

# Learning Hubs

## Where Learning Takes Place in a Digital World

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April 2013



Cisco Internet Business Solutions Group (IBSG)

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*This paper is the latest in a series of perspectives by the Cisco® Internet Business Solutions Group (IBSG) on the future of geographically distributed, networked work and learning, and how this approach is enabling profound changes to organizations, communities, and individuals. It focuses on new models for learning and how institutions are adapting their infrastructures, propositions, and engagement modes to a digital world.*

#### Introduction

*“This call for action is written for activists and thinkers who have had, or dream of having, the privilege of being able to build visions of what learning could become in a globally connected world rich in ubiquitous digital technologies. This is a privilege because the work of making realistic and rich visions requires conditions that are unfortunately rare. They include: time to think, communities of like-minded people to think with, diverse forms of knowledge to fuel the thinking, and real-world experiences to keep the thinking under control.”<sup>1</sup>*

Ubiquitous mobile technologies, cloud services, and the network have created a range of learning opportunities in ways previously unimaginable. Learning has always taken place anywhere—not just in formal environments such as educational institutions or the workplace, but online in the home, in informal conversations, in public debates, in museums, and elsewhere. However, not everyone learns autonomously: many need support and guidance in turning information into usable knowledge. Workplace learning expert Jay Cross was among the first to recognize and reward informal learning as the most effective way of turning theory (explicit knowledge) into practice (tacit knowledge) by working alongside and/or conversing with more experienced people.<sup>2</sup>

Many learners either have failed or have not achieved their potential under the formal education system, and may benefit from alternative models and places for developing their skills and gaining further knowledge. Now that informal learning is widely accepted, it has an important and necessary place alongside formal education. Therefore, opportunities afforded by technology to learn anywhere, anytime ought to be accompanied by tools and spaces for both types of learning—for networking with peers and teachers, both virtually and physically.

#### Learning Is Collaborative, and Teaching Has Changed

Sometimes learners need help from experienced peers, teachers, or trainers. With knowledge easily accessible, the role of the teacher has changed significantly—teachers are no longer the gatekeepers of knowledge. In today’s information age, the teacher’s role is evolving: from “sage on the stage” to “guide on the side” to, more recently, “mentor in the center.” With myriad resources in multiple formats available on the web, perhaps the teacher’s role should now be that of a “curator.” The museum curator gains public interest by selecting which artifacts to put on display, arranging them logically for better understanding, and displaying notes and captions alongside the exhibits to provide further information. The

curator archives and catalogs other artifacts, which are available to people who want to pursue the topic in-depth, and also provides support as needed.

In some way, the Internet is much like a museum (albeit, not nearly as well-cataloged); therefore, teachers must “curate digital artifacts” and “display” them in a way that provides deeper understanding and ignites interest in further learning. In this way, the Internet does not provide less support; it offers a different avenue for acquiring information.

With the rise of Massive Open Online Courses (MOOCs)<sup>3</sup> and the increase in the number of virtual universities,<sup>4</sup> there is a significant need for physical environments where learners can meet and offer mutual support when they enroll in virtual courses. This need is evidenced by attrition rates of up to 90 percent for students taking MOOCs, largely due to the lack of tutorial support offered. Any support that is forthcoming is provided only through online forums—rarely with teachers, and never face-to-face. Compare this situation to support offered by The Open University<sup>5</sup> in the United Kingdom, for example, where cohorts are smaller, associate lecturers are appointed to support learners, and face-to-face meetings are held regularly throughout a course.<sup>6</sup>

As more universities offer MOOCs, they will need to review business models and monetize some aspects of the courses, such as paid-for certification-proctored exams and learner support. A network of “learning hubs” could provide these facilities. (Learning hubs are discussed beginning on page 4.)

Another factor driving the need for more physical learning environments is increased participation in higher education, indicating the growing importance of support for individuals. Not all students are self-motivated and confident learners; some require more time to understand a subject and may need concepts defined in new ways or to be shown another approach to learning the material. A personal tutor will come to know his or her students and help them find the best way to learn a subject. For some, this pathway might be online; for others, face-to-face communication might be preferred, especially at the beginning of a student’s program of study. For new learners, meeting regularly may provide a strong sense of belonging and level of commitment that help ensure a student’s progress.

