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Internet of things: Impact on learning and knowledge management

Internet of Things (IoT) is being viewed as the next big disruptor that would change the way businesses are transacted; customer needs are identified and serviced. The IoT refers to communication between 'things' containing embedded technology connected via wireless networks without the need for human interfaces. It is important to note that the number of objects connected to the Internet—including smart phones has already exceeded the number of people on earth. According to Gartner, there will be nearly 26 billion wireless devices connected to the Internet by 2020.

We are experiencing an explosive growth of connected 'things', considering that in 2009 that number was less than 1 billion devices. While the proliferation of smart phones contributed a great deal in building the momentum for Internet of Things, what we are going to experience is more and more 'smart things'. We are going to be encircled with smart cities, smart communities, smart household gadgets, smart healthcare systems and innumerable other smart and connected objects. This transformative phenomenon calls for an understanding of how

learning and knowledge assimilation would have to adapt in the corporate context.

Internet of Things in principle is designed for functioning without the human interface. So where does human element come into the picture? Internet of Things and the resultant data has the potential to make the human interfaces smarter. The traditional learning approach of having a predetermined content and pedagogy for all learners is slowly getting augmented with customised content and self-paced learning through online methods.

Thus the learning management system and the knowledge management system would have to be get hooked to IoT and get smart at analysing the huge amount of data that would be possible to access and with analytics understand the key focus areas of training and development required to be customised for each individual. Further role specific such data could be compared with global standards and benchmarks and keep pushing the bar for the individual wherever they may be located to get them on par with the best in the world.

Knowledge management (KM) systems would have to be geared more and more for real time knowledge updation. Internet of

Things and SMAC (social media, mobility, analytics and cloud) are forcing businesses to rethink their goals and how value is created.

Sensors and embedded technology enabling transmission of real time data through wireless networks will lead to co-creation of new real time knowledge with customers and vendors on a regular basis. In the changing world led by Internet of Things and Big Data, knowledge needs of individuals will get redefined.

Source| Business Line | 22 December 2014

Cloud computing makes course easy for engineering students

Hyderabad: Students can join their classmates to finalise their timing slot, course and faculty for each semester at a fixed time online anywhere in the world. The flexible credit system is possible through the latest buzz word in IT – Cloud Computing.

Premier educational institution VIT University offers an innovate programme, 'Fully Flexible Credit System' (FFCS), which allows the students to plan their timetable and academic schedule from second semester onwards.

Prof Dr Brijesh Nair of the university, who was on a private visit to the city, spoke to The Hans India about the credit system adopted by the university. The robust system developed by the university caters to 26,000 students belonging to different streams spread over two campuses at Vellore and Chennai in Tamil Nadu.

"Students have the freedom to select from 20 time slots and 10 faculty members as per their convenience and preference for mentors," says Dr Nair.

Before each semester, the students ought to register online based on their preference of slot-based timetable, course and faculty. Thus, students can prepare their own timetable depending on their activity. They are also encouraged to choose interdisciplinary courses from other streams for acquiring additional skills.

This year the varsity has introduced online examination. The questions pop up on the gadgets of the students on time and the results will be out once the faculty evaluate answer sheets and put marks online.

"There is no human interface in the system. The results are available on the net. Parents of the students can also check their wards' performance. Even hostels are equipped with bio-metric system. If a student doesn't register at 8 pm, the computer generates and sends an SMS to his or her parents."

The varsity has emerged as a favourite destination of students hailing from Andhra Pradesh and Telangana as it finds place in the Limca Book of Records for

securing maximum jobs placements in the country.

Source | |http://www.thehansindia.com/

GU top ranking varsity in state: Shodhganga

Gujarat University has recently been adjudged the best university in Gujarat and 20th in India by Shodhganga - a national repository for papers written by students of over 193 universities across India. The repository used the number of papers uploaded by these universities as the criteria to rank them. Two other universities - Saurashtra University and Maharaji Sayajirao University - were ranked 22nd and 35th in India. As per the notification issued by the University Grant Commission, as many as 12 universities from Gujarat and 40 from all over India made it to the best university list. Some of the universities named in the list are Jawaharlal Nehru University (JNU), Anna University and Mahatma Gandhi University.

Senior Scientist at Shodhganga Manoj Kumar said, "As many as 193 universities/institutes contribute to our repository. Out of them, 40 have made it to the top including three from Gujarat. Gujarat University has made maximum contribution from Gujarat while Saurashtra University and MSU have uploaded 281 and 158 theses," said Kumar. According to Kumar, Shodhganga broadly performs four kinds of functions,- uploading

Indian Electronic Theses & Dissertations (ETDs), formation of a digital library consortium, providing e-books and e-journals to registered members and Soul 2.0 (a software for library automation).

ABOUT SHODHGANGA

The main page of Shodhganga@Inflibnet reads, "The centre provides a platform for research students to deposit their PhD theses and make them openly accessible to the scholarly community. The repository has the ability to capture, index, store, disseminate and preserve the Electronic Theses and Dissertations (ETD)."

Source |http://www.ahmedabadmirror.com/

Software that helps visually challenged read and write

Visually challenged students can now read textbooks, browse journals and compose on the desktop using a special software designed by Department of Computer Science Engineering at the Vignan University. The software project - "Development of Educational Suite for Visually Challenged Students in Computer Science and Information Technology" has been approved by the Department of Science and Technology, Government of India.

