

Review

Data mining in education: Children living or working on the street with lost data problem

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Received 6 March, 2021; Accepted 22 August, 2021

Data mining in education predictions are made about other groups based on the big data of education. However, the extent to which training data can be accessed is relative. A group that can be described as missing data is children living or working on the street. For this reason this study aimed to deal with children working or living on the street. Children who have to live or work on the street before they can complete their development are faced with many dangers arising from the street and may be exposed to social exclusion. In this context, the aim of this study is to examine the social dimension of the problems faced by children living or working on the street and to analyze and evaluate the limited number of data on this issue. The research is a compilation study in line with the literature analysis of the sources about children living and working on the street.

Key words: Data mining in education, lost data problem, living on the streets.

INTRODUCTION

It can be said that the most important factor that causes children to work on the street is the economic insufficiency of the family. On the other hand, an individual who has not completed the age of 18 and engaged in an activity for the purpose of socio-economic gain, that is children working before the legal age limit of 18, are defined as "child labor". In addition, exploitation, use and early inclusion in business life, is an important problem. Working children came into our lives with the phenomenon of migration and there was a serious increase with the intensified internal migration. The difficulties experienced by families in agriculture and finding a job after the industrial revolution led to migration

from rural to urban areas (Kelebek, 2017; Alacahan, 2010). Children living/working on the street are one of the important problems of our country as well as many other countries in this regard, and this problem will continue as long as the phenomenon of migration continues. Another important problem for educational scientists is that the facts and data of the children in this group are difficult to access. It constitutes a serious lost area for data mining studies, which is one of the current fields of study in education. The work of children is a universal problem that concerns not only our country but also the whole world. Children who work on the street and return home in the evening, that is, who have a home and family and

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have not lost their connection with their families, are called street children (Bilgin and Kızmaz, 2010; Tunçcan, 2000; Yetim and Çağlayandereli, 2007). It is accepted as an important social phenomenon-problem from small societies to developed societies, and the foundations of this phenomenon are discussed in connection with economic, social, political and other problems.

PROBLEM OF MISSING DATA IN EDUCATION: CHILDREN WORKING AND LIVING ON THE STREETS

Although the Convention on the Rights of the Child is quite comprehensive, we do not have a policy to prevent children working on the street from working due to the economic conditions of their countries and the problems in the system, and this raises the issue of current legal regulations. Since it is not known exactly how many children live and work in this way, it is not possible to make an estimation of these children. Among the reasons for this is that families with many children are not able to spare time and reduce the value given to their children. Since children cannot live their childhood, they are accepted as a labor force by their families and they are expected to become adults as soon as possible in order to contribute to the family budget (Kelebek, 2017). Today, children cannot reach the life they deserve for many reasons, they are exposed to neglect and abuse, and violations of children's rights prevail all over the world due to the lack of sufficient data on these children (Erbay, 2013). Difficult conditions within the family, conflict, violence, abuse, neglect, and economic problems can cause children to run away from home and live on the street. The phenomenon of child working on the street is related to how child labor is perceived socially and the values attributed to the child (Yetim and Çağlayandereli, 2007). In addition to participating in and sharing in economic activities traditionally necessary for the survival of the family, labor is a confirmed disposition even in childhood. While the urban society approaches children living and working on the street with pity and grief, families with low socioeconomic status and far from the city see this as normal, and they do not care that these children stay away from education.

EDUCATION MINING TECHNIQUES

Classification

In classification, examining the attributes of a new object and prioritizing that object assign it to a defined class. The important thing is that the properties of a class must be clearly specified beforehand. We can match the characteristics of the profession with the characteristics of a student's achievement and performance. Thus from students or vocational high schools or a university

courses, a virtual profile can be extracted.

Clustering

We can think of clustering as a clustering of certain groups of students. Certain groups are formed according to structures-terms -data-etc. Example is male-female success grades separately set terms. Clustered such as hierarchical clustering, granular clustering, spectral clustering are k-means in themselves, possibilities such as fuzzy-c-means, QT type were used.