The human condition dictates that from time to time, people need others for support, encouragement, or just company. Physical learning spaces provide that human touch. Research at The Open University reveals that meeting a subset of your student cohorts is important to learning, and occasionally physical presence is more valued than a virtual one.<sup>7</sup> Additionally, for newcomers to tertiary education and training, face-to-face experiences also have a strong social function—a key feature and benefit of a brick-and-mortar tertiary education.

Education increasingly includes group tasks and activities, which are important for developing the skills employers want: collaboration, turn-taking, empathy, and listening. These abilities are difficult to achieve online, especially in the early stages of building relationships and determining group dynamics. After a period of time, students might agree to continue group work online, either through an asynchronous forum or via a virtual meeting using collaboration tools such as Cisco WebEx® or video conferencing. Or, they may decide to continue to meet in-person periodically. If so, this will require the availability of physical spaces in convenient locations.

## Learning Hubs

Learning hubs may be the answer to these challenges. A learning hub is a technology-rich learning environment with both physical and virtual components that provide formal and informal opportunities for learners to come together with peers, teachers, and other experts in their field. Here, individuals can access relevant knowledge and information, enlist support from educators and other learners, and, in so doing, develop new opportunities to improve their livelihoods.

## Learning Hubs Versus Study Centers

As noted earlier, individuals often are concerned about returning to formal education environments, yet they want to find ways to improve themselves. An informal study center—with or without the added value of online learning—might provide the means.

The notion of learning hubs in the form of study centers is not new—blended learning programs intersperse face-to-face encounters with virtual learning; and distance-learning students studying with Open Universities around the world meet with associate lecturers at study centers to discuss aspects of their course or become introduced to a new topic. What differentiates a learning hub from a traditional study center is that a hub is purpose-built to accommodate more than just tutorial instruction and seminars. A learning hub also serves as a space for temporary or prearranged meetings and discussions with peers—perhaps to work on a project or group assignment, or to provide mentoring and support through the sharing of experiences and expertise. Furthermore, learning hubs enable students to meet with experts and mentors virtually or join a class remotely (from one or more learning hubs) via high-definition video conferencing or Cisco TelePresence® facilities.

## Learning Hubs: The Vision

The solution for the future of learning draws parallels with the future of work—working practices performed independent of time and place. Smart Workers will choose their work venues to suit the task at hand.<sup>8</sup> As the growth in online learning mushrooms, the best providers of virtual education will recognize the value of *some* face-to-face contact and will look for spaces that provide online learners with a physical learning environment at low cost and, if possible, close to where students live. These spaces might be for practical activities, lab work, or group activities that are best done—or can only be done—in a physical environment. Schools, universities, and other brick-and-mortar facilities that have additional physical capacity and need more revenue might offer space to a learning hub developer or create it themselves and rent the space.

Such spaces are available to learners who study part time at another institution and live some distance from their own institution's campus. The spaces might also be made available to those who are either enrolled in an online program or have prior commitments that prevent them from spending significant time on campus. Learning hubs can exist not just in schools, colleges, and universities, but also in libraries, community halls, Smart Work hubs, or empty pubs and shops. In fact, any wired location can serve as a learning hub.

Learning hubs are connected to each other and to the world. If the information and help a learner needs are not available in one hub, the student can source an expert across the network of learning hubs. Librarians, teachers, and experts are located at the hubs to help visiting learners find resources and connect to mentors, tutors, and other learners and

experts. An online booking system allows education providers to reserve space for formal education programs. “Home-grown” resources developed by teachers and learners are placed in a global learning hub repository and made available for others to access, rate, adapt, customize, and improve. Video and collaboration services are available across the network of learning hubs; each hub subscribes to the services and pay fees according to usage and ability to pay. A network of mentors—many of whom work on a voluntary basis—offers additional physical and virtual support.

