The Learning Impact 2010 Report:

High Value Projects that Leading Institutions, Schools, and Governments are Implementing to Improve Access and Affordability to High Quality Educational Experiences

Executive Summary & Abstract:

This report is directed at individuals and organizations leading the adoption of new technologies to support teaching and learning at the course, discipline, institutional, and educational system levels. Its goal is to help identify repeatable implementation projects that can help institutions and educational authorities improve access, affordability, and quality of educational experiences. The conclusions provided are based primarily on analysis of three years of finalists in the annual IMS Learning Impact Awards or LIAs. Additionally, overall industry trends as monitored by IMS were considered. The analysis is focused on grouping activities based on the "why" they were undertaken, as opposed to the "what." For instance, an analysis based on the "what" might proclaim that interactive white boards are an important trend. The "why" approach, however, focuses primarily on the strategic learning impact goals that leading institutions and schools are aiming to achieve and secondarily on the enabling technologies supporting those goals.

The first conclusion is that there are 10 developing project categories that emerged from the analysis that are undergoing significant development and evolution around the world. These 10 project categories represent a well-rounded view on how technology will affect learning now and in the next 5-10 years. As such, this is a framework that learning technology leaders can use to assess whether their organization has considered the full range of learning technology innovation and is keeping pace with the adoption patterns of leading institutions around the world.

The ten project categories with high learning impact potential are:

1. Scaling pedagogical knowledge & practice
2. e-learning meets e-classroom
3. Collaborative learning
4. Adaptive, personalized, and inclusive learning resources
5. Outcomes-focused learning support

6. Gaming, simulation, & immersive learning
7. Educational resource sharing
8. Digital learning networks
9. Digital learning content creation and management
10. Shared learning platform implementations

These project categories were analyzed using a proprietary rating scale along with the frequency of LIA medal winners to estimate both the learning impact gains they result in and the level of implementation challenge. Through this process, four of the ten project categories were further sub-divided into two parts each, resulting in a two-dimensional plot of the 14 resultant project types.   This analysis resulted in a second conclusion that there are five project categories that should be of significant interest to all leading providers of education at the secondary and tertiary levels, as follows:

Projects with superior learning impact gain and straightforward implementation:

- Scaling pedagogical knowledge & practice
- Online homework, formative assessment, & grading applications

Projects with superior learning impact gain and manageable implementation challenges with the right resources:
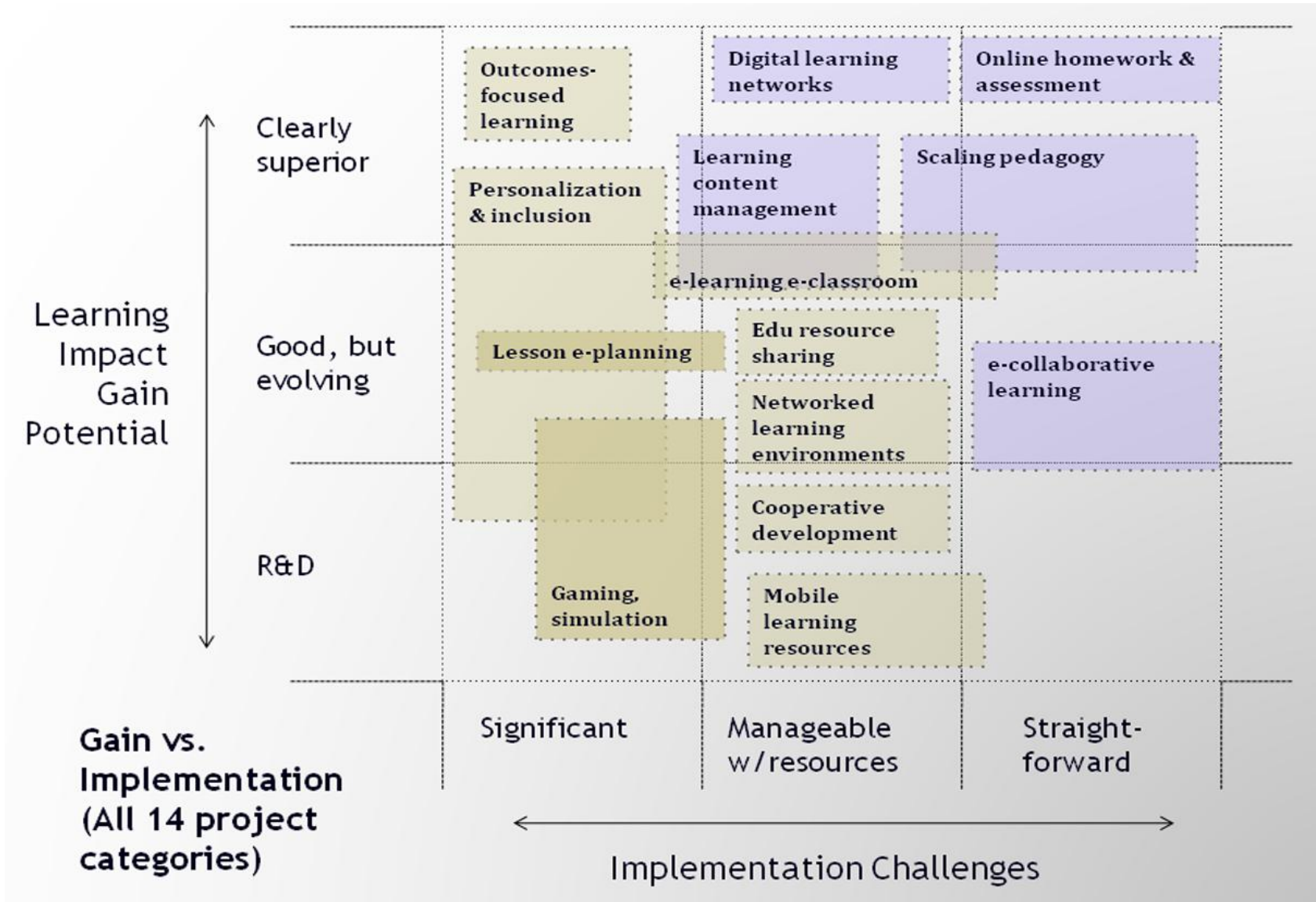
- Digital learning networks
- Digital learning content creation and management

