Digital Skills Capacity Building in Resource-Constrained Environments:

PERSPECTIVES FROM THE AYITIC GOES GLOBAL PROJECT IN HAITI

Ayitic goes global
Empowering Women through Digital Markets

The Caribbean Open Institute

Digital Innovation in Teaching & Learning

- Rapid advances in digitization, web technologies and available bandwidth, enable the emergence of new models of education, teaching and learning (*e*Learning);
- **Massive Open Online Courses (MOOCs)** have emerged as a significant capability and competitive issue for established higher education institutions and traditional education models
  - *Characterized by*: Online mode of delivery; Short videos; Online quizz
    assessments; Peer and self–assessment; Online forums
- Pedagogical Assumptions
  - Availability of High Bandwidth
  - Digital Natives & Learning styles
  - Mobility and Consumption On-Demand
  - Scalability, Expanded enrollment
  - Free access & consumption, Pay-for-Certificati

Context Matters!
Social, Cultural, Civil and Technology Infrastructure
Economic Incentives & Opportunities

Short Video Clip – AYITIC Goes Global

Objective

Create the enabling conditions for young Haitians, with a special focus on women, to find employment in the digital economy in Haiti through addressing skills and infrastructure deficits.

Employment in Digital Economy

Enable access to digital Jobs for young women

Skills deficits

a. Develop digital skills among young women
b. Strengthen technical skills among local ICT professionals