A learning hub can be small or large, and can be located in the developed or developing world. Regardless, all hubs are connected in some way. The most advanced have ubiquitous wireless connectivity; fast, wired connections and IP phones; small meeting rooms; and open learning areas. Some have Cisco TelePresence systems, interactive whiteboards, or screens and data projectors. Large display screens placed around the hub enable students to plug in their devices and share their screens. Hubs also contain comfortable chairs, desks, a snack bar, quiet spaces, and screened-in areas for small work groups. All spaces are flexible so that rooms can be adapted for different activities and configurations: individual work, small or large work groups, or entire class activities.

### **Learning Hubs To Meet Specific Needs**

Learning hubs of the future will come in many guises and serve a number of purposes. These are just some examples of possible learning hubs designed for specific needs.

#### *Recycling Empty Buildings*

A “schoolshop” set up in a vacant store in suburban Chicago provides an after-school homework environment for K-12 students. Children stop there on their way home from school. Lawyers, journalists, artists, and other professionals are encouraged to drop in to help students with their homework on a voluntary basis—the impact is greater motivation and engagement, and less truancy or school dropout rates. In a similar vein, designer Sean McDougall’s concept, “Crowning the Learner,”<sup>9</sup> calls for pubs and bars that have closed down to be sponsored by local government and reopened as “learning pubs,” where the “bar” staff are teachers. Anyone is allowed to enter—older people learn from younger ones, and vice versa. Learning is traded: younger people might help older folks use the Internet; older people might share their expertise and experience in given areas. The pub is fully wired, and teachers are on tap to help anyone who asks.

#### *Combining Work and Learning*

Learning hubs can also be located in Smart Work Centers (SWCs), where meeting-room and video-conferencing facilities enable students to join classes virtually. Such classes can be held at the colleges or universities that students attend, or elsewhere. Or, students could meet with others via several Cisco TelePresence facilities connected locally, regionally, nationally, or even globally.

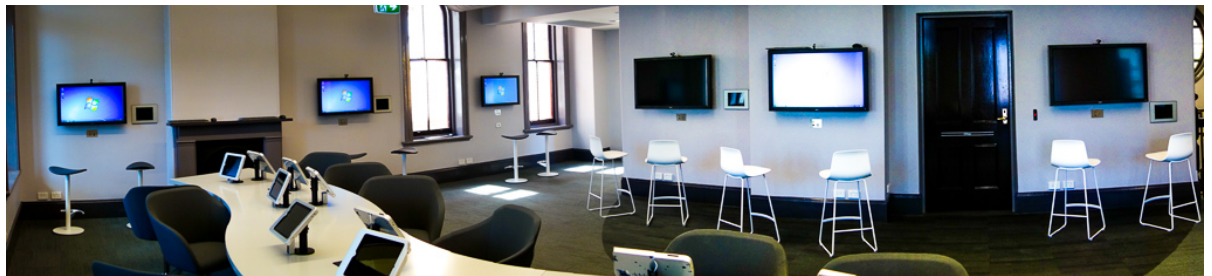
Students who attend an educational institution part time could meet with peers at SWCs. Courses in entrepreneurship and opportunities for applied learning would help increase availability of SWCs and incubation hubs, and attract new businesses. Combining learning hubs with SWCs presents opportunities for serendipitous connections that lead to employment or new business ventures.<sup>10</sup>

### *Attracting New Students*

Other learning hubs might operate on a franchise basis. The University of New England (UNE) in Armidale, Australia plans to offer degrees via distance learning nationally and across the world to Australians who are traveling. Called Future Campus, this venture features a network of expanding study centers equipped with the latest in educational technologies that enable students to connect, study, and interact with staff and students globally. The first campus, which opened to the public in April 2013, provides distance learning to more than 2,000 university students living and studying in Western Sydney, Australia (see Figure 1).

