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## Sustainable LIS Pedagogical Skills with Virtual Learning Environment (VLE): Collaborative Career Development Platforms, Communities and Practices

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### Abstract:

*Continuing Professional Development is the dire obligation of the practising library and information professional in the challenging information society, ever-changing user needs, and advancing support tools. The national and international library associations carry the responsibility of the CPD for the librarians. Traditional face-to-face training, discussions and conferences are supplementary with eLearning platforms, making acquisition of knowledge easy, accessible, economical and thus possible across the geographical limits for career advancement. This study aims to explore the use of Virtual Learning Environment tools by professional library associations for career development, collaboration, networking, and building communities across the globe.*

**Keywords:** Virtual Learning Environments (VLE), career development, library associations, cooperative learning.

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### Introduction

Growing challenges of the increased information, knowledge management, social sharing and professional collaboration tools have put the librarians in the stream of consistently upgrading the knowledge and skills. Around the globe, there is also a greater focus on librarians' capacity building to sustenance information and knowledge societies, lifelong learning and

sustainable development goals 2030 by UNESCO. To keep the library and information science students abreast with the latest trends and demands, the Library and Information Science (LIS) schools and iSchools are offering emerging education and awareness. However, the practising librarians face wide-range of evolving challenges on the job and look back for Continuing Professional Development (CPD) support from the associations, library schools, and other platforms. LIS associations and professional bodies are answering the librarians need through live and virtual learning opportunities. The CPD programs are helping librarians to gain knowledge through teaching and experience sharing, networking and collaboration, mentoring and consultation as well as awareness of the resources, policies, laws, practices and support available on the national and international level.

### **21<sup>st</sup> century challenges and required skills**

The role of librarians in the digital era, remain fundamentally unchanged, though become thoroughly diverse in front of the networked digital information. Nowadays, collections are digital, spaces are for people along with and/or instead of books, access is virtual, bibliographic information is metadata, reference services are learning commons, orientation and instructions have converted into information literacy and librarianship have become embedded into disciplines and environments. Fast pacing technology and growing access have empowered the users but at the same time, divert them to seek support from librarian to overcome the information advancement. The librarians are facing challenges for both, their self-learning and teaching to hi-tech users. The expectations are to run the traditional librarianship of acquisition, technical processing, storage and retrieval with the latest tool but also likely to train, teach and guide the overburden information users. 21st-century learning skills and abilities mainly based on philosophies of collaboration, communication, and creativity. The organisations intend to introduce new services and functions i.e. Research data services (RDS), digital scholarship and ICT operations are presuming existing library staff to take over instead of hiring new one and thus casting more demand for the CPD (Hotline, 2014). Continuously, developing pedagogical and professional skill are the only option left for the librarians, to acquire knowledge ahead of their users, to sustain the lifespan of library programs.

### **Review of Literature**

#### **Continuous Professional Development (CPD)**

Continuous professional development (CPD) is adequate in the age of economy and technology globalisation, evolving demographic, diversity of the workforce, client and quality focused, hi-tech and high-performance systems, and prominence on the human capital (Noe, 2013). Career development in LI context sometimes referred to as continuing professional education (CPE), is the process by which library and information specialists maintain professional competencies throughout their careers (Robinson & Glosiene, 2007). However, it's not a very well defined term rather known as a process and varying definitions as per the primary motive behind the CPD. Construction Industry Council – CIC, UK described CPD as *“the systematic maintenance, improvement and broadening of knowledge and skills, and the development of personal qualities necessary for the execution of professional and technical duties throughout the individual’s working lifespan”*. CIPD - Chartered Institute of Personnel Development (2016) defined CDP as *“a combination of approaches, ideas, and techniques that will help you manage your learning and growth – that regardless of your capabilities or stage of career, the CPD should be exactly ‘yours’*. The focus is firmly on the results and gains measurable in real world”. Friedman (2012) quoted a definition by University of the Kent that *“a range of short or long term training programs, some of which have the option of accreditation, and help foster the development of*