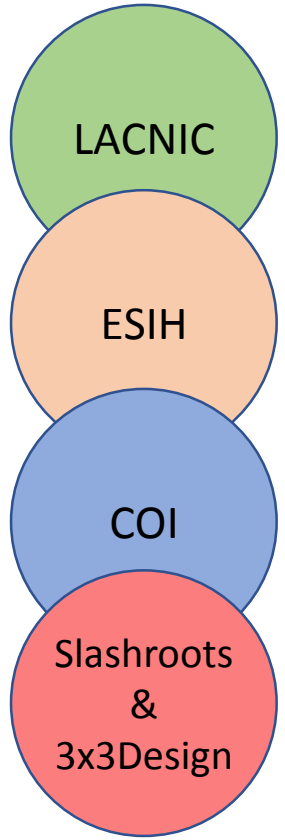
Infrastructure deficits

Promote Internet Development in Haiti

Sustainability

Incorporate new project partners and develop scale-up strategy

Regional Partners



*e*Learning Requirements

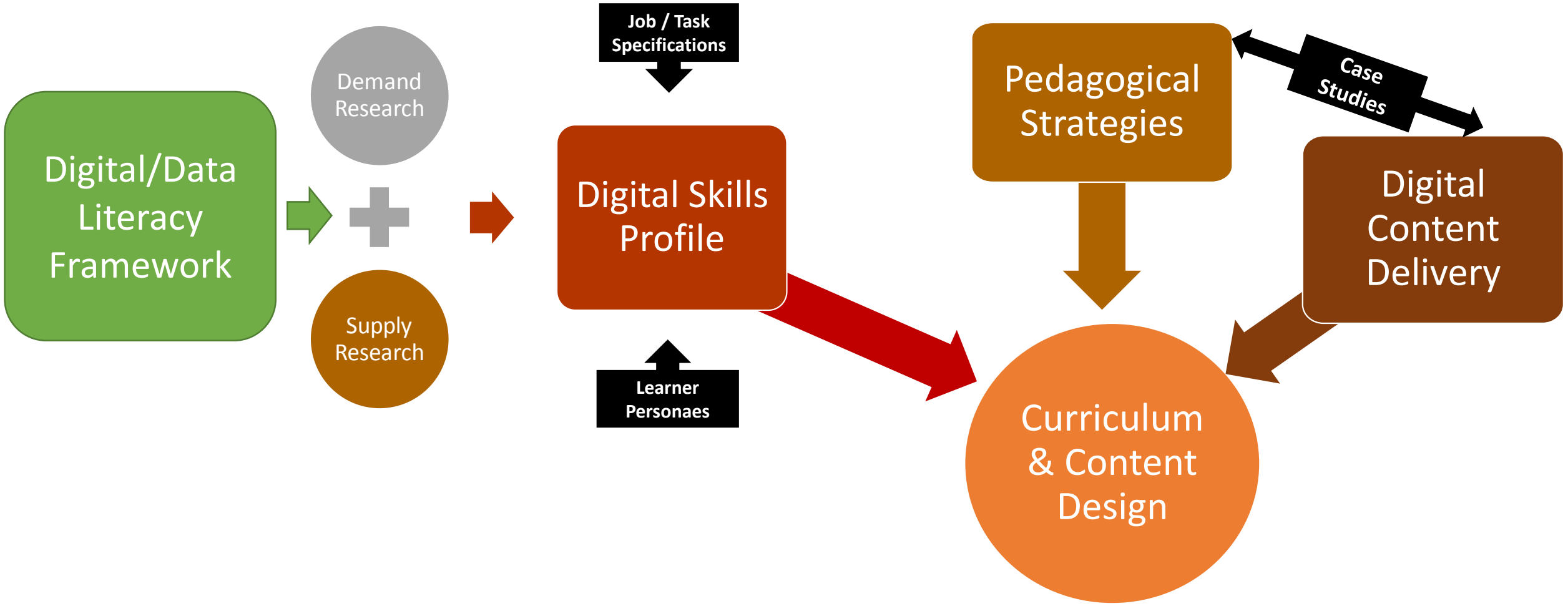
- Core Assumptions:
  - Content will be designed for online delivery (multi-lingual)
  - Internet access may be constrained (low-bandwidth, intermittent)
  - Mobile devices will be an important access device (access and consumption)
  - Blended Learning - multi-mode delivery for maximum flexibility (synchronous & asynchronous)

- Challenge *(Research Question)*:
  - What are the appropriate Pedagogical strategies for utilizing *e*Learning technology to deliver effective, virtual (online) training in a low-resource environment and exploits mobile devices for learning access and consumption?

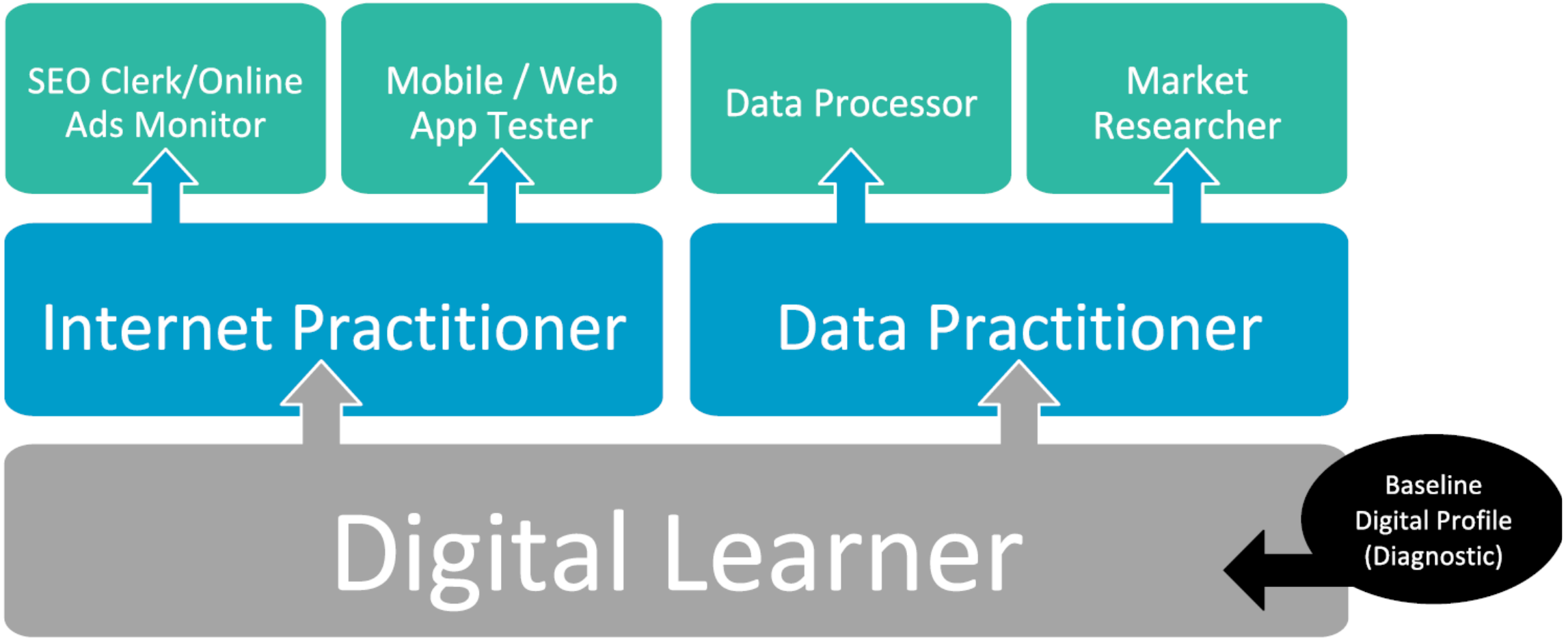
Connectivism – A New Learning Theory?