At the campus' opening, University Professor and Vice Chancellor Jim Barber said, "Now technology has allowed us to remove the 'distance' from education and bring face-to-face online learning to people in the areas in which they live. With increasing numbers of people looking to study later in life, they need to know there are support facilities available that will allow them to juggle lifestyle commitments such as work and family."

**Figure 1.** UNE's Future Campus at Parramatta in Western Sydney Is Equipped with Teleconferencing and Cisco TelePresence Collaboration Technologies, Wireless Connectivity, and Physical Spaces for Collaborating In-Person with Peers.



Source: University of New England, Armidale, Australia

### *Creating an Environment for Incubating Ideas and Much More*

Learning hubs can also serve as think tanks of sorts. Such is the Learning Lab,<sup>11</sup> a new center for education, technology, and innovation based in central London. Located in Hub Westminster<sup>12</sup> (see Figure 2), the Learning Lab is a 12,000-square-foot incubator space for inventors, venture capitalists, community activists, designers, engineers, and policymakers working together to tackle the world's most pressing challenges. The hub gives companies and partners an opportunity to showcase their products, services, and innovative work, and also serves as a professional development center where school, college, and university leaders can pilot projects, conduct research, and more.



**Figure 2.** The Learning Lab Contains State-of-the-Art Technology Such as Multipoint Video Conferencing Systems, Flexible Furniture, as Well as Collaboration Spaces.



Source: The Education Foundation, 2013

## Growing a Network of Physical Learning Hubs

There is an opportunity to develop a network of learning hubs around the world. Many organizations and communities are discussing new work and learning models that will bring together communities in ways that impact and improve the economy, globalization, and social cohesion.

### New Models for Skills Development

The National e-Skills Institute, a flagship project of the Department of Communications, Republic of South Africa, is a facilitator and change agent preparing the nation to harness the potential of information and communications technology (ICT) across the full spectrum of society to address the country's major challenges in achieving equitable prosperity and global competitiveness. The objective of e-Skills is to explore the use of ICT for employment readiness, effective e-governance and service delivery, business development, local innovation, and socioeconomic development, underpinned by a sound research evaluation and monitoring framework.

The e-Skills Institute is working with Provincial Knowledge Production and Coordination Co-labs, located in universities around the country, with the intention of establishing co-labs in each of the nine provinces. Six have been established so far. Each co-lab champions a strategic priority area such as e-enablement of government services, ICT for rural development, free and open-source software, e-entrepreneurship, e-health, digital inclusion, and social innovation. Instructional design standards are being created to make the curricula and

content developed or sourced by the co-labs available to all users via an e-Skills Cloud. These resources will be available through “Smart Knowledge Community Production Centers,” at work, at home, or on mobile devices.

The regional co-labs will spawn networked community centers that will also serve as learning hubs that support both formal and informal learning, and provide a place where citizens can access health and other government services, get help in writing their curriculum vitae or applying for a job, and more. Cisco is helping e-Skills design a technology proof of concept to explore the impact of technology (such as low-end video solutions) and to ensure the program’s success.

Another example of skills development in a novel environment is General Assembly,<sup>13</sup> which provides both online courses and intensive local workshops across the globe—currently in Australia, Germany, Hong Kong, the United Kingdom, and the United States. The General Assembly model goes beyond existing approaches to learning, focusing on digital skills. It operates courses led by expert digital practitioners and engages and partners with employers to guide students toward careers in which they can directly apply their acquired skills. Physical locations provide innovative spaces for learning, working, and collaborating with like-minded people in the center of urban digital clusters such as Shoreditch “Tech City” in the East End of London.

### **New Collaboration Models for Education Across Countries and Regions**

Smaller, independent educational institutions such as THNK, the Amsterdam School of Creative Leadership, are often experimental and learner-centric in their approach. THNK, in partnership with Cisco and TPEX (TelePresence Exchange International), is currently exploring ways to improve the student experience at a tertiary level and beyond. It seeks to achieve this not just at its existing locations, but also at proposed satellite locations around the world, where THNK hopes to mirror the model of its Amsterdam location, while ensuring the student experience. The partnership calls these hubs “brain havens.”