Projects with good but evolving learning impact gain and straightforward implementation:

- e-Collaborative learning

The above five projects are those that are most likely to succeed and result in the perception of high learning impact. The remaining nine projects covered in this report also represent finalists and medal winners in the LIA process and therefore should also be considered by organizations that have the appropriate resources and challenges.

The subsequent pages of this report summarize each of the fourteen project categories and their placement in the two-dimensional gain versus implementation challenges chart. Also provided are references to the exemplary Learning Impact Award winners. The following chart summarizes the placement of the 14 project categories on the learning impact gain vs. implementation challenges matrix, with the five named projects above shown in the top right.

Learning Impact Gain Potential

- Clearly superior
- Good, but evolving
- R&D

Gain vs. Implementation (All 14 project categories)

	Significant	Manageable w/resources	Straight-forward

Implementation Challenges

Boxes in the matrix:
- Outcomes-focused learning
- Digital learning networks
- Online homework & assessment
- Personalization & inclusion
- Learning content management
- Scaling pedagogy
- e-learning e-classroom
- Lesson e-planning
- Edu resource sharing
- e-collaborative learning
- Networked learning environments
- Cooperative development
- Gaming, simulation
- Mobile learning resources

Learning Impact Project Categories Covered in the Report:

1. **Outcomes-based learning support environments**

   Applications and processes to enable teaching, learning, and placement tied to explicit outcomes and achievements.

   Primary adoption level(s): Discipline, institution
   Top-rated examples:

   - Online Learning Environment at University of Wollongong supported by The Learning Edge: Australia, tertiary, platinum, 2008
   - Learning & Career Outcomes infrastructure: USA, tertiary, platinum, 2009

2. **Online homework & formative assessment applications**

   Providing students self-paced learning, feedback, and adaptation while providing the teacher with information on individualized student progress.

   Primary adoption level(s): Course, discipline
   Top-rated examples:

   - MyMathLab at University of Alabama: USA, tertiary, platinum, 2009
   - ETS Criterion Online Writing Evaluation service at Farragut High School: USA, secondary, platinum, 2007
   - The California State University (CSU) Math and English Success Websites and the CSU Fresno Fast Forward Program: USA, secondary + tertiary, gold, 2007

3. **Digital learning networks**

   Achieving large-scale sharing of educational resources toward specific and measurable access, affordability, and quality objectives.

   Primary adoption level(s): Institution, system
   Top-rated examples:

   - Glow: UK, secondary, platinum, 2009
   - Tennessee Board of Regents Online Campus Collaborative: USA, tertiary, platinum, 2008
   - Cyber Home Learning System of Korea: Korea, secondary, platinum, 2007
   - SEDUC – AMAZON: Brazil, secondary, gold, 2009
   - Schools Online Curriculum Services, Australia, secondary, gold 2008

4. **Digital learning content creation and management**

   Achieving production efficiencies in content development, reuse, customization, and personalization.

