpose, sometimes needs analysis can be done through individuals but it should not be forgotten that the ultimate goal in needs analysis is to develop and change the institution. All stakeholders involved in the needs analysis contribute to raising the quality of themselves and their institutions. What is important in this process is to produce appropriate solutions to problems fitting the purpose of the needs analysis and to make sure that the methods and techniques used to produce those solutions are valid and reliable (Kaufman, Oakley-Browne, Watkins and Leigh, 2003). Of course, need analysis approaches play an important role in determining the purposes of the needs analysis. Considering deductive reasoning, it is essential to determine the approaches that will guide the goals.

## **4. Approaches in Needs Analysis**

Different approaches are in question in the analysis of needs. One of those approaches that is appropriate to the structure of the organization or institution may be preferred; however, one is not superior to the other. We can summarize the mentioned approaches under five headings (Kısakürek, 1983, Demirel, 2008). These approaches are the differential approach, the democratic approach, the analytic approach, the descriptive approach and the process approach. The first of these, the differential approach, is used to demonstrate the difference between the expected and observed success level. For example, suppose an institution needs to meet 50 standards for quality. However, the institution can only meet 30 of the relevant standards. The 20 standards

that arise in this context represent the expected level to be possessed. Another approach, the democratic approach, allows for the identification of needs through the needs of superior or dominant groups. By superior and dominant groups, it is meant to include superior and dominant groups in the analysis process, considering the principles of the pluralist democracy, not the majoritarian. We can take unions taking part in the identification of training needs as an example. A third approach, the analytical approach, is related to the pre-determination of the needs for change and development and the shaping of the future, depending on the conditions of our globalizing world. For example, central exams are all to be done online in parallel to future technological developments. Another approach, the descriptive approach, reveals the benefits and advantages in the case of the existence of a problem, difference, or reduction that arises from the lack of an object or phenomenon. For example, the difference between a class that uses the learning management system and a class that does not use it can be determined and compared. A need can be determined accordingly. Finally, among the needs analysis approaches, we can also refer to the process approach. The most important feature that differentiates this approach from other approaches is that its point of origin or focal point is on the process. For example, the most appropriate method that can be used in a needs assessment study to track developments in the world of program development is the process approach. As you can see, there are different approaches for needs analysis to be done. The important thing here is to make the diagnosis correct and to apply the correct treatment. In other words, the aim is to choose an appropriate approach complying with the purpose out of the needs analysis approaches, and achieve the correct results. The types of needs analysis as well as the needs analysis approaches must be well known for accurate diagnosis and treatment.

### **5. Types of Needs Analysis**

The types of needs analysis are grouped under six headings by Burton and Merrill (1991). The types of needs analysis play an important role, especially in the assessment, planning and regulation processes of needs analysis. The first of the types of needs analysis is normative needs. Such needs emerge especially if the specified standards cannot be met. For example, the situation in our country during international examinations such as TIMSS or PISA is a good example of normative needs. Another type of needs analysis is the felt needs. The felt needs are the needs that determine the need for the knowledge, skills, or behaviors, which are possessed by the individual, and for those which must be possessed; and this need is expressed by the individual himself. An example is for a student to recognize that his metacognition level that affects his success is low. A third type of needs is related to the expression of the felt needs and taking action considering them. As an example of the expressed needs, online education in a higher education institution is more preferred than classical education, and this situation influences course selection. A fourth type, the comparative needs arises when two similar institutions, organizations, people, or schools do not receive or provide the same service. For example, the fact that a school has a computer laboratory and another school in the same district does not have any can be determined by comparative needs. Another type of needs analysis, expected needs, is pertinent to the determination and solution of a problem or situation that may occur in the future. For example, an enterprise should make its strategic plans for the next 20 years. Finally, there is the urgent needs in the classification of the types of needs analysis. The urgent needs are failures that suddenly appear and cause negative consequences. Natural disasters and their consequences can be given as an example of the urgent needs. Of course, on the one hand it is important to determine a particular approach, purpose, and type while determining needs; on the other hand, it is also important how to gather data that is appropriate for approach, purpose, and type. This issue is examined under the heading of techniques of needs analysis.

