Corporate learning in a disruptive digital era: a new global organizational paradigm (A case-study of IBM’s Your Learning Platform)

Aprendizagem corporativa em uma era digital disruptiva: um novo paradigma organizacional global
(Um estudo de caso da Your Learning Platform da IBM)

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Suryanarayana Alamuri
PhD in Management
Institution: Faculty of Management, Osmania
Address: Hyderabad, Telangana, India
E-mail: professorsuryanarayana@gmail.com

Venkataiah Chittipaka
PhD in Management
Institution: School of Management Studies, Indira Gandhi National Open University (IGNOU)
Address: India
E-mail: venkatchitti@gmail.com

ABSTRACT
In a digital world when the technologies as well as the market places are evolving at an alarming pace, facilitating the employees to acquire newer knowledge and helping them advance their learning is most challenging than ever before. Staying agile and to become and remain ahead of competition in this swiftly changing business landscape is a daunting task indeed for companies. Corporate universities and Classrooms in B-schools have totally been overshadowed and got undermined by newer versions of learning and we are witnessing that the buffet of teaching employees is expanding and changing more than ever before. In addition to tracking down a plethora of in-person opportunities in the form of mentorships and training, employees are able to use their computers and smart phones to sift through facilely rich content online at any time and place. It may be in the form of online social media networks, published papers, as well as videos and courses. Nowadays, mobile and cloud technologies, and social networks are taken for granted by the tech-savvy modern employees. And not surprisingly, the millennials believe that technology makes them more effective and productive and hence always prefer to communicate through the electronic mode at workplace than face to face or for that matter even the telephone. They are found to be using technology only routinely. This Paper addresses the important challenge of shifting learning to the 21st Century platform economy faced by corporates and discusses how IBM has successfully tackled the same
through its Your Learning Platform.

**Keywords:** learning & development (L&D), mobile learning, 21st century platform economy, digital learning experience, collaborative technologies and tools.

**RESUMO**
Em um mundo digital em que as tecnologias e os mercados estão evoluindo em um ritmo alarmante, facilitar a aquisição de novos conhecimentos pelos funcionários e ajudá-los a avançar em seu aprendizado é mais desafiador do que nunca. Manter-se ágil e estar e permanecer à frente da concorrência nesse cenário de negócios em rápida mudança é, de fato, uma tarefa assustadora para as empresas. As universidades corporativas e as salas de aula das escolas de administração de empresas foram totalmente ofuscadas e prejudicadas por novas versões de aprendizado, e estamos testemunhando que o buffet de ensino dos funcionários está se expandindo e mudando mais do que nunca. Além de buscar uma infinidade de oportunidades presenciais na forma de mentorias e treinamentos, os funcionários podem usar seus computadores e smartphones para examinar conteúdos on-line de fácil acesso a qualquer hora e lugar. Pode ser na forma de redes de mídia social on-line, artigos publicados, bem como vídeos e cursos. Hoje em dia, as tecnologias móveis e de nuvem e as redes sociais são consideradas garantidas pelos funcionários modernos que entendem de tecnologia. E não é de surpreender que a geração do milênio acredite que a tecnologia os torna mais eficazes e produtivos e, portanto, sempre preferem se comunicar por meio do modo eletrônico no local de trabalho do que pessoalmente ou até mesmo por telefone. Eles estão usando a tecnologia apenas rotineiramente. Este documento aborda o importante desafio de mudar o aprendizado para a economia de plataforma do século XXI enfrentado pelas empresas e discute como a IBM conseguiu lidar com isso por meio de sua Your Learning Platform.

**Palavras chave:** aprendizado e desenvolvimento (L&D), aprendizado móvel, economia de plataforma do século XXI, experiência de aprendizado digital, tecnologias e ferramentas colaborativas.

