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Approach of Agent Oriented Technology in ICT Education System

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Abstract: **Most pervasive technologies used in remote control Processes in ICT education system is software agents. Agent technology and collective intelligence, and their applications in building and managing open, large-scale, distributed systems such as web/grid/cloud/IoT service-oriented systems. Change-oriented approach believes in change of ICT, has changed the tools and even the policies and educational goals basically and fundamentally. By Using the Agent base architecture of in education which is ICT based it over come the limitation of traditional ICT tools.**

Keywords: **OIAA (Online Information Arranger Agent), Education Intelligence Agent (EIA).**

1. Introduction

Information and Communication Technologies are defined as all devices, tools, content, resources, forums, and services, digital and those that can be converted into or delivered through digital forms, which can be deployed for realizing the goals of teaching learning, enhancing access to and reach of resources, building of capacities, as well as management of the educational system.

These will not only include hardware devices connected to computers, and software applications, but also interactive digital content, internet and other satellite communication devices, radio and television services, web based content repositories, interactive forums, learning management systems, and management information systems. These will also include processes for digitization, deployment and management of content, development and deployment of platforms and processes for capacity development, and creation of forums for interaction and exchange.

1.1 Challenges and Issues

The challenge of developing alternate modes of education, continuing education, teacher capacity building, information systems for efficient management of the school system are being addressed. With Information and Communication technologies becoming more accessible, reliable and mature, the prospect of leveraging ICT for education is becoming increasingly feasible. Use of Agent technology in software use
In ICT can resolve this problem up to some limit.

2. Related Work

The field of instruction has been influenced by ICTs, which have without a doubt influenced instructing, learning, and research (Yusuf, 2005). A lot of research has demonstrated the advantages to the nature of instruction (Al-Ansari, 2006). ICTs can possibly develop, quicken, advance, and extend abilities, to propel and draw in understudies, to encourage relate school understanding to work rehearses, make monetary suitability for tomorrow's laborers, and in addition fortifying instructing and helping schools change (Davis and Tearle, 1999; Lemke and Coughlin, 1998; refered to by Yusuf, 2005).As Jhurree (2005) states, much has been said and announced in regards to the effect of innovation, particularly PCs, in instruction. At first PCs were utilized to instruct PC programming yet the advancement of the microchip in the mid 1970s saw the presentation of moderate microcomputers into schools at a fast rate. PCs and uses of innovation turned out to be more unavoidable in the public eye which prompted a worry about the requirement for processing abilities in regular day to day existence. Hepp, Hinostroza, Laval and Rehbein (2004) guarantee in their paper "Innovation in Schools: Education, ICT and the Knowledge Society" that ICTs have been used in training as far back as their initiation, however they have not generally been greatly present. Despite the fact that around then PCs have not been completely coordinated in the learning of customary topic, the normally acknowledged talk that training frameworks would need to get ready nationals for long lasting learning in a data society helped enthusiasm for ICTs (Pelgrum, W.J., Law, N., 2003).

3. Role of Teachers To Use Technology

Teachers worked in schools where hardware and access to resources were twice the average, were comfortable with technology and used computers for many purposes. They perceived that their teaching practices became more student centred with the integration of technology in their curriculum and they held higher expectations of their students.

- Teacher motivation and commitment to their students' learning and to their own development as teachers, the support they experienced in their schools, access to sufficient quantities of technology.
- A positive rather than negative attitude towards ICT. Teachers who have positive attitudes towards ICT itself will be positively inclined towards using it in the classroom.
- Student choice rather than teacher direction. Teachers who favored directive styles of teaching tended to rate their own competence as low and made use of helpers with ICT.

ICT Enhancing Quality and Accessibility of Education

ICT increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It can influence the way students are taught and how they learn as now the processes are learner driven and not by teachers. This in turn would better prepare the learners for lifelong learning as well as to improve the quality of learning. In concert with geographical flexibility, technology-facilitated educational programs also remove many of the temporal constraints that face learners with special needs .Students are starting to appreciate the capability to undertake education anywhere, anytime and anyplace. One of the most vital contributions of ICT in the field of education is- Easy Access to Learning. With the help of ICT, students can now browse through e-books, sample examination papers, previous year papers etc. and can also have an easy access to resource persons, mentors, experts, researchers, professionals, and peers-all over the world. This flexibility has heightened the availability of just-in-time learning and provided learning opportunities for many more learners who previously were constrained by other commitments. Wider availability of best practices and best course material in education, which can be shared by means of ICT, can foster better teaching. ICT also allows the academic institutions to reach disadvantaged groups and new international educational markets. As well as learning at anytime, teachers are also finding the capabilities of teaching at any time to be opportunistic and able to be used to advantage.