   Primary adoption level(s): Discipline, institution, system
   Top-rated examples:

   - Giunti Labs at Volkswagen Group Italia, Italy, corporate, platinum, 2008
   - HarvestRoad Hive & the Resource List Management System at the University of Western Australia: Australia, tertiary, gold, 2007

5. **Lesson & activity e-planning**

   Applications and processes that make the planning and facilitation of collaborative learning activities more efficient and effective.

   Primary adoption level(s): Course
   Top-rated examples:

   - LAMS: Australia, secondary + tertiary, gold, 2009
   - TELOS, Canada, tertiary, silver, 2009

6. **e-Collaborative learning**

   Providing students with applications and opportunities to participate in and improve achievement via effective collaborative learning activities.

   Primary adoption level(s): Course
   Top-rated examples:

   - Microsoft Research ConferenceXP at Australian School of the Air: Australia, secondary, silver, 2007
   - WebPA at Loughborough: UK, tertiary, bronze, 2008
   - Managing Project Work with eUreka: Create- Discover-Innovate: Singapore, tertiary, 2009

7. **Scaling pedagogical knowledge & practice**

   Providing efficient and effective support to teachers and faculty in significantly improving facilitation and delivery of learning experiences.

   Primary adoption level(s): Institution, system
   Top-rated examples:

   - eTwinning Action by European Schoolnet: Belgium, secondary, gold, 2007

- Lone Star College - Online Faculty Orientation for Online Teaching: USA, tertiary, bronze, 2009
- DE Oracle @ UMUC: USA, tertiary, bronze, 2009

8. e-learning meets e-classroom

Providing a highly productive and seamless technology environment for teachers and students both in the classroom and online.

Primary adoption level(s): Discipline, institution
Top-rated examples:

- Tegrity Mini-Studios at University of Central Florida: USA, tertiary, silver, 2008
- Tegrity Campus 2.0 at Saint Mary's University: USA, tertiary, bronze, 2007

9. Personalization & inclusion

Providing alternative learning resources based on learner preferences and profiles.

Primary adoption level(s): Discipline, institution
Top-rated examples:

- A Tutor – Accessible, Adaptive, Online Learning: Canada, tertiary, gold, 2008
- LEXDIS – Assistive Technologies for e-Learning: UK, tertiary, finalist, 2009
- AccessApps – Portable Assistive Technology: UK, tertiary, finalist, 2009
- A new standard passepartout: Implementing IMS AccessForAll and ISO FDIS 24751 Accessibility standards: France, tertiary, finalist, 2009
- Teachers' Domain Accessibility Features: USA, secondary, finalist, 2008

10. Mobile learning resources

Providing effective mobile learning resources and activities that complement traditional forms of delivery.

Primary adoption level(s): Discipline, institution
Top-rated examples:

- MyWay: Usable and Accessible Made-To Measure Learning Materials: Spain, tertiary, gold, 2008
- QTImPlayer: Australia, tertiary, finalist, 2009

11. Educational resource sharing

Providing portals or repositories aimed at lowering the cost or improving the quality of software, content, or teacher development through resource sharing.

Primary adoption level(s): Course, discipline, institution, system
Top-rated examples:

- OpenLearn at the Open University: UK, platinum, 2007
- Agrega: Spain, secondary + tertiary, silver, 2009
- iSHARE - Inter-cluster Sharing of Resources: Singapore, silver, 2009
- The Le@rning Federation Learning Objects and Support Services: Australia, secondary, finalist, 2008

12. Gaming, simulation, & immersive learning

Providing applications that give students and teachers opportunities to participate in effective experiential learning that is better than traditional alternatives.

Primary adoption level(s): Course
Top-rated examples:

- Racing Academy: UK, tertiary, finalist, 2009
- PBL-Interactive: New Zealand, tertiary, finalist, 2009
- On-line Hands-On Labs in Information Assurance at UMUC: USA, tertiary, finalist, 2009
- SIMulated Professional Learning Environment (SIMPLE): UK, tertiary, finalist, 2009

13. Networked learning environments

Reducing the cost of implementation and improving access to learning platforms and applications.

Primary adoption level(s): System
Top-rated examples:

- Open Source Virtual Learning Environment and eLearning Network: New Zealand, secondary + tertiary, silver, 2008
- LENS (Learning Environment by Network Service): Korea, secondary + tertiary, silver 2008

14. Cooperative development & customization

Providing learning platforms and applications that enable customization and sharing of customizations to reduce cost and increase innovation.

Primary adoption level(s): Institution, system
Top-rated examples:

- MyUOC – Online Learning Environment: Spain, tertiary, 2009
- OLAT - Online Learning And Training (Open Source LMS): Switzerland, tertiary, 2009