**RESUMEN**
En un mundo digital en el que las tecnologías y los mercados evolucionan a un ritmo alarmante, facilitar a los empleados la adquisición de nuevos conocimientos y ayudarles a avanzar en su aprendizaje es más difícil que nunca. Mantenerse ágil y adelantarse a la competencia en este panorama empresarial tan cambiante es una tarea de enormes proporciones para las empresas. Las universidades corporativas y las aulas de las escuelas de negocios se han visto totalmente eclipsadas y socavadas por las nuevas versiones del aprendizaje, y estamos siendo testigos de que el bufé de empleados docentes se está expandiendo y cambiando más que nunca. Además de buscar una pléyora de oportunidades presenciales en forma de tutorías y formación, los empleados pueden utilizar sus ordenadores y teléfonos inteligentes para examinar contenidos en línea de fácil acceso en cualquier momento y lugar. Puede ser en forma de redes sociales en línea, artículos publicados, así como vídeos y cursos. Hoy en día, las tecnologías móviles y en la nube, así como las redes sociales, se dan por sentadas para los empleados modernos conocedores de la tecnología. Y no es de extrañar que los millennials crean que la tecnología les hace más eficaces y productivos, por lo que siempre prefieren comunicarse a través del modo electrónico en el lugar de trabajo que cara a cara o incluso por teléfono. Utilizan la tecnología de forma rutinaria. Este documento aborda el importante reto de cambiar el aprendizaje a la economía de plataformas del siglo XXI al que se enfrentan.
las empresas y analiza cómo IBM ha abordado con éxito este reto a través de su plataforma Your Learning.

**Palabras clave:** aprendizaje y desarrollo (L&D), aprendizaje móvil, economía de plataforma del siglo XXI, experiencia de aprendizaje digital, tecnologías y herramientas de colaboración.

### 1 INTRODUCTION

In an age of disruptions, it is no exaggeration to state that the rise of technology has all the potential to cause transformation of every single functional area of an organization. The power of technology in a highly networked world is too humongous and no aspect of Learning and Development (L&D) space within HR vertical could be cited as an exception from getting drastically altered due to its impact. Modern HR has already woken up to these new ground realities and newer wisdom has dawned on L&D managers about the current rise and advancement of modern technology and its projection into the future. With the advent of computers and Internet, organizations of every kind and size have been getting impacted significantly and repeatedly by technology. In the Information Age, operating businesses without the use of computers is just unfathomable. Companies have witnessed most profound impact of technology in L&D function. Improved performance and enhanced effectiveness are the immediate byproducts of innovative technologies that are affecting directly and vitally most of the L&D practices.

Technology has already changed the way in which HR officers manage and disseminate employee information and communicate, in general, with employees. Nowadays, employees are using freely intranets, wikis, webinars, and blogs internally to stockpile information, work collaboratively, and share opinions and project progress. There are companies that aggressively use social media to tie its far-flung and huge workforce together. Historically, technology-driven companies led the way in adoption of new technologies along with the work styles that go with them. Not surprisingly, these trends were most pronounced collectively in technology sector. Now, as technology has become more integral to the operation or mission of organizations, these themes and breakthroughs are now percolating to and permeating the larger work community without any exception. Modern HR trends generally don’t impact the workplace directly, but have more to do with affecting how we work. The physical workplace is far more than just furnishings and real estate. Organizations are all about how people work and are managed,
the technologies that enable the work, and how they employ the workplace for its own ends. Workplace even reflects forces of the larger external social and economic environment.

Long ago, number of off-the shelf or tailor-made computerized systems such as HRIS have been invented to simplify HR functions allowing companies to replace the paper work files and reap huge benefits. Companies continue to use technological tools for communicating, storing, and managing shared data for distributed work till date. However, we are witnessing today an extension of those capabilities to cheaper and more ubiquitous devices. L&D professionals used to collaborate with their associates only in conference rooms.

Employees were confined to their office rooms for eight to ten hours every day. Only tech-savvy firms used teleconference line or Skype. Now, one is able to witness innovative workplaces as employers are totally revamping their working environments to make them employee-friendly and more productive. Firms no longer need to transfer files via email or with a flash drive but can use virtual and cloud-based technologies making working remotely a viable option. One is able to witness the big blur between work and home already. Online, all the time, and availability via technology, has blurred the line between work and home.