Association

Association is one of the first techniques (Srikant and Agrawal, 1994). Association is gotten by analyzing past data, these data. Detection of cooperative behavior in it is an approach that supports future studies. In order to detect the pattern, multiple purchases of products must be involved in the acquisition movement. Data mining on millions of data algorithms used for association query should be fast (Agrawal and Srikant, 1995). For example, in school, a relationship is established between lists of students with good grades and students with exemplary moral status.

Regression

In priming, the goal is to predict one or more variables in terms of other variables. It is about finding relationships that make it possible. For example, 40 years old who is a computer engineer, handsome with a house and a car is a regression.

Forecasts

Data warehouse offers forecasts. For example, what will the company's capital status ratios look like after 5 years? Which professions will our citizens choose the most? It is a structure that finds answers to such questions. Our biggest help here is time and data from past years distribution (Skender, 2017). When the dimensions of Data Mining in Education are examined, it is necessary to have sufficient data in order to examine a data group in an educational sense. However, these data sets are unfortunately not available for children who are out of education for some reason. For this reason, it is not possible for the children in this group to look at the element of togetherness, to make a cluster or to make a principle. This is actually a general problem in education. Since the sets that can quantitatively analyze not only the children who are out of education, but also the children who actively participate in education (absenteeism, migration, geography, other children at risk, etc.) do not

yet provide us with sufficient data. This is because these are not a quantitative problem, but a qualitative problem and it requires specific research rather than general estimates.

CHILDREN WORKING AND LIVING ON THE STREETS AND FORECASTS

While people with many biological, social and cultural characteristics create these qualities, they are also affected by the society in which they were born and raised. In other words, people are born with some basic features and shape these features through the society they live in (Arslan, 2002). In this context, it is a community of people who abide by common rules, cooperate and operate in areas whose boundaries are determined in line with common purposes. People with very different characteristics come together in societies. Children living or working on the street are also a part of society. In fact, while these children are a part of the society, on the one hand, on the other hand, they often face the danger of being excluded unconditionally by the society. These children, who are unconditionally excluded, do not feel they belong to the society and cannot gain the consciousness of being in a society (Arnas, 2003; Baris, 2008). As a matter of fact, these behaviors of street children, who may be dragged into crime as a result of the exclusion of people, cause these people to justify their attitudes towards children living on the street. The smallest structure of society is the family. The biggest obstacle for the child to establish a healthy relationship with other members of the society is that children who live on the street or have to work are not receiving love and attention from their families, which is the most basic structure of the society, and that they are removed from the safe family environment and left to the street environment.

The child's distrust of the family members in his closest environment causes him to build a wall between him and the society he lives in, and may not to participate in official institutions such as schools, and to escape from education and training environments in some way. In addition, children living and working on the street prefer to live on the street. Even if they use their preferences to do a regular job, it is likely that the society is reluctant to give a job because they avoid getting education at an early age. For this reason, the desire of the children in this group to be enrolled in educational institutions is very low, so the predictive power for these children is gradually decreasing.

DISCUSSION

Data mining in education of large-scale student and staff

data is the process of accessing and processing information. The information aimed to be revealed are often implicit, unclear, previously unknown, previously undiscovered but potentially useful, meaningful and is critical information. In general, Data mining methods have emerged to meet different needs. In the 1960s, data were not all electronic. With relational databases and SQL in the 1980s dynamic and instantaneous analysis of data facility were provided. By the 1990s, the volume of data being collected was too large in size and storage of data. Data fields or data warehouses have been used for data mining statistics and artificial intelligence for the evaluation of these large data masses collected resulting from the use of technique out. Statistics definition of the highlighted elements in data mining in general appears to be included. The aims of data mining and the statistical science are to discover knowledge from data.

Accordingly, data mining can be defined as a tool created as a result of the integration of statistics with technology (Skender, 2017). Data mining provides opportunities to a great extent, especially in education, for students' success. It is possible to study the factors affecting the success levels, the factors affecting the unsuccessful students and interpret the results. However, the situation may be slightly different in social sciences, especially in educational sciences. As we mentioned before, it is an important problem of quality as well as quantitative data in educational sciences. In addition, the situations that we think we know in terms of quantity often give different results later on. This pushes us to qualitative research (Berg and Lune, 2019). Every person is different as an individual. In this direction, it is expected that the wishes, needs and expectations of being in a society will also differ. However, it may be regarded as an unfair expectation that young children who have not yet completed their own personality development are left to live or work on the street and expect them to understand others.

The problem of children living on the street, having to work on the street, and seeing the street as their own home, which has emerged as an important problem of the society, is among the main social problems that concern people from all segments of the society (Aslan, 2002). This shows that it is not enough to help the child at the point of solving this problem and it is necessary to develop solutions that include both the child and the family. So this is definitely a quality question, not a quantitative one. Education is indispensable in order to have a qualified workforce and to be a productive society in the future. The number of children living or working on the street is quite high today, and most of them try to earn income from the street without completing their development and education, they face many dangers, and they face many problems such as malnutrition (Aksoy et al., 2006; Bilgin, 2019). This situation both complicates their lives as individuals and causes many social problems.

CONCLUSION

From the moment of birth, every individual opens his eyes to the world with the need to have a good family, to meet his basic needs such as nutrition and shelter, and to feel safe. While these needs of some children are met by their families without any problems, the families of some children are deprived of providing these opportunities to their children. For this reason, every individual, as a person, as a family and as a society, should be aware of their responsibilities and solutions should be found for children who are at risk, such as children living or working on the street. It is extremely important to keep track of and provide follow-up and support services for them, in order to eliminate quality problems in education.

CONFLICT OF INTEREST

The authors have not declared any conflict of interest.

REFERENCES

- Agrawal R, Srikant R (1995). Mining generalized association rule. Proceedings of the 21st Int'l Conference on Very Large Databases, Zurich, Switzerland, September.
- Aksoy M, Gezmen M, Çetinkaya Ç, Tuluk HN, İncekara B (2006). Comparative nutritional status of street children aged 7-12 with their peers in different locations. *Continuing Medical Education Journal* 15:11-7.
- Alacahan O (2010). Socio-economic profile, attitudes and expectations of families working their children on the street. *Social Politics Conferences* 59(2):133-147.
- Arnas YA (2003). Street children. *Community and Social Work* 14(2):43-58.
- Aslan K (2002). Problems in family and child education in the changing society. *Aegean Education Journal* 1(2).
- Baris İ (2009). Children living on the streets and their families (The Case of Istanbul). *Sociology Conferences* (39):87-14.
- Berg BL, Lune H (2019). *Qualitative research methods in the social sciences*. Education Publishing.
- Bilgin BB (2019). Children living on the street and / or working. *Journal of International Social Research* 12(64).
- Bilgin R, Kızmaz Z (2010). Children working / living on the street and crime: the case of diyarbakır. *Electronic Journal of Social Sciences* 9(32):269-311.
- Erbay E (2013). Big Picture of Child Labor in Turkey. *Society and Social Work Journal* 24(1):157-167.
- Kelebek G (2017). Dangers faced by children working on the street. *International Social Research Congress Uşak'17*:376.
- Skender MF (2017). Data mining in education and student success. *Journal of Research*. P. 102.
- Srikant R, Agrawal R (1994). Mining sequential patterns: generalizations and performance improvements, research report rj 9994, IBM Almaden Research Center, San Jose, California, December.
- Tunçcan N (2000). Child Labor: Causes, dimensions and position in the globalizing world. Proceedings of the 1st Istanbul Children's Congress. (Prepared by: M. R. Şirin, and S. U. In issue). Istanbul Children Foundation Publications pp 479-493. Istanbul.
- Yetim Z, Çağlayandereli M (2007). Children working on the streets with the dimension of social perception. P. 32.