*employment-related knowledge, skills and understanding*". Training is a job related planned effort, either formal or informal, through explicit or tacit knowledge base, arranged by an organisation or on the personal level to enhance the competencies, skills, knowledge and emerging job challenges (Noe, 2013). CIPD (2016) categories the benefits of CPD into two categories: personal and organisational. In personal benefits, one may acquire confidence and credibility; earn more by showcasing achievements; accomplishing career goals; surviving positively through change; becoming productive and efficient by reflecting on learning. The organisational benefits include assisting in linking the learning to actions and theory to practices; enable HR professionals to set SMART (specific, measurable, achievable, realistic and time-bound) objectives; better staff morale and motivated workforce; value-added output and performance from the staff and appraisal.

Emerging technologies and information society challenges require librarian to be a step ahead of the hi-tech users. CPD helps librarians tend to professional networks, implement active practices, group work and the use of new technologies in the workspace. Despite like professionals in education, medical or engineering sector, the librarians' CPD opportunities are merely organised and formal. Most often the LIS professional has to seek the informal training opportunities through personal efforts. It includes the resources offered by LIS national and international associations, LIS schools or other interdisciplinary organisations. Librarians commonly look outside their institutions and in the case of developing countries, beyond their national boundaries for collaboration opportunities, knowledge sharing and support. The CPD activities may include but not limited to: learning by doing, coaching from others, discussion with colleagues, in-service training, project management, involvement in professional bodies, lecturing or teaching, mentoring, being an examiner or tutor, presenting in conferences and workshops, through formal courses, research, distance learning, volunteering work, professional reading etc. (Friedman, 2012).

Online networks, communities, and social learning structures have made it possible from last decade. International CPD opportunities are creating collective intelligence, awareness to upcoming challenges and policy matters. The network means a group of persons interacting and sharing their knowledge and experience for some common purpose.

### **Virtual Learning Environment (VLE)**

A Virtual Learning Environment (VLE) is a system for delivering learning materials to full-time/part-time students via the web either online or offline – 24/7, including lessons, study plans, resources, assessment, student tracking, teacher-student collaboration and communication tools, without any geographical, time, societal or most often political and economic barriers. A VLE or LMS is a software application, used under license acquired or held by an educational institution, commercial body, or OS enabling courses to be taught online (Swenson & Taylor, 2012). There is much VLEs inefficient use by academic and professional teaching institutes. Some organisations use it to replace the paper-based education and assessment processes in the presence of the one-to-one full time teaching environment. Other technology stable organisations are comprehensively substituting the paper environment as well as the physical contact between teacher and students with the virtual communication and hence promoting the distance learning concepts. The VLE are a promise of semantic technologies in learning and an aspect of Technology Enhanced Learning (TEL) in both formal and informal education settings. Semantic technologies' usage to 'match people, content, and communities' is the core of the VLE (Davis, Tiropanis & Cerri, 2012). The VLEs are also known as Learning Management Systems (LMS), Course Management Systems (CMS), Learning Content Management Systems (LCMS), or Virtual

Learning Environments (VLE). A wide range of technologies supports online learning platforms. Sunal & Wright (2012) discussed these technologies as a combination of most available technologies of the time and still not limited to, text, video, audio, and multi-media presentations that may take place synchronously or asynchronously. Online learning typically involves learning communities in which participants are engaged with other students and the instructor by voice over Internet (VOIP), Web 2.0 tools (e.g., blogs, wikis, and digitally shared media), video conferencing, three-dimensional virtual environments, social networking tools, digital drop boxes, and other technologies often packaged in classroom management systems (e.g., discussion boards and e-mail). There are various modes of online CPD opportunities as active learning modules of progressive learning styles i.e. online courses – short informal training sessions presented as a video conference or online workshop; online discussion – short talks presented as webinars; or off-the-shelf courses – short formal teaching programs, with or without assessment.