Of late, L&D function is getting totally transformed and we witness a sudden rise of technology-enabled opportunities in these HR verticals. Technology-enabled training meetings, podcasts, tele-seminars, online learning, screen capture and recording software, and webinars are providing employee development opportunities. As technology-driven delivery options are getting expanded more and more, there are increased expectations for learning transfer to the job now. Similarly, other training and development options, opportunities, and definitions are coming on to the L&D surface. Let us examine some of them in the succeeding sections.

2 EMPLOYEE LEARNING AND DEVELOPMENT TRANSFORMED

Various mobile technologies and approaches are coming very handy for organizations that believe in lifelong learning and self-learning on the part of their employees. They help immensely in developing workforce skills such as literacy, numeracy, and participation in learning and also readiness among young adults and new entrants. The way employees received information, training, and learning is getting
radically redefined primarily due to the latest advances in mobile technology. The basic purpose of mobile devices has changed completely from making or receiving calls and the same has been replaced by retrieving the latest information on any subject. Now, HR professionals can hope to enable quality education for all employees through M-learning technologies such as handheld computers, MP3 Players, notebooks, mobile phones, and tablets.

**M-learning or mobile learning** is "learning across multiple contexts, through social and content interactions, using personal electronic devices." M-learning has been defined as the "processes of coming to know, and of being able to operate successfully in, and across, new and ever changing contexts, including learning for, at and through work, by means of mobile devices". It is a form of distance learning where in m-learners use mobile device educational technology as per their own convenient time. Mobile devices with interactive and multi-mode technology can be used in brick-and-mortar or online settings to enhance learning experiences of the employees. They facilitate online interaction between the facilitator-instructor and the employee-learner.

In the context of working employees, it can embrace a variety of different forms of learning such as (i) M-learning for work, (ii) M-learning at and through work, and (iii) Cross-contextual m-learning. Mobile learning is widely used in workplaces around the world as it allows widened opportunities for timing, location, accessibility and context of learning when compared to the traditional classroom pedagogical approaches. In this current scenario, all the cumbersome traditional resources such as textbooks, visual aids, and presentation technology are getting replaced by mobile devices with Wi-Fi capabilities allowing for on-demand access to information. They also give access to training centre activities and information providing a continuum for learning through communication applications, interactive displays, and video features both inside and outside the training setting. They revolutionize the way learning is imparted to employees irrespective of geographical boundaries with the help of uniquely designed training material or course ware so that employees would be in a position to master their subject with total ease. Increased communication, group collaboration, and better understanding of concepts are some of the immediate by-products of mobile technology applications that enhance employee-centered learning. Technology allows the earners to engage and manipulate information as well. Of late, Mobile-Assisted Language Learning (MALL) is also increasingly being deployed to assist in language learning using handheld computers,
cell phones, and podcasting to help employees acquire, develop, and hone their language skills.

Information technology makes it possible for human resources professionals to train new staff members in a more efficient manner as well. The ability to access company information and training programs from remote locations eliminates the need for trainers to work directly with new hires on all training. Some interaction will always be necessary on some level, of course, but training in virtual classrooms makes it possible for the HR professionals to train a large number of employees quickly and to assess their progress through computerized testing programs. One is able to witness a sudden rise of technology-enabled opportunities in the domain of training, employee development, training meetings, and seminars.

Podcasts, tele-seminars, online learning, screen capture and recording software, and webinars are providing employee development opportunities.

**Podcasting** consists of listening to audio recordings of lectures. It can be used to review live lectures and to provide opportunities for employees to rehearse oral presentations. Podcasts may also provide supplemental information to enhance traditional lectures delivered in training sessions.

As the technology-enabled delivery options are getting expanded there are increased expectations for learning transfer to the job now. Similarly, other training and development opportunities and definitions are coming on to the surface. Training is no longer occurs in a classroom alone. Now, we have newer and multiple options such as online learning, earning an online degree or credits, and all forms of web-enabled education and training. By using these choices available, employers are saving millions of dollars in employee travel expenses. Moreover, the employee’s access to the training has become more available, affordable, and accessible. Every single employer has joined the bandwagon of experimenting with and making substantial progress in classroom training in a virtual world called Second Life. We can also look forward to the concept of alternative forms of employee learning such as coaching and formal mentoring hitting the mainstream and bringing in lot of success.