4. Agent Technology in ICT

Some time on remote area when a online lecture is delivered at a node then due buffing or net problem decline the interest in ICT –via remote tools. Handling such type of issue in ICT the agent technology is use which makes the tool very friendly and inclines the student and teacher interest in reference of ICT.
Some Agents use in education process like Virtual Learning Agent, Virtual libraries Agent and digital learning Agent, Wireless connectivity, student administration Agent , staff administration Agent etc.

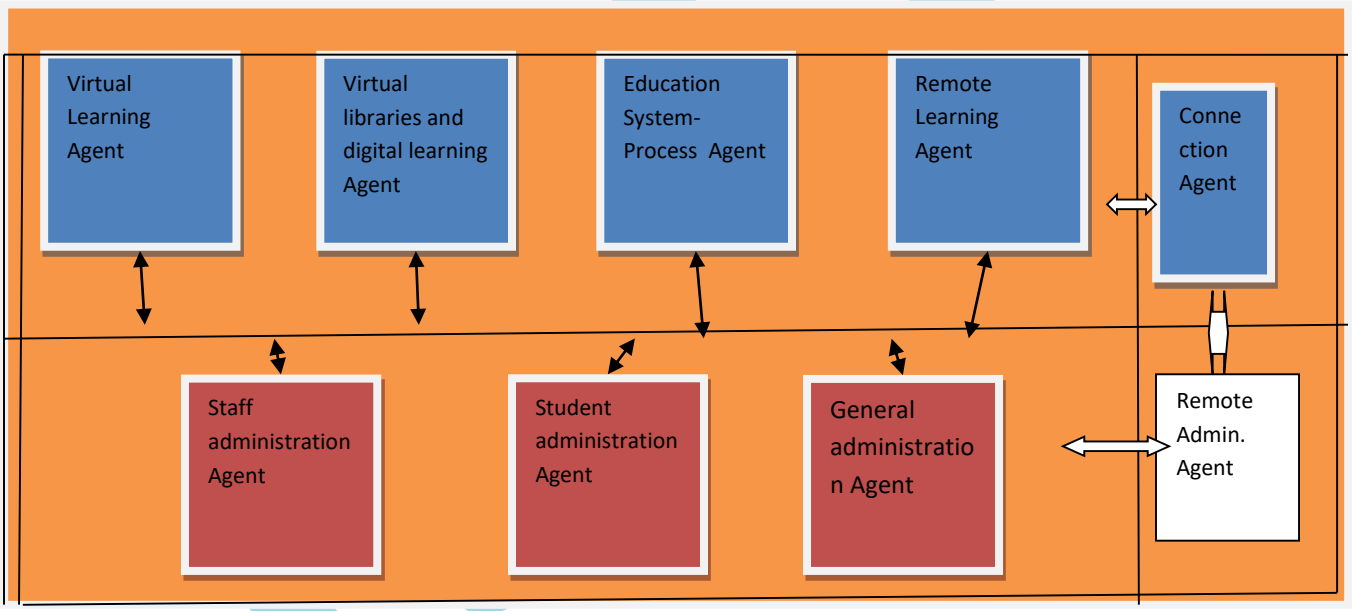

Fig. Agent Based Architecture in ICT

5. Agent Based Architecture in ICT

In Front End of software tool of ICT some agent require which an handle the problem occurs in ICT learning.

Virtual Learning Agent:- This type of agent handle the problem come at virtual learning, if some problem or example which is not clear the doubt of student it design its own example according to the student tendency of learning supported by a supervisor and provide a learning schema.

Virtual Libraries And Digital Learning Agent :- This type agent handle the problem face by library or accessing the data from library and even update the library at regular intervals.

Education System- Process Agent :- This type of agent mainly play a role to maintain the education processes in natural flow and with in the system, it totally avoid the rule which don't obey the process in ethical manner.

Remote Learning Agent:- This type of agent mainly control the remote Learning like remote login lectures and workshops via a network. It generally handle the problem face at terminal end at the time of remote login.

Staff Student General Administration Agent:- This types of agent handle the problem in a administrative end like staff, student and in term of general administration.

Remote Admin Agent:- This type of agent working on server side which help to the agents like administrative agent on console side to handle the problem.

Connection Agent :- This type of agent help in resolving the issue at the time of connectivity establishment by a terminal with their respective server.

6. Conclusion

Approach of agent oriented technology in Information and Communication technologies becoming more accessible, reliable and mature, the prospect of leveraging ICT for education is becoming increasingly feasible. Use of Agent technology in software use In ICT can resolve various problem face by ICT.

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