- Traditional theories of Learning describe how knowledge is absorbed, processed, and retained during learning: *Behaviourism, Cognitivism & Constructivism*
- **Constructivism**: Learner-centred methods such as *active learning* and *discovery learning;* Teacher as facilitator
- **Connectivism**: an attempt to construct a new learning paradigm for the Digital age, that takes into account the effects and possibilities of *technology-enabled learning* in a *networked* context
  - Engage learners in an overtly social and networked learning experience
  - Emphasizes the connections that develop among the participants, materials, and learning
  - Amplification of learning, knowledge and understanding through self-education structured as a distributed network, and aggregated together using technology

Curriculum Design: Competency-Based



Digital Skills Profiles (Demand Research)



Instructional Design Principles

Pedagogical strategy	Instructional Design feature
Efficacy of online eLearning: increased flexibility, efficiency of delivery and on-demand access	Develop responsive eLearning content to work on any device: *Mobile phones, Tablets and Desktops*; stand-alone mobile phone courses that do not require continuous Internet connectivity
Retrieval learning	Short, modular eLearning content with built-in quizzes and repetitive learner assessment in line with content;
Alignment	Competency-based course design - explicit learning objectives and clear linkages to content organized in a logical sequence
Mastery learning	Progressive, self-paced, directed learning path that allows students to achieve incremental mastery of a concept before moving on to the next
Enhanced attention and focus	Combine text and graphic components on the scrolling page to create rich, interactive and a much more responsive experience
Peer learning, out–of–band support, interaction and timely Feedback	*Connectivism*: The amplification of learning, knowledge and understanding through the extension of a personal network

ADAPT Open Source Framework – Pedagogical Innovations

- Short Modular Courses
  - Progressive, self-paced, directed learning path by locked sequencing
  - Built-in quizzes and repetitive learner assessment
  - Performance recognition through *e*-badges
  - Multi-lingual with language picker (English, French & Haitian Kreyol)
  - 1.5 - 3 hours per module; Complete each course within 1 - 2 weeks.
- Mobile App Course Wrapper
  - Stand-alone disconnect operation (Tablet or mobile phone)
  - Record all standard SCORM activity in a log file for subsequent analysis
- Learning Analytics
  - Dynamic SCORM reporting and data capture in Moodle LMS
  - Analysis and feedback to course facilitators

