Application of IoT in Analyzing Cognitive Skills of Students-A Systematic Literature Review

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ABSTRACT
The Internet of Things is an interrelated system of computer equipment, digital and mechanical machinery with unique identifiers, capable of transferring and relocating data over the Internet in the absence of human-to-computer involvement or without human-to-human interactions. The entire future of the global technology will swing around the Internet of Things, which is bound to connect a large quantity of SOs- Smart Objects, or articles or entities to transform the physical environment around us to a digital world. The application of IoT involves several domains like smart grids, smart farms, better healthcare, smart cities, smart homes, smart transportation system, smart parking and so on. The problem-solving and conceptual knowledge obtained in school is basically inert for several students. In certain situations, knowledge acquired remains surface bound features of problems, as learned from school classes and textbook presentations. The Cognitive computing process uses the available data to react to changes in order to make the right decisions based on specific learning processes from past experiences. In the case of cognitive apprenticeship process, there is a need to bring deliberately the thinking process and thoughts emerge, to produce them to be visible, whether in the case of writing, reading, or problem solving. The thoughts of the teacher must be completely visible to all the students, while the thinking of students must be clearly visible and readable to the teacher. The mental capabilities of students are developed through the cognitive skills that the students need to learn to be successful in school. To effectively understand, write, read, analyze, remember, think, and solve all the problems, the students of these cognitive skills should gather so as to function collectively and properly. If these skills become weak, the students will start to struggle, unable to face problems and solve them correctly. The new learning method makes the students observe, perform and practice the subjects from both the teachers and their peers. In view of this, this study of literature review investigates and explains the concept of IoT by conducting a systematic review and assessment of corporate and communal white papers, scholarly research articles, journals and papers, professional dialogues and discussions with researchers, academicians, scholars, educational experts along with online database available. Purpose and goal of this paper is to analytically categorize, and examine the prevailing research techniques and applications of IoT approaches on cognitive skills of students towards personalization in education. The limitation of the study is that it deals only with the subject matter's application components which leave physical components.

Keywords: Cognitive Skills, Smart Objects, Personalized Education, IoT Applications, Cognitive Apprenticeship, Smart IoT.

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