### 3 COLLABORATIVE TECHNOLOGIES

With the rise of rapidly occurring technological breakthroughs these days, there is no dearth of availability for enabling technologies and social collaboration tools making
the world highly networked. Companies using technological tools for communicating, storing, and managing shared data for distributed work till date is nothing new. However, of late, we are witnessing an extension of those capabilities to cheaper and more ubiquitous devices. Today, all one needs is a smart phone or any other wired device that reaches the Internet to be able to access work materials and interact with colleagues on a 24/7 basis. Nowadays, these tools are being consolidated into easy-to-use collaboration platforms. Employees are able to collaborate asynchronously—that is, not simultaneously with others—to check in and respond to message threads and document changes as their schedules allow. As teams are becoming more distributed across multiple time zones and more and more employees are juggling multiple teams and projects this shift becomes very much essential. Today, synchronous—or simultaneous with others—tools such as video and audio conferencing, data sharing, instant messaging, presence detection, availability status, reputation, and knowledge capture are being added and getting used increasingly. Collaborative technologies combine synchronous and asynchronous tools, merge and consolidate to fewer, stronger providers, and converge to standard platforms (for example, Google and its suite of search, email, document sharing, groups, etc.). Due to this feature they are undoubtedly reaching new levels of ease-of-use, fidelity, and ubiquity. Collaborative technologies are fine only for exchanging formal knowledge. However, they don’t work well to help an employee get to know colleagues on a personal level (their passions, their family, where they went on their last vacation, etc.). However, there can be no substitute for the dialogue that used to take place around the company water cooler The so-called social media technologies are going to help fill this gap: “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0. Technology tools are being consolidated into easy-to-use platforms that let employees collaborate in both a synchronized and non-synchronized manner.

4 HOW CAN CORPORATES SHIFT LEARNING TO THE 21ST CENTURY PLATFORM ECONOMY

Businesses “creating and selling to the consumers” represents the traditional ‘pipe model’ of business. This kind of flow of producing value upstream and people consuming downstream used to be found ubiquitously in every line of business including education and training and has outlived its utility now. In this highly networked era, representing a
seismic shift, businesses are moving towards a ‘platform model’ in tune with the ever-changing world of technology that is overly steeped in analytics and social networks. In order to be in sync with the changed demands for professional learning, these latest platforms are effectively offering to anchor a modern ecosystem of producers and consumers always providing the needed tools for everyone to have interactions. They act as virtual meeting places where people can exchange their needs, ideas, and content as well. It perfectly suits everyone as anyone can contribute and get benefitted at the same time. Though this paradigm shift from a pipe model to a platform model immediately results in the total surrender of control over how and what employees learn, the most progressive organizations go to the extreme of personalizing and offering best possible customized learning opportunities to every employee and help them grow and succeed in their professional lives with umpteen possibilities.

5 TECHNOLOGY AND ARCHITECTURE

Limitations of traditional learning-management systems, in total contrast, became more conspicuous with more and more alternatives and avenues blooming and blossoming in the marketplace.

Now, components of an organization’s learning and development interventions are no longer going to conform to and go through ‘collect-curate-deliver-update-track-report’ sequence in their management. Present generation employees want more autonomy in their learning pursuits that are tailor-made to suit their individual learning needs and goals and the latest technologies do provide broader access to more and varied learning opportunities. In the current scenario, corporates require such learning technologies that encompass the regular offerings and also those that are social, informal, and external both in terms of platforms and content. In order to be able to offer opportunities for self-discovery, social interaction, and personalization a more fluid approach instead of the erstwhile top-down industrial model becomes an imperative. The need of the hour, after all, is successfully matching the ever changing learning needs of employees and their business leaders in a technology-driven world.