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Language Picker

Side Menu
- Resources
- Help
- Glossary

FOUNDATIONS OF BEING DIGITAL - Course Introduction

View

MODULE ONE - Learning About the Internet

View

MODULE TWO - Using the World-Wide Web Securely

View

MODULE THREE - The Mobile Internet

View

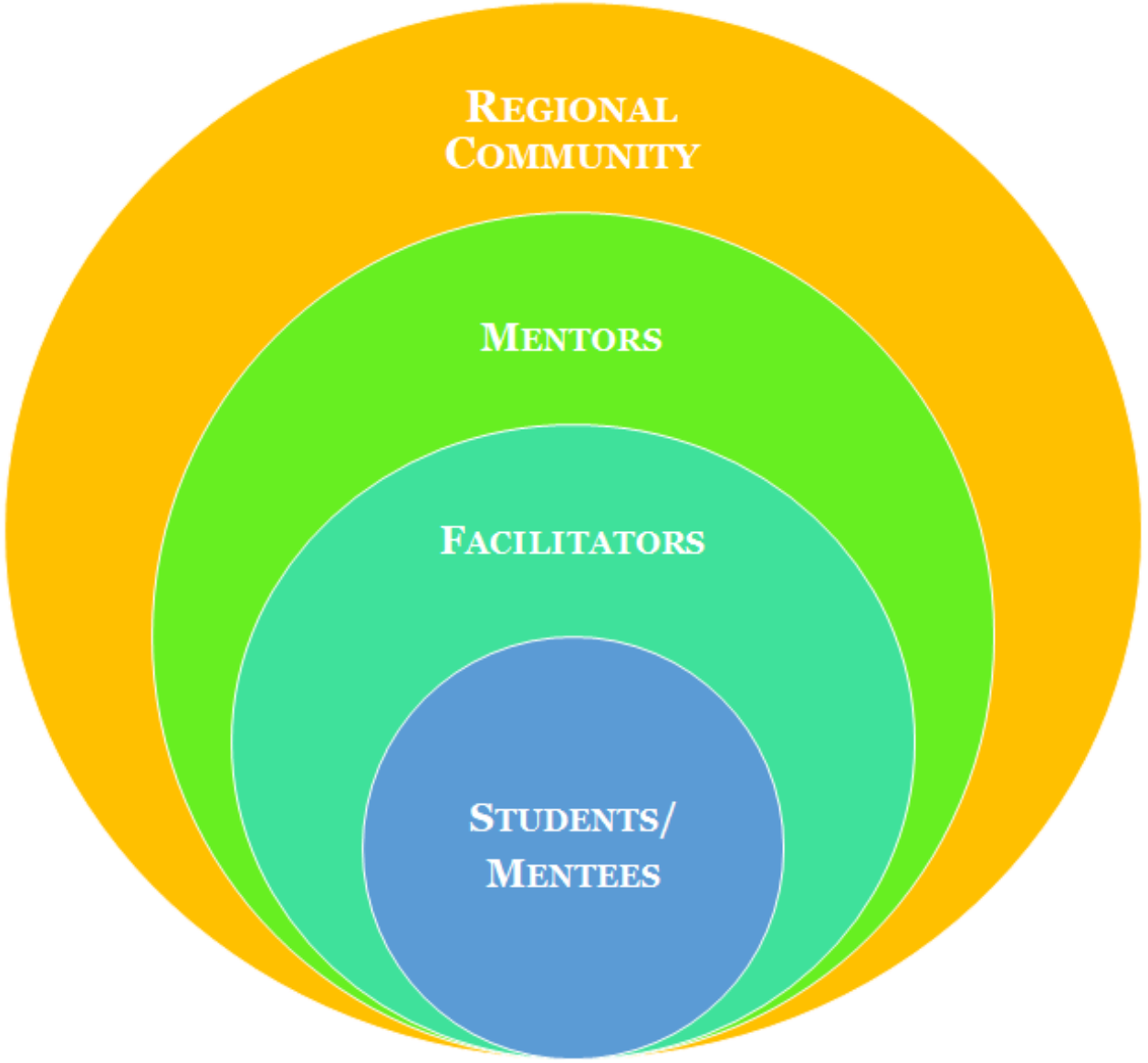
MODULE FOUR - Personal Safety and Security in Cyberspace