VLE is providing innovative learning possibilities for learners around the globe. Online course-ware concepts, e.g. off-the-shelf and open source CMS such as Blackboard, WebCT, Moodle is widely in use to sustain the emerging trends of collaborative learning since last decade. Many universities, especially from the developed world, have opened their virtual hubs of knowledge for the students without limitations of nationality, age, capital or necessary proficiency. Interactivity, open learning, cooperation, knowledge sharing, self-learning strategies, all have revolutionised both the education and continuing professional development ventures. Interdisciplinary courses by EdX, Coursera, Khan Academy, Stanford online, Harvard online are good examples of free or priced course-ware from prestigious universities.

**Benefits:** Online education has increasingly dominating the current teaching system, continuing professional development and research output (Singh & Holt, 2013). The blessings of online learning systems include the use of semantic technologies is in matching content and people involved in learning processes on a large scale (Davis, Tiropanis & Cerri, 2012). Today's youth known as web 2.0 generation or digital natives are most likely comfortable in the digital world than the face-to-face interaction (Swenson & Taylor, 2012). Student-to-student interaction constitutes one of the core concepts of the productive virtual environment. Britain (1999) enlisted the benefits as the flexibility of time and place, coping with increased student numbers, sharing and re-use of resources, collaborative work, student-centered learning, reducing the administration burden and staff development. Other advantages includes (Posey et al, 2010) categorization of programs and study plans, resources linking to lectures, self-evaluation options, structured independent study, pooling of learning and supporting tools for academic integrity, intellectual, social and intercultural partnership, sustainable environment with less use of paper, accessibility to archived courses, cost effective compared with full-time education and to long distance travel and accommodation.

**Challenges:** The online learning environment provides ready access to professional and personal development opportunities whereas possessing some challenges to individual professionals. *First* of all the knowledge seeker need to have access to technology e.g. advanced specification hardware, latest soft wares, access to high-speed internet. *Second*, the command on the use of technology is a prerequisite to gain access and active participation in the online learning programs. *Third*, the cost of technology and access is challenging for many from underdeveloped countries. *Fourth*, not always but frequently, the time difference becomes a hurdle in gaining the benefit. *Fifth*, some Asian and African countries have banned the certain social media sites on political, security or religious grounds. *Sixth*, the

interpersonal skills, and personal motivation to learn is required in online learning environment. *Seventh*, the language is often a barrier for librarians from the non-English speaking countries to take up these learning prospects. Other challenges include time-consuming, identification and assessment of contents, duplication, focus diversion and inability to connect with the context or scenario of the subject, individualization and monitoring of learning (Britain, 1999). Lack of social presence available in face-to-face teaching, course structure, the design of the class, interface, assessment, and instructional style are also prominent challenges to VLE (Sunal & Wright, 2012; Secker, 2004). Robinson & Glosiene (2007) stated that only larger organisations offer in-service (internal) CPD to employees.

### **eCPD and Library Professional's Associations**

The LIS curriculum exposure is stimulating in fast changing economic, technological, social and political environments. The vast difference in the LIS curriculum among developed, developing and under-developing countries is another bitter reality in the presence of growing and affordable access to the connected world by users group. There are 218 countries in the world with national library setups of each size and type. Almost all countries have any national library association connecting and guiding the nation-wide library professionals. National and international library association and consortium i.e. IFLA, SLA, ALA, CILIP, AACL, Webjunction, etc. are offering various opportunities of CPD and online learning programs more than two decades. The CPD through eLearning platforms provides career progress training across international boundaries. Official, library and information association websites are dynamic protagonists in providing an incredible resource for professional and personal growth, national and international networking, scholarly output, policy information and problem-solving for library professionals. Through these VLE's the librarian of the world are becoming a connected and collaborating community.

**Aims & Objectives:** This study aims to systematically and critically measure within niche of library association and LIS professional platform's websites' contents to:

1. Measure the nature and depth of continuing professional development (CPD) programs' design & interface, contents, and access.
2. Identifying and evaluating the Virtual Learning Environment (VLE) pedagogical programs.

### **Design of the Study**

This study is conducted with survey methods of research. A review of selected online training and educational web sites of national, international, regional and specialised library associations, and other librarians' professional platforms is done with a self-developed checklist. The checklist covers the CPD activities offered by professional associations; eLearning contents i.e. short courses, Instructor-led training (ILT), interactive workshop, webinars, training tutorial, etc. Apart from CPD, the subject coverage, social networking, archives, materials and resources, fee and funding opportunities, language is evaluated.

### **Data Analysis**

A website survey of the national, international, regional and special library associations and other librarians' professional platforms for career development and eLearning training was conducted to gain insight into the associations' contributions for the librarians continuing professional development (CPD). A whole 118 websites were surveyed for this study: 78 (66%) national library association, 26 (22 %) International and specialised Library

Association, 5 (4%) regional library associations, 9 (8 %) LIS and global not-for-profit and academic online course wears. The national library associations were found activity working for professional networking, conducting conferences, seminars, and workshops, providing job information, advocacy information, offering awards and scholarships, distributing newsletters, reports or scientific research journals conference proceedings (see table 1). Although, as average the association's contributions can be ranked as superior i.e. ALA, CILIP, ALIA, LIANZ, BIS, IFLA, SLA, MLA, etc.; moderate as Malaysian Library Association, Canadian Association of Research Libraries, American Association of Law Libraries, Association of Research Libraries, etc. and as modest as Danish Library Association, Tanzania Library Association, Icelandic Library and Information Science Association, Bahrain library association, Belarusian Library Association etc.

*Table 1: CPD Activities and Events by Library Associations*

<b>Statements</b>	<b>Frequency</b>	<b>%</b>
Professional networking	88	74
Conferences/Seminars/Workshops	93	79
Emerging paradigm shifts information	32	27
Career Sustainability support	25	21
Career Advice and Trends	25	21
Job information	58	49
Awards and scholarships	26	22
Newsletters and reports	89	75
Journal and conference proceedings	34	29
Competitions	3	3

### **eLearning LIS courses**

Overall 12 national and international library associations were offering online courses. *American Library Association (ALA)* and its eleven divisions on special librarianship are the largest national library association offering online, offline and archived courses, webinars, webcasts and resources under 'Education and Career'. ALA course and webinars are most often priced, but few scholarships for developing country librarians are provided for traditional courses. However, occasionally some scholarships are available for the librarians from the developing world. Archived courses and webcasts are often made free. A complete range of free and purpose-built resources is available for self-learning. Apart from the courses and training, ALA, continuously arrange the conferences, seminars, workshops; provide career development guidelines and advice, job information; information and documentation on the library advocacy and emerging paradigm shifts. *Australian Library & Information Association (ALIA)*, provides a range of online training courses, webinars, chats and webcasts for members and non-members of ALIA through Moodle. *Medical Library Association (MLA)*, offers online courses through Moodle; *Librarians Association of Malaysia/ Persatuan Pustakawan Malaysia*, offers online courses through Malaysian Higher Education MOOC; *Library and Information Association of New Zealand (LIANZ)*, uses Moodle for a broad range of online training sessions; *Portuguese Association of Librarians, Archivists, and Documentalists*, uses Moodle, *Polish Librarians' Association* through the Platform for Open Science project FOSTER; *Documentalistes de Catalunya Institute of Catalonian Librarians and Documentalists (COBDC)*, Spain, through Moodle, *Library Information Switzerland (BIS)*, offers a few online course while an extensive range of face-to-face course; *IFLA* offers full range of webinars, webcasts, *Chartered Institute of Library*

**& Information Professionals (CILIP - UK), Scottish Library and Information Council** are offering e-courses through Moodle. **Deutscher Bibliotheksverband / German Library Association (DBV), The Library Association of Ireland**, still don't offer online courses but provide a wide range of CPD face-to-face courses, webinars, webcasts, training, workshops and seminars.

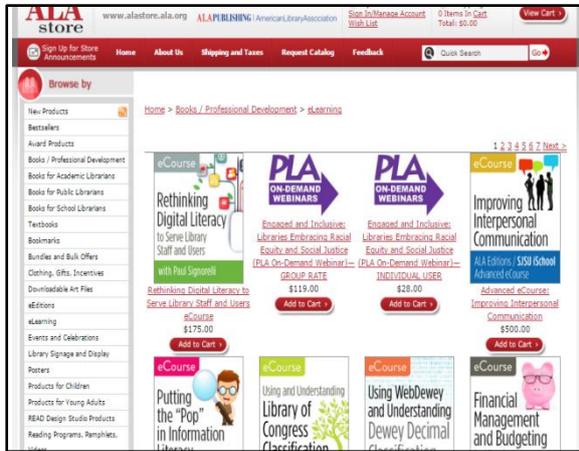


Image 1: America Library Association eLearning Portal

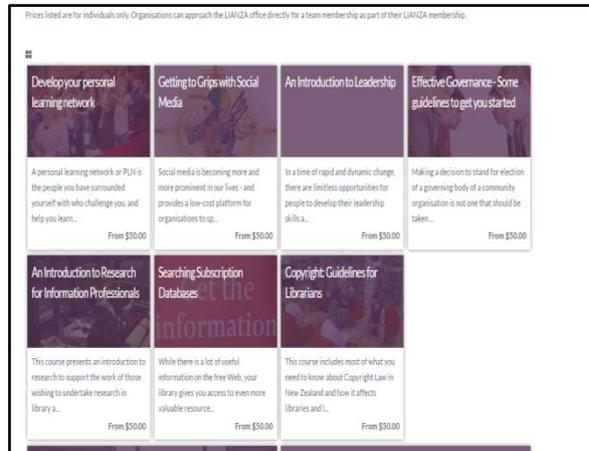


Image 2: Library and Information Association of New Zealand (LIANZ)

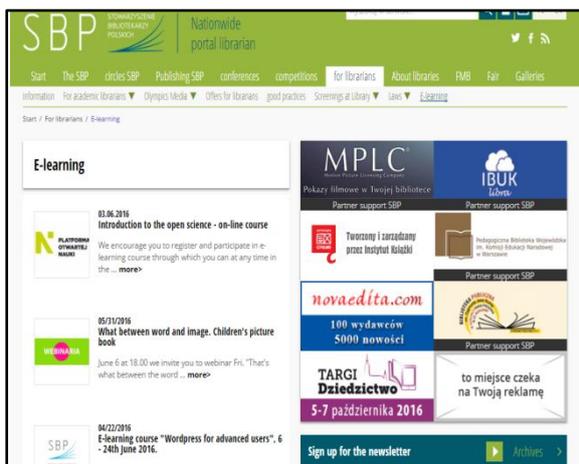


Image 3: Polish Librarians' Association



Image 4: Portuguese Association of Librarians, Archivists and Documentalists

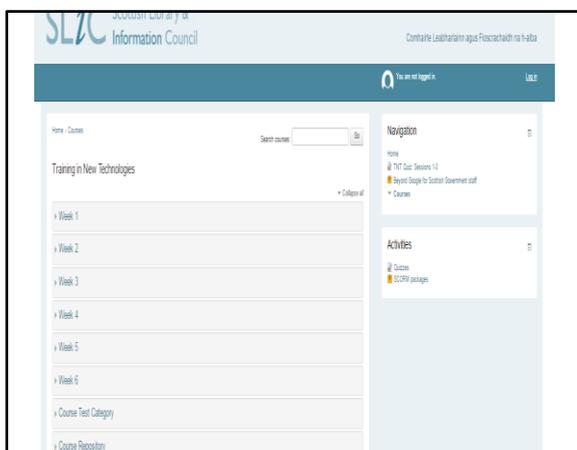


Image 5: Scottish Library and Information

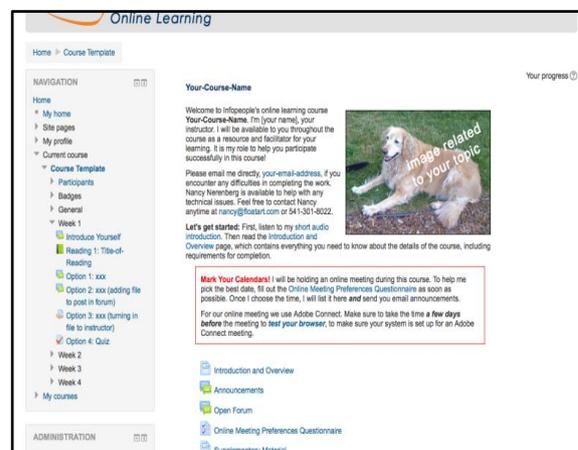


Image 6: Infopeople

## Council

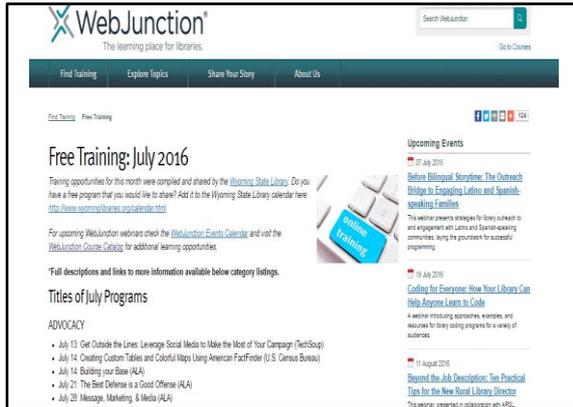


Image 7: WebJunction

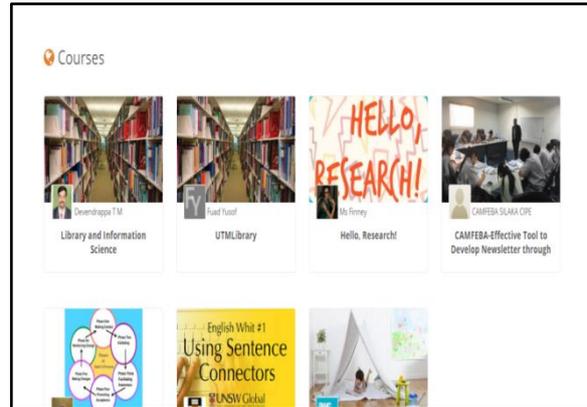


Image 8: Librarians Association of Malaysia

There are some platforms by commercial or academic institutions for the library training other than the national library associations. **WebJunction** (see image 7) from OCLC is providing free and priced training courses on all the ranges of the library aspects. Some eCourses are free, while other cost as low as 40 US\$ and options for customised courses is available for group training. Apart from the courses, there is a vast range of webinars, webcasts, online discussions and archived open course. Similarly, **Infopeople**, a project of the Califa Library Group and supported in part by the U.S. Institute of Museum and Library Services, offers many online courses as well as off-line courses for library conventional and modern technologies (see image 6).

Massive Open Online Course (MOOC) and Open educational resources (OER) like **edX**, **Coursera**, **Khan Academy** are non-profit educational organisations; **Harvard Online Learning**, **Stanford Online**, and other academic institutions are offering open course wears, mostly free or with fair cost. Although these courses are not directly addressing the traditional librarianship but provide a broad range of professional and personal grooming courses i.e. data analysis, English language courses, marketing, communication skills and personal management, history and geography, designing, web development, basic mathematics and statistics and computer sciences. These courses help to enhance skills and knowledge to the librarians leading the liaison librarianship or research.

