

GLOBAL LEARNING
AS A CHALLENGE FOR THE INSTRUCTIONAL
TECHNOLOGY UNITS
IN HIGHER EDUCATION

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Abstract

Instructional technology units (ITU) in different higher education institutions have different names not necessarily reflecting the mission and mandate of the unit. In addition, the tasks performed cover a wide range of technological, managerial and pedagogical activities. In addition, the existing literature shows more than one definition of global learning, where each reflects a different pedagogical philosophy or a distinct level of technology integration.

This study aims at assessing the magnitude of challenge imposed by global learning on the instructional technology units at higher education institutions. An examination of the jobs performed by these units cross-examined against the set of common features of global learning specifies the tasks clearly challenged. In addition, the subset of features that are not addressed by any of these tasks has an indicative weight in assessing the challenge. Qualitative assessment is employed to judge the magnitude.

Instructional Technology Units

A variety of names is used in higher education (HE) institutions to point to instructional technology, with the most popular being educational technology. The two names are used interchangeably although there exists a general agreement on the differences between instruction and education. These differences do not affect this research as the emphasis is on the managerial aspects of the operation of the units, sections, or departments that provide the instructional technology service. In other words, what matters to this research is the functions performed regardless of the name used.

An overview was conducted of the mission and goals of 9 units handling instructional/educational technology (ITU) in different ecosystems and reflecting different educational visions (See Table 1 for the names and addresses). The goal of the overview is to extract the set of the common functions performed by these units.

Table 1

Units Handling Instructional Technology Consulted in This Study

Unit	URL	University
Academic core processes and systems	http://website.aub.edu.lb/it/acps/services/Pages/home.aspx	American University of Beirut, Lebanon
Educational technology Center	https://www.albany.edu/its/82184.php	University of Albany, USA
Educational Technology center	http://www.ust.edu.ph/academics/educational-technology-center/	University of Santo Tomas, USA
Elearning center	https://www.tlu.ee/en/E-learning-Centre	Tallinn University, Estonia
Educational technology	https://itss.d.umn.edu/services/educational-technology/educator-tools	University of Minnesota Duluth, USA
Instructional technology support	https://www.nyu.edu/life/information-technology/instructional-technology-support.html	New York University
Center of excellence in teaching and learning	https://www.ccnycuny.edu/cetl	City college of New York, USA
The center for instructional technology	https://www1.villanova.edu/villanova/unit/instructionaltech.html	Villanova University, USA
Instructional technology Unit	http://www.uobitu.org/	University of Balamand, Lebanon

The overview showed that:

1. Instructional technology units focus on facilitating student learning using a wide and varied range of tools.
2. The tasks of instructional technology differ from one university to another.

The set of the most common functions performed by ITUs includes:

1. Training instructors on the design and development of innovative educational technology solutions to enhance teaching and learning.
2. Promoting mobile and e-learning environments and implementing solutions.
3. Assisting in course preparation using building tools and learning management systems.
4. Assuring the availability of classrooms tools, like Clickers, Polling Response Systems and interactive whiteboards
5. Supporting video conferencing.
6. Assisting in the production of high quality multimedia content such as recordings of classroom sessions or video conference sessions.
7. Managing quality assurance including complying with policies and standards and the use of tools for originality checking and anti-plagiarism.

Global Learning

Global learning is becoming one of the buzzwords in the educational technology field. An increase of 24 % in the size of the global learning management system market is expected through 2020 (Technavio, 2016). Global learning is counted among the hottest trends in education technology, according to more than one source (Connell, 2016). Despite this, there is not one final agreed upon definition of the concept (Dlamini, 2017). Some of the definitions approach the concept from a student perspective (Agnew & Kahn, 2015), while others approach it from a faculty member perspective (Hilliard, 2015), and very few make their approach through an ecosystem view (Landorf, Kahn, & Whitehead, 2016).

An examination of the different definitions in the literature reflected a massive dissimilarity between higher education views of global learning. The different approaches reflected concentration on global content, internationalization, and global citizenship (Connell, 2016). All the definitions highlighted the role of technology in achieving the goals. Some definitions oversimplified the issue to describe global learning as the simple use of ICT to collect and utilize global content (Bourn, 2014; Gibson, Watters, Alargic, Rogers, & Haack, 2003; Global Learning Programme, n. d.)

Studying these variations is not our goal, but a definition is needed on which to build our assessment of the challenges of global learning on the instructional technology units; the definition of the Association of American College and Universities was adopted (Hovland, 2014).

According to the Association of American College and Universities, “Global learning is a critical analysis of and an engagement with complex, interdependent global systems and legacies (such as natural, physical, social, cultural, economic, and political) and their implications for people's lives and the earth's sustainability” (Association of American Colleges and Universities, 2009). Through global learning, students should:

- a) “Become informed, open-minded, and responsible people who are attentive to diversity across the spectrum of differences
- b) Seek to understand how their actions affect both local and global communities
- c) Address the world's most pressing and enduring issues collaboratively and equitably” (Association of American Colleges and Universities, 2009).

Methodology

The functions described above were validated against the Metaari's Learning Technology Research Taxonomy. This taxonomy is described in *The 2016 Global Learning Technology Investment Patterns* published by Metaari in 2017. This taxonomy classifies 8 digital learning products for global learning and is used as the backbone of Metaari's quantitative data repository and the foundation of its classification system that enables the identification,

cataloguing, and indexing of addressable opportunities for revenue when suppliers market specific products to distinct segments of buyers in different globally. Metaari claims that the purpose of the taxonomy is “to provide tactical precision to suppliers competing in a complex global market” (Adkins, 2017, p. 6). The classified products are: (a) self-paced eLearning (courseware), (b) collaboration-based learning (live online tutoring), (c) digital reference-ware (digital audio, digital video, and text), (d) simulation-based learning, (e) game-based learning, (f) mobile learning, (g) cognitive learning, and (h) a new type of learning product, robotic tutors (Adkins, 2017, p. 23).