The DST has further sanctioned

Rs.43.17 lakh towards the project.

"Students and faculty members are training 70 students from Kalabharathi and Government School for Visually Challenged at Narsaraopet in the usage of special software. Students are also being provided laptops and desktops in which the software is uploaded. We will also further augment facilities to train more number of students," said Professor A. Raghunath and K.V. Krishna Kishore (CSE).

Under the project, customised computers have been set up on the premises of library.

Source | http://www.thehindu.com/

An interactive science museum in Bangaluru

A science gallery is set to open in Bengaluru in 2017, to offer visitors interactive experiences and live experiments. Set up on the lines of a science gallery at the Trinity College, Dublin, the facility will be the first of its kind in Asia. The Bengaluru centre is part of eight similar university-linked science galleries to be established by the Global Science Gallery Network (GSGN), headquarterd in Dublin, by 2020. The Indian Institute of Science, (IISc) Bengaluru, is the lead academic partner for the gallery.

For scientists, the gallery will provide a new platform for creating, testing and communicating cutting edge research. The Science Gallery, Bengaluru will be an addition to the GSGN, which started with the centre at Dublin. The GSGN recently received a 1 million Euros as grant from tech giant Google. The Bengaluru centre will offer collaborative opportunities between Irish and Indian universities. "The aim behind this gallery is to ignite passion amongst youngsters about science and fostering the next generation of technology pioneers," says Chris Horn, chairman, Science Gallery International. Each gallery will create four exhibitions annually. One or two of these will tour the Global Science Gallery Network every year.

Source | Hindustan Times | 24 December 2014

Kerala to introduce digital textbooks in schools

In a major initiative that may revolutionise the general education sector, Kerala is all set to introduce multi-media "Digital Collaborative Textbooks" (DCT), the first of its kind in the country, in government schools.

This digital textbook will comprise information contributed by persons around the globe in audio or video formats, besides the scanned soft-copy of normal textbooks.

The state government has decided to launch the DCTs in government schools on an experimental basis from next

academic year starting in June, A Shahjahan, Secretary, Department of General Education told PTI.

Students and teachers can access the DCTs with the support of tablets and e-learning centres set up at schools.

IT@School, under the state General Education Department, is planning to formally launch the "digital collaborative textbooks" early next month.

A senior official of IT@School said Kerala is the first state to introduce this kind of multi-media textbooks.

"At the normal level, the DCTs are e-books in which ordinary textbooks are scanned and uploaded. But, a plethora of information, contributed by different people including experts in different subjects make them unique," IT@School Executive Director K P Noufal told PTI.

He said over 3.7 million students and about more than two lakh teachers in the state-run schools are expected to benefit from the ambitious project.

The department was also ready to share digital textbook model with private schools also which follow state syllabus. But, they should provide hardware and other supporting facilities to get the access, he said.

Source | Business Line | 29 December 2014

Google Translate to offer real-time speech-to-text conversion features soon

Google is planning to release an updated version of its Translate app for Android offering real-time detection and written translation of popular languages, according to a New York Times report. There is no date set for when the update will be available, though the report notes that it will happen soon.

The Translate app, Google says is used by 500 million monthly active users, and offers written translation of 90 languages and spoken translations of a few popular languages. Most Android devices currently running the application are expected to receive the upgrade.

Source| http://www.techspot.com/

E-content for UG and PG courses soon Will be available in a month on INFLIBNET portal, says UGC Vice-Chairman

University Grants Commission Vice-Chairman H. Devaraj said that e-content for 77 undergraduate and 78 postgraduate subjects would be ready in a month and available on the UGC's INFLIBNET portal.

The initiative was part of the Union Ministry of Human Resources Development's National Mission on Education through Information and

Communication Technology for which Rs. 400 crore had been allotted.

"Of this, Rs. 100 crore was given to the UGC. We have taken up two programmes under this — developing e-content for UG colleges for 77 subjects and e-PG Pathsala for 78 subjects. The e-content will be ready in a month. It will be available on INFLIBNET portal and students can download for free," he told reporters on the sidelines of an international conference at VIT University on Saturday.

Once the e-content is available, there will be no need for books, he said, adding that they would shortly bring out Massive Online Open Courses.

"States such as Orissa and Bihar are yet to cross 10 per cent GER, while the overall GER in the country is 19 per cent. We have a long way to go," he said.

In the last 60 years, UGC has established "an excellent base" for the country and controls 39,671 colleges and 761 universities now.

"We have provided enough general development assistance for institutions," he said.

"UGC has provided all basic facilities and now expects excellence and quality. We will review and monitor our programmes in colleges and universities. We will bring in an effective monitoring system for

this," he further said. He stressed on creating an academic environment to look at the needs of the country and needs of the industry. Crowd sourcing should be done and latest technology has to be adopted, he added.

NAAC deadline

Prof. Devaraj said UGC has made National Assessment and Accreditation Council (NAAC) accreditation mandatory for all colleges and universities.

"All institutions should apply for NAAC accreditation before June. Accreditation and assessment is important but NAAC had problems of staff shortage. We have provided 25 persons for NAAC," he said.

With the National Accreditation Regulatory Authority for Higher Educational Institutions Bill pending in Parliament, he said once this is passed, many regional centres might come up and even private agencies may enter into accreditation process.

VIT University Chancellor G. Viswanathan said steps should be taken to see that at least 10 per cent of total international students come to India for higher education.

Source | The Hindu | 13 January 2015