### **6. Techniques of Needs Analysis**

The process of data collection plays a key role in whichever step of the needs analysis you take because the quality of the needs analysis depends on the analysis of the carefully collected data (Smith, Delahaye and Gates, 1986). In this context, the techniques used in the data collection process should be considered when the needs analysis techniques are mentioned. Survey often comes to mind when many researchers refer to data collection techniques. In addition to surveys, many data collection techniques such as observation, interview, focus group interviews and documents are frequently used by researchers (Bowman, 1987). In this study, the data collection techniques frequently used especially when needs analysis is done, will be mentioned and the names of other data collection techniques will be mentioned. For more detailed information, books on research methods and techniques can be cited.

One of the most commonly used data collection techniques in the needs analysis is the survey (McClelland, 1994). In order to obtain valid and reliable data in surveys, a pilot study must absolutely be done. It must be ensured that the violation of ethics does not occur. The survey is one of the most effective and least costly data collection techniques especially when working with large groups (Stoneall, 1991). Interview, in addition to surveys, is among the frequently utilized data collection techniques in needs analysis. Interviews are implemented in accordance with the purpose of the needs analysis in the qualitative data collection process.

What is important in interviewing is to have gained experience in interviews, not to force the participants to talk, to inform them about their rights and to gain in-depth information as much as possible (Birnbrauer and Tyson, 1985). Focus group interviews also appear to be another form of interview. The most important feature of focus group interviews that distinguishes them from the others is the emergence of group dynamics and brainstorming since participants in focus group interviews feel better (O'Donnell, 1998). In addition, the principle that the brain works better with other brains should not be forgotten. One of the factors that should be considered in focus group interviews is that the group members shall not know each other very closely; the other is that dominant or leading people should not be allowed to influence the opinions and feelings of the group by giving each person equal amount of time. In addition to the above, there are other data collection techniques and techniques that we use especially in program development studies. Other data collection techniques include various data collection techniques such as the Delphi technique, the PROGEL technique, the occupational analysis, literature review and assessment instruments (Demirel, 2008; Rouen and Kusy, 2008). Needless to say; after the needs analysis study is analyzed using the necessary data collection techniques, an evaluation study should necessarily be conducted. In other words, needs analysis studies should be followed by evaluation studies (Taylor, 1993). In this context, program evaluation models guide the researcher.

## **7. Stages in Needs Analysis**

In response to the question "In what stages does the need analysis proceed?", researchers give different answers. For example, according to Porche (2004), needs analysis is carried out in three stages. These are pre-analysis, analysis and post-analysis. In the pre-analysis stage, a plan is made for the needs assessment, the objectives are defined, the limitations are defined, the time and budget are checked and the type of data to be collected is decided. In the analysis stage, data is collected, types of needs are determined and data is analyzed and synthesized. After the final analysis, potential solutions are put forward, the relevant gap is tried to be closed, the report is written and the results are published. Another needs analysis stage was carried out by Demirel (2008). This stage consists of five steps. These steps are the stages of preparation, data collection, data analysis, reporting data and data use. In the preparation stage, priority actions are determined. Data collection tools are required in the data collection process. Data is evaluated in the analysis of data and analyzed with appropriate techniques. In the process of reporting data, the findings are interpreted and the results are written. In the stage of data use, the final stage, the results are shared with the relevant authorities and necessary measures are taken.

## **II. Conclusion, Discussion And Suggestions**

Needs analysis is used to identify deficiencies or gaps between the existing situation and the desired situation in program development (Saylor et al., 1981, Taymaz, 1981, De Ketele et al., 1989; Küçükahmet, 1992; Demirel, 2009; Bureau, 2008). These gaps or deficiencies are the determinants of sustainability of the program, of continuous development and change. When we look at our surroundings or think about our history, we see how fast everything changes, develops, or disappears. This reminds us that determining the needs is not really a matter of preference but a necessity. That is why it is necessary to critically focus on needs analysis in program development. In addition to this, the fact that the needs analysis is done properly in accordance with reality in program development makes it possible to make a realistic education (Taymaz, 1981, Rogers et al., 1992, Demirel, 2009). In this context, real education is directly proportional to the continuous and effective analysis of needs. Briefly, needs analysis should be done taking all its aspects into account in order to be able to present a contemporary and real education, to enable the individual to develop himself, his institution and his society in a holistic way, and to provide continuous development and change of the curriculum. For relevant and reliable needs analyses, in-service trainings should be organized, models should be developed, working, consultation and approval groups should be established and finally professional support should be obtained.

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