In general, technology-rich learning hubs with innovative features in space design are proving to be a potential solution to both the consistency and continuity of learning. This phenomenon is also happening with larger universities setting up satellite campuses around the world.

### **Making K-12 Education More Relevant**

There are a number of challenges facing the K-12 education system globally, including:

- Dealing with the issue of young people (typically ages 16 to 24) who are not in education, employment, or training (NEET)
- Addressing the shortage of specialist teachers
- Provisioning supportive environments where budding young entrepreneurs can develop their ideas
- Encouraging new models for student engagement that address increasing disaffection in general

A U.K.-based group, led by Cisco and Futurelab at the National Foundation for Education Research, is exploring how learning hubs can be designed and developed to address these and other challenges. The group also recognizes that changing work patterns and increased



access to mobile and collaboration technologies are enabling new opportunities. However, this situation presents challenges to schools that have not embraced technology to its fullest, and creates concerns about the lack of preparation on the part of schools to help learners thrive in this new order. The proposed test bed for learning hubs in schools seeks to provide an environment that is more aligned to the workplace and encourages learners to work together to develop skills in collaboration and critical thinking that employers seek.

### **Smart Education in South Korea**

The South Korean government is investing US\$2 billion to develop a Smart Education initiative by 2015. According to the Smart Education Strategy Execution Plan, after-school classes in “community” classrooms will address the education opportunity and information gap among regions and social classes.<sup>14</sup> Cisco IBSG proposed a learning hub model that utilizes Cisco TelePresence-based facilities to enable specialist school teachers and renowned private instructors to teach across these classrooms, allowing external experts greater opportunity to teach more students in multipoint specialist and aptitude classes, thus lowering costs and reducing travel times for these teachers.

There is also a design for a mobile classroom that will provide an “any play” learning environment, enabling students to study through digital education content anytime, anywhere, and on any device. Such classrooms will serve as learning hubs offering face-to-face and peer support.

The Korea Education and Research Information Service (KERIS) and the Multifunctional Administrative City Construction Agency (MACCA) are creating the national learning hub and education content open market, enabled and powered by the cloud and the “future school” in Sejong City, South Korea.

### **Next Steps**

Early discussions among educators have revealed the need for learning hubs in a range of guises. Institutions, communities, and entrepreneurs must take a number of considerations into account to advance a local and global network of learning hubs, including:

- Building a business case for investors
- Developing a set of technology-rich learning hub designs fit for 21st-century learning and relevant to each socioeconomic culture in which they reside
- Building a global learning infrastructure from which virtual and physical learning hubs can buy services
- Developing cost-effective and sustainable solutions
- Creating an effective digital resource-sharing repository and model
- Identifying suitable locations
- Using existing provisions such as SWCs, university and school campuses with spare real estate, community centers, and so on
- Understanding the role of existing ventures and initiatives in the learning hub network (such as the examples in this paper)

- Determining the role of “pop-up” learning hubs—such as Dialogue Café,<sup>15</sup> physical spaces connected through high-end video-conferencing technology to enable city-to-city and multicity events—in meeting specific, short-term needs
- Marketing the learning hub concept

In developing a viable business model for learning hubs, it will be necessary to:

- Identify potential partners and bring them to the table
- Orchestrate new partnerships among entities wishing to offer virtual and/or physical learning hubs
- Develop the technical architecture to support and provide access to cloud services from learning hubs and mobile devices
- Facilitate the development of a “knowledge exchange,” enabling sharing of resources globally among learning hubs in each of their manifestations. Using tools such as Cisco WebEx Social is a way of sharing tacit knowledge more widely through electronic communities of practice in a connected world.

The demand for learning hubs has never been greater. Alternative learning models and education spaces that coexist with traditional educational institutions, combined with technology that enables learning to take place anywhere, anytime, will help today’s learners and tomorrow’s students achieve their full potential.

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*The author would like to thank Bas Boorsma, Shane Mitchell, Tony Kim, and Cynthia Bournellis for their contributions to this paper.*

## Endnotes

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