SISTEM PAKAR DIAGNOSA GANGGUAN BELAJAR KHUSUS (*LEARNING DISABILITY)* PADA ANAK DENGAN METODE *DEMPSTER-SHAFER* (DS)

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ABSTRAK

Anak-anak merupakan tahap awal manusia dalam proses belajar. Anak-anak menjadi awal atau permulaan seseorang belajar, untuk itu jangan sampai masa belajar anak terganggu. Menurut penelitian yang dilakukan pada tahun 2005 oleh Balai Penelitian dan Pengembangan Pendidikan Nasional terhadap 24 SD di empat provinsi, ditemukan 13,9% siswa yang beresiko kesulitan belajar. Dari jumlah tersebut, 47,4% di antaranya memiliki taraf kecerdasan normal hingga di atas normal. Dengan kata lain terdapat 6,59% siswa Indonesia yang memiliki resiko kesulitan belajar. Kesulitan belajar tersebut salah satunya yang disebut *Learning Disability*, merupakan gangguan belajar khusus, dimana anak tidak bisa belajar dengan optimal dikarenakan oleh adanya gangguan pada saraf,emosi , kromosom dan neuron pada otak. Adapun jenis-jenis dari *Learning Disability* yaitu disleksia, disgrafia dan diskalkulia. Karena dalam hal ini sistem digunakan untuk orang awan maka digunakanlah sistem pakar yang mengadaptasi data dari seorang pakar. Metode yang digunakan dalam penelitian ini adalah Metode *Dempster-Shafer,* dimana metode ini biasa digunakan untuk menentukan hasil suatu permasalahan ketidakpastian. Mesin interferensi Metode *Dempster-Shafer* digunakan untuk menghitung nilai kepercayaan pakar dan hasil diagnosa anak terhadap gejala yang dialami. Hasil dari uji sistem terhadap 25 anak yang merupakan kelas 3 dan 4 SD, didapatkan data ada 15 anak terdiagnosa mengalami gangguan belajar khusus dengan berbagai kategori urgensi dan 10 anak tidak terdiagnosa gangguan belajar khusus. Hasil uji tersebut sebagian besar anak yang terdiagnosa gangguan belajar khusus memiliki orangtua dengan tingkat pendidikan yang tinggi, sehingga menunjukkan bahwa tidak menjamin orangtua memiliki tingkat pendidikan tinggi, anaknya tidak mengalami gangguan belajar khusus.

Kata kunci: *Learning Disability, Disleksia, Disgrafia, Diskalkulia,* Sistem Pakar*, Dempster-Shafer.*

EXPERT SYSTEM IN DIAGNOSING CHILDREN LEARNING DISABILITY USING DEMPSTER-SHAFER (DS) METHOD

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ABSTRACT

Childhood is the first stage in human learning process. Child fase is always be the beginning yet most important fase on learning period. So that,we have to make sure theres no thing that disturb the children learning period. According to research conducted in 2005 by the Center for Research and Development of Education in 24 elementary schools in 4 provinces in Indonesia. As the result of the research finds that 13.9% students likely be a student with learning disability. By that number, 47.7% among it has an average or above average IQ. In the other hand, 6.59% student in Indonesia likely to have a difficulties in their study. The difficulties in learning is well known as learning disabilities which is categorized as specific learning difficulties. In this condition, student can not study optimally due to abnormality in nerve, emotion, chromosome, and neurons in brain. Learning disabilities is divided to 3 sections known as dyslexia, dysgraphia, dyscalculia. Because this system is using by nonexpert so researcher decided to use Expert System which is adapting the data from the expert. The method of this research is Dempster-Shafer Method which usually used to specify the result of a problem from the uncertain thing. Interfere machine in Depster-Shafer method use to calculate the expert reliability and the students's symptoms diagnose result. The result from the research in 25 elementary students in grade 3 and 4 shown that 15 students diagnosed to be having a specific learning difficulties in different range and 10 students diagnosed to not having any learning disability. The result shown that mostly student who has difficulties in learning process came from well educated family, this case also shows that parents educational background has no correlation with the possibility for children having a learning difficulties, but environment and developmental process has. Children with any developmental failure in their early age has higher chance to have a learning disability.

Key words : Learning Disability, Dyslexia, Dysgraphia, Dyscalculia, Expert System, Dempster-Shafer