The subject coverage of the CPD courses and training varies among different countries and most likely responding to the local needs and expertise. The online courses can also divided into three major subject categories: 1). Fundamental courses e.g. cataloguing, acquisition, preservation; 2). Advanced courses: on RDA, Apps and trends i.e. instructional videos, gaming, etc. and 3). Future Trending: design thinking etc.

### Virtual Learning Environment

All the 12 library associations and organisation are offering the eLearning programs through Moodle, an OSS eLearning management system. The results show that the most national library associations were offering web 1.0 environment i.e. pdf, presentations and images under education, career development or training tags. A few were activity using web 2.0 i.e. webinars, webcasts, e-forums and social media for career development support and networking. None of the association was using web 3.0 for the training and education (see table 2).

Table 2: Virtual Learning Environment

	Statements	Frequency	%
<b>Web 1.0</b>	Online material or links to material e.g. presentations, videos, tutorials	65	55
	Webinars	26	22
<b>Web 2.0</b>	Webcasts	14	12
	E-Forum	73	62
	Social media	63	53
<b>Web 3.0</b>	Avatars	-	-
	Educational Games	-	-

### Social Networking and Marketing

Social networking is essential for collaborating, sharing and marketing either for personal or institutional benefits. The library association websites were found activity using social media tools for marketing, communication and professional networking. Many associations have active accounts on more than one social media sites.

Table 3: Web 2.0- Communication and social connectivity

Communication and connectivity	Frequency	%
Mailing List	76	64
Facebook	69	58
Twitter	57	48
LinkedIn	24	20
RSS, Blogs	21	18
YouTube	12	10
Flicker, Google Plus, Instagram and <i>Pinterest</i>	18	15
Tumblr, Wikis, Digg, Vimo	3	3
Formspring.me, LiveJournal, Reddit	2	2
MySpace, SpingPad, Storify	1	0.8

Most of the eLearning courses were priced ranging 40 U\$ to 250 U\$. although some offer free courses, scholarships for attendees and free archives. Webinars were also prices and free. Reduced prices for members were offered by all associations. The webcasts were free of cast. Some institutions like WebJunction, Coursera, Khan Academy etc. provide free access to self-paced, off-the-shelf e-courses. Overall the English was common language of communication, education and trainings on the websites even from many non-English speaking countries. A few countries offer the trainings in native languages and some in both languages (see table 4).

Table 4: Lingual, practical and economic aspects and Digital Resources

	Statements	Frequency	%
<b>Economic Aspect</b>	Priced	43	36
	Reduced price for developing world countries	3	3
	Grants/funding/Awards/Scholarships	32	27
<b>Language</b>	Free	43	36
	English	57	48
	Regional	39	33
<b>Technical Aspects</b>	Both	15	13
	Text	42	36
	Presentations	29	24
	Graphics	18	15
	Video Clips	14	12
	Audio	4	3
	Information and support resources e.g. hand-outs, books, research material	14	12
Archived material and resources	64	54	

## Discussion

The CPD is much required nowadays with rapidly shifting needs of users, advancing technological platforms and challenging competition for libraries' sustainable future. The findings of this study reveal that a good number of national library associations are active on the worldwide web through their websites, activities and networking on social media. Although, the width and depth of the web-presence have extreme variations of career development support from superior to moderate and low. Some national library associations were activity offering CPD courses, training, workshops, seminars and conferences through face-to-face presentation and resources archives. Only a few national and international library associations were using eLearning platforms Moodle as VLE and MOOC. Although the range of subject coverage is still not thriving from these few contributions, while promising as becoming models for others. Social networking and sharing with web 2.0 tools is also a standard part of VLE and websites. It is also notable that the adoption of VLEs for CPD is relatively at early stages in library and information sciences than professional bodies of other subjects. The VLEs can play a vital role in developing the librarians pedagogical and vocational skills to answer the 21st-century emerging challenges without geographical, time, societal or most often political and economic, sometimes religious and gender-based barriers.

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