Today’s employees are obsessed with a syndrome: to have a one-stop-shop that allows them to search for the needed systems and avenues. They think they would be able to find and obtain meaningful learning and domain-relevant offerings that help in getting recommendations besides tracking their progress over a period of time—all under one
umbrella. The real challenge for Learning and Development professionals is to design, taking advantage of the modern technologies, open learning ecosystems that basically rotate around the user experiences rather than corporate demands. In such an environment, employees would definitely be in a position to mine social networks for tailored opportunities for their unique learning needs. For designing such a site within the new ecosystem, HR people should take a leaf from the consumer world and look at the sites maintained by Netflix and Amazon that offer high class usability while dealing with complex and humongous arrays of data.

6 IBM’s DIGITAL LEARNING EXPERIENCE THROUGH ‘Your Learning’ TOOL: A CASE STUDY

Digital access to learning is very much critical for businesses as they help retain the best and the most brilliant. We are aware that there are needs and burgeoning demands for such kind of access. Keeping this in mind, IBM developed a formidable tool named as Watson and leveraged it fruitfully. Watson has the ability to work both with structured data and unstructured natural language. Similarly, IBM has developed Your Learning—a Digital and Cognitive Learning Platform to engage and enable employees using the latest in technology. It is no wonder that humongous data and myriad social interactions take place everyday within IBM. However, IBM’s Your Learning effectively mines the data and manages the sea of human engagements. For this, it combines an easy-to-use graphic interface with the under-the-hood power of IBM Watson’s cognitive analytics. Its ability grants IBM’s Your Learning the means to swiftly integrate, assess, and curate not only a vast amount of learning sources—formal, informal, and social—but also to customize vetted offerings for each individual learner. IBM expects more meaningful recommendations to be forthcoming from Watson as it starts learning more and more about each one of its users. It also responds and alerts others fast by pruning the content that is having little impact once it processes the social comments that coming from a multitude of users and the entire feedback.

6.1 WORKING OF INDIVIDUALIZED LEARNING

In a fast changing technical and business landscape, users generally like any learning platform that responds with speed, flexibility, and creativity besides providing
24 x 7 interfaces for each employee. But, IBM’s Your Learning platform provides search, browse, career roadmaps, plus customized learning channels, while its learning analytics link consumption patterns with skill improvement and business impact. Amazon.com’s capabilities make smart recommendations for books, movies, and other merchandise. On similar lines, IBM’s cognitive capabilities grew on similar lines. Now, it can make better and smarter recommendations with its improved search results. It is able to provide more meaningful planning suggestions to its employees. An employee’s friends, colleagues, and like-minded strangers contribute to help them find what they need to progress in and succeed as learners. This is possible due to the power of social media that IBM’s Your Learning platform taps into successfully. Using Watson’s cognitive power, it can also ask what each individual is interested in, find out what people having similar likes and interests generally consume, before offering most meaningful and relevant suggestions. Based on its understanding of each worker’s learning needs and desires, it reveals unexpected career opportunities, if any, using cognitive analysis. It is more important than ever that industry professionals need agile and personalized experience that aids them to make better business decisions in this cognitive era. Realizing this fact, IBM’s Your Learning is designed to help transform their businesses by creating more personalized digital learning experiences. Such experiences give learners ownership over building their career, putting their destiny in their own hands.

6.2 IBM’S YOUR LEARNING PLATFORM: ITS DESIGN, TECHNOLOGY, AND ARCHITECTURE

IBM’s Your Learning platform was designed to covers three key elements:

a) First, the core value—the learning opportunities;

b) Second, the interactions among learners—made possible via social networks to engage, to share, and to rate learning opportunities;

c) The platform itself— presenting an intuitive and direct interface to the array of available learning options: internal and external, digital and in-person.

In an open and cloud-based environment, this tool uses to the fullest extent the ongoing innovation efforts and provides a boost. Of course, its public APIs aid and assist this process effectively. It is no wonder that clients always want to get connected to the digital learning platform, to their unique and individualized applications, and sources of data. Open services provide the perfect connectivity while avoiding the complexity and
vendor lock-in issues with proprietary systems. IBM’s Your Learning is built with IBM Bluemix and Cloudant technology and they are based on industry standards for cloud applications and hosting. This delivers a powerful and immediate learning solution besides enabling future innovation. To bring in an analogy, just as all travelers leave their homes and go for different and varied destinations, learners also commence their journeys for many and variety of reasons. Some of them are:

a) They have the urge and curiosity to find a solution, answer, point of view, or an expert that are found outside of their organizations;
b) People do get an invitation on account of the roles they perform, or due to a job change, or in pursuit of compliance;
c) A suggestion that they must received through word-of-mouth, social networking, or target marketing.

To be successful in meeting and supporting all these needs, IBM’s Your Learning’s interoperability with multiple internal and external trusted sources should allow its features and services. Different learners are generally found embarking upon different learning journeys and odysseys. Despite this, all have one thing in common: applying the knowledge possessed by them to improve their businesses through bettering their individual selves. This requires them to sail through FOUR steps. They are:

a) Discovery or kick-starting their journey;
b) Exploration of whatever is available;
c) Immersion in the learning process;
d) Adoption of the learning.

6.3 METRICS AND MANAGEMENT SYSTEM

Any learner using modern technology expects his/her learning experiences to be purposeful, productive, and delightful. IBM Learning just does this and fills their needs and wants. The litmus test for establishing its efficacy lies in measuring the impacts it produces. This is done through quantification of its usage, using the user feedback for the purpose of qualifying its improvements, and measuring the impacts it creates through clients’ success.

For succeeding in these tasks, it demands and deserves an altogether different approach to metrics de novo. At one of time, IBM’s Your Learning managed about 400,000 learners per month. Each day, it could process 30,000 to 100,000 user
transactions from more than 30 trusted learning sources. Three-quarters of IBM’s learning completions used to come from outside of the traditional learning-management system. The popularity of IBM’s informal sources such as IBM Connections—an IBM’s internal community platform (wikis, communities, and blogs), internal video replays, and virtual event system virtually experienced a boom. All of them have the potential to track who uses what and how frequently. It tells us the whole story about the kind and level of engagement of the learners, learner autonomy, their reaction and input to create an irresistible experience all made possible through valid feedback. These metrics enable IBM to keep informed about employee skills development and career acceleration. They also reveal the engagement levels of IBM’s employees. After all, engaged, empowered, and confident employees alone can positively impact and transform the business of any enterprise.

In this context, Web Analytics deserves a special mention. It is highly useful as it allows IBM to better understand the (i) site traffic and trends, (ii) devices the learners use, (iii) the particular times they engage, and (iv) the things they search for, and far more. For collecting feedback and drive iterative change, IBM uses the Net Promoter Score Model. It uses the real-time Chat Advisor features to assist learners in the moment of need. To analyze the emotional sentiment of users and predict digital learning preferences, the power of Watson analytics is used. It may be noted that the learning experiences get fine-tuned and user experiences become more personalized and fulfilling by adding the cognitive and social power. This also affords an excellent opportunity for making the programs prominent if they witness a spurt in learners’ interest. Of course, courses that experience poor reviews get dropped altogether. In the recent past, IBM could manage to combine big data from over 3.75 lakh learning histories.

Similarly, it also succeeded in assessing and creating better learning recommendations by compiling more than nine million completions and 56000 learning activities. The real take away from this exercise comes from the fact that each one of the recommendations is tailor-made to each of IBM’s global roles, skills, business groups, and personal learning histories.

7 SUMMARY THOUGHTS

Of late, Learning & Development (L&D) function is getting totally transformed and we witness a sudden rise of technology-enabled opportunities in these HR verticals.
Technology-enabled training meetings, podcasts, tele-seminars, online learning, screen capture and recording software, and webinars are providing employee development opportunities. As technology-driven delivery options are getting expanded more and more, there are increased expectations for learning transfer to the job now. Similarly, other training and development options, opportunities, and definitions are coming on to the L&D surface. Various mobile technologies and approaches are coming very handy for organizations that believe in lifelong learning and self-learning on the part of their employees. IBM has amply succeeded in frog leaping learning to the 21st Century platform economy. This was demonstrated through this Paper by discussing the different dimensions of digital learning experience in detail using IBM’s: **Your Learning** Platform as a Case Study.
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