Table 2 shows a matching of the functions claimed by the ITUs and the digital learning products classified by the taxonomy to assure the readiness of the ITUs to manage these products and produce service using them.

Table 2

Claimed Functions vs. Metaari’s Global Learning Products

	Self-paced eLearning	Collaboration-based learning	Digital reference-ware	Simulation-based learning	Game-based learning	Mobile learning	Cognitive learning	Robotic tutors
Training instructors	✓	✓	✓	✓	✓	✓	✓	
Advising on e-learning environments and implementing solutions	✓	✓				✓		
Assisting in course preparation and building tools for LMS	✓	✓	✓	✓	✓	✓	✓	
Assuring the availability of classrooms tools		✓	✓	✓	✓	✓		
Supporting video conferencing systems	✓	✓	✓	✓	✓	✓	✓	
Assisting in the production multimedia content	✓	✓	✓	✓	✓	✓	✓	
Managing quality assurance	✓	✓	✓	✓	✓	✓	✓	

Table 2 shows that ITUs manage all the global learning products fully or partially. The robotics tutors is not yet mentioned by any ITU although it is expected to have a major effect (MacIntosh, 2018).

It should be noted here, concerning the validity of the matching, that to assure an exact matching, the study should have dealt with the task level, where differences among ITUs will show. Dealing with the general task is

satisfactory since the aim of this study is to explore the range and nature of the challenge more than the steps to meet it.

A *challenge* is something new and difficult that requires great effort and determination (*Collins English Dictionary*, 2018). In the case under study, challenges are seen as the occurrence of an arbitrary phenomenon.

To come out with a clear assessment, a clear tool should be devised. To report the findings of the research and make the assessment clearer, a matrix is used as a visual representation. In this matrix, information is organized to show the value of the severity of the challenge brought by global learning products. Since the concern is evaluating the association between the functions of the ITUs as perceived and declared by them and the global learning products that form the variable determining the rows of the table, scoring is the method used (Trochim, 2006). Challenges are scored by a set of 10 experts. These experts are directors and managers of ITUs in 10 different Lebanese universities.

These experts who provided their scoring were contacted by email. The scores filled in the table are the averages of the assessment made by the 10 experts. These are intended to reflect how severe is the challenge created by each global learning product on the ITUs based on the functions claimed to be performed by them. Directors and managers were asked to grade the difficulty of each function on a scale of 1-10 where 1 is the easiest and 10 the most difficult (Alberts, 2013).

Results and Analysis

Table 3

Scores of Challenges Created by Global Learning Products

Products	Score
Digital reference-ware	2
Self-paced eLearning	3
Collaboration-based learning	4
Simulation-based learning	5
Mobile learning	5
Cognitive learning	6
Game-based learning	7
Robotic tutors	9
Average	5.12

The overall difficulty is above average. This means that going global is a difficult challenge for ITUs. This result can be understood since both instructors and students need to bring learning experiences from the world into classrooms, to share their experience and problems, and to collaborate on projects with international partners and colleagues.

Conclusion: The Set of Challenges

The result of the above analysis necessitates a clearer presentation of the challenges an ITU faces in adopting global learning. A revisit of the literature was necessary to better formulate the challenges. The result is the following list of the most important common challenges:

1. Social media utilization challenges include:
 - Global learning generates to a growth of use in social media and collaboration tools such as Facebook, Twitter, Google Hangouts, Skype, and many others.
 - The selection of the right social media for a course challenges the instructional technology unit as it is expected to cross the course needs against the functionality of each social media tool and make a decision on which to use.
 - The utilization of multiple social media tools might lead to chaos (Beseghi, 2017).
2. Video Conferencing challenges include:
 - An increase in the demand for video conferences is another challenge especially if dedicated rooms are requested.
 - The type of video conferencing, the real presence requirement.
 - The increase in the number of sessions requires an increase in budget.
 - The bandwidth and quality of conference is another concern (Sinay, 2014).
3. Training challenges include:
 - A higher learning curve should be adopted by the unit in order to support the new tools and products. Adopting new technologies requires professional mastery before handing them to instructors and students in class.
 - Studies show that in many cases, instructors avoid workshops and training sessions. This requires a higher level of support from the unit's side (Hovland, 2014).
4. Global issues challenges include:
 - The learning management system support of multilingualism or content translation. This is a challenge for the unit that manages this system.
 - The differences in the regulations on privacy and intellectual property from one country to another.
 - The difference between time zones as it affects due dates and exams scheduling (Gillett-Swan, 2017).
5. Emerging trends and technologies' challenges include:
 - New trends in education like blended courses whose approach is to integrate components of face-to-face and online learning.
 - A higher demand on videos and presentations for class use, assuring a considerable quality (Adkins, 2017, p. 28).

Recommendations

Since global learning is not just connecting a classroom to the Internet, every new demand for a product or service creates a different challenge for the ITUs for which the ITU should be ready, technically and organizationally.

Accordingly, it is recommended that:

- An ITU should ensure that the university has the best conceivable infrastructure to provide instructors with the best technology resources to better serve and prepare students to global learning
- Professional development of the ITUs staff should be at the top of the management concerns to assure access to relevant and rigorous professional training that guarantees the proficiency in integrating learning technologies in the HE ecosystem (Passut, 2018).

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