View

COURSE ASSESSMENT

View

Role of a Learning Support Community *(Experimental)*

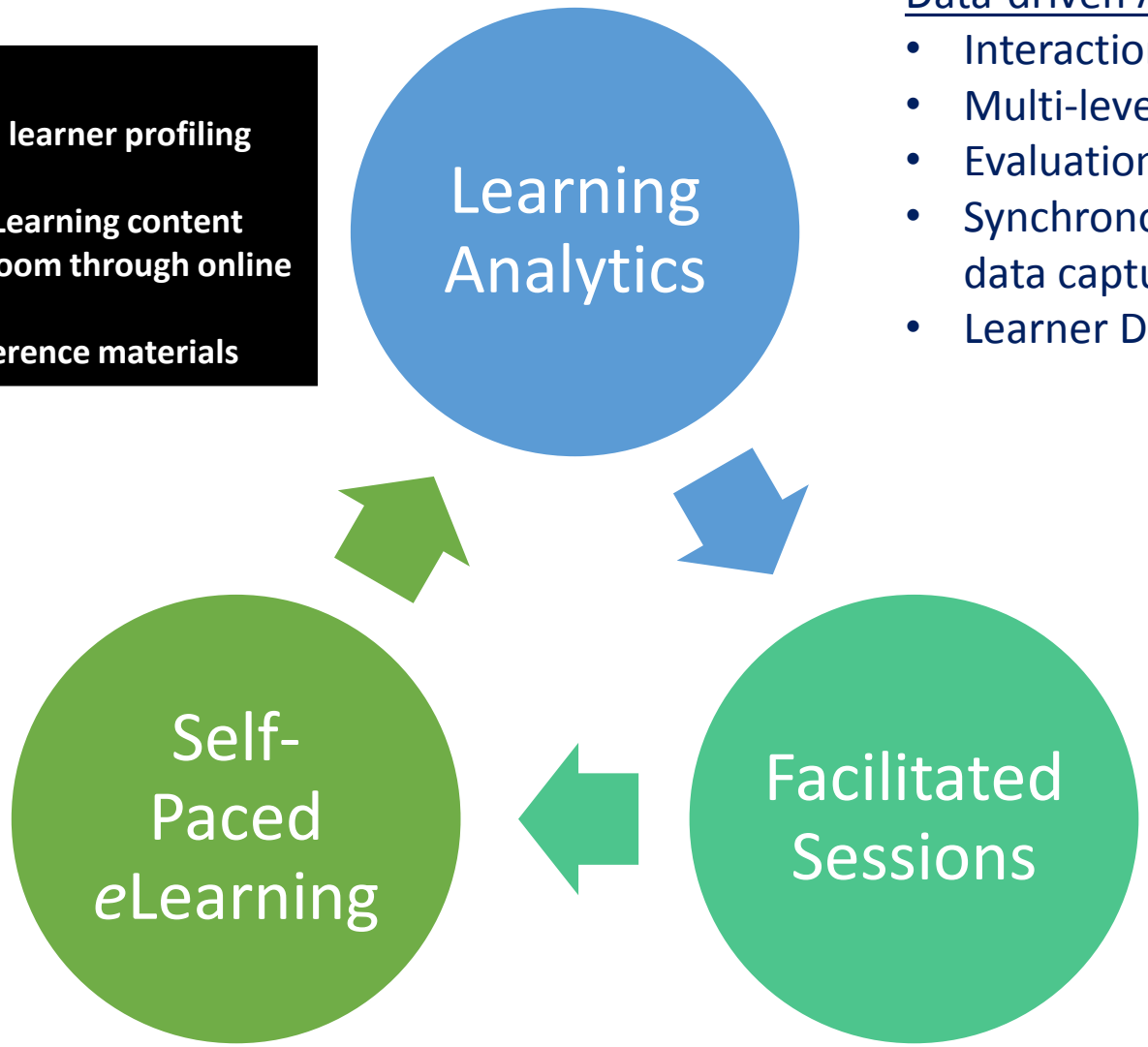


Blended Learning Model

seamless integration of online and offline learning methods

Key principles:

- **Research-based needs analysis and learner profiling**
- **Flip the classