Data mining in early education Survey

Pre-Master Graduation Project

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Abstract:

The current preschool education is still facing many difficulties. First, unlike primary and secondary schools which have test scores, there are few good ways to assess the learning situation of young children.

Second, it is hard for teachers and parents to give thoughtful care all the time to each child. In particular, recent incidents of child abuse have been exposed frequently, causing social panic. However, as research of young children's mental health and emotion is still in its infancy due to the lack of relevant data, methods that focus on measuring and analyzing young children's mental health and emotional states are lacking. Furthermore, on the one hand, the principal goal of preschool education is to stimulate interest and enhance cognitive ability. On the other hand, assimilation and accommodation which are two specific stages of cognitive development require an active learner, not a passive one. Thus, emotion analysis can solve these problems to some extent.
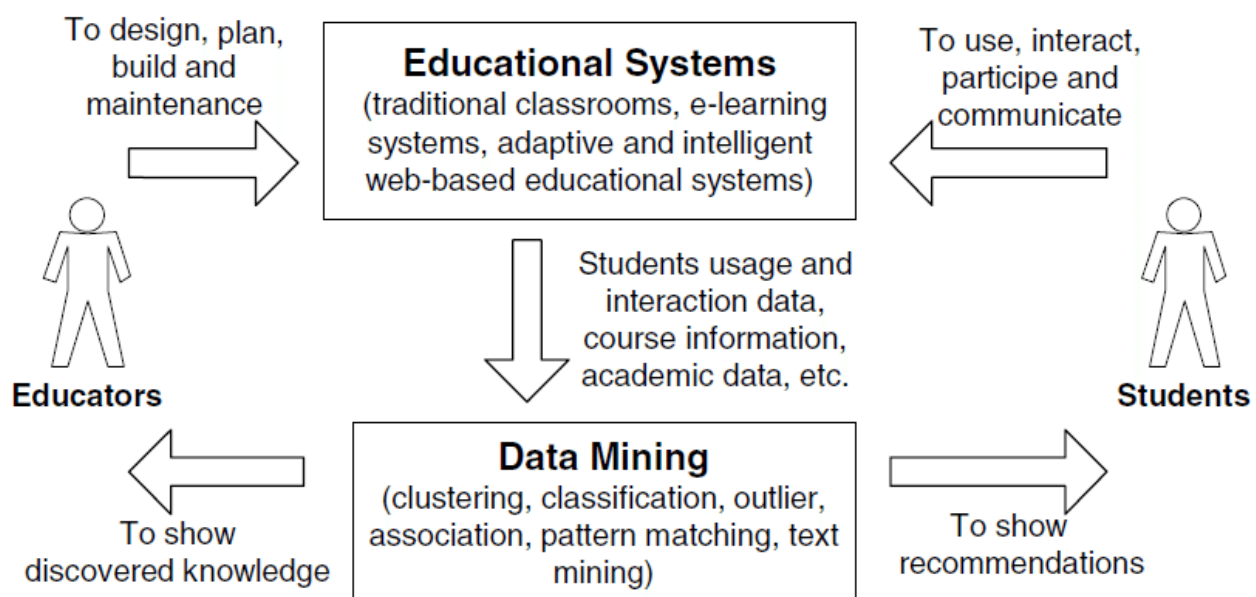
Character and lifestyle are formed during this period. Ages 2 through 7, during this stage, children develop memory and imagination. They are also able to understand things symbolically, and to understand the ideas of past and future [4]. If children show some traits in this period, parents need to give necessary intervention and help. Such as performance of over-excited, for example, it is difficult for extroverted child to sit still, keep calm or focus attention. On the contrary, some children hate to

Introduction:

Many educators have confirmed that early childhood education, especially from 2 to 7 years old, plays a critical role in character building which influence the way people respond to environment and society Character and lifestyle are formed during this period. Ages 2 through 7, during this stage, children develop memory and imagination. They are

also able to understand things symbolically, and to understand the ideas of past and future.

If children show some traits in this period, parents need to give necessary intervention and help. Such as performance of over-excited, for example, it is difficult for extroverted child to sit still, keep calm or focus attention. On the contrary, some children hate to participate in group activities, look inactive and usually silent, and lack independent ability. These are the performance of introverted type. Thus, parents should give correct intervention, such as consciously creating a lively and happy atmosphere in the family, taking the initiative to talk with their children and ask some kinds of interesting questions, as well as accompany children to outdoor sports and other interesting activities to shape the child's character. three years for child's personality correction, only if parents understand the child's psychological characteristics, knowing the child's temperament, can they promote parent-child relationship, find the proper direction of education. In other words, only knowing children and understanding their potential advantages indeed, can help parents give rationally love and cultivation

Problem:

many of the past studies were concentrating on primary and secondary schools and neglecting the Kindergarten education.

there is very little research especially for young children.

preschool education is still facing many difficulties.

Multiple of parent and educator found a difficult understand a behavior of children and how to deal with them.

Quality pre-primary education is the foundation of a child's journey: every stage of education that follows relies on its success

Why Data Mining:

In this papers, we want to introduce special use of data mining in education specific pre- school Education , called pre-school educational data mining. (PSEDM).

We live in a world where we collect large amounts of data, but if this data is not further analyzed, it remains only large amounts of data. With new methods and techniques, we can use this data, analyze it, processing, interpretation and get a great advantage. The perfect method for this is data mining. Data mining is the process of extracting hidden and useful information and patterns from large data sets.

Data mining (DM) is popular in education area especially when examining students' learning performances. It focuses on analyzing educational related data to develop models for improving learners' learning experiences and enhancing institutional effectiveness. Therefore, DM does help education institutions provide high-quality.

Various methods, algorithms and techniques are used for educational data mining. The most often use is for classification, clustering, prediction and association. The most frequently used data mining techniques are neural networks, decision trees, regression analysis and cluster analysis.

Disadvantage:

There are also disadvantages of data mining, namely in user privacy and security. It has to be clear how and with whom the information will be used and shared. Data mining tools and techniques work with very big amounts of data, so there is great cost at the implementation stage. It requires great IT experts for preprocessing data and finding the best model and technique for analysis. The techniques of data mining are not 100% accurate, so it may cause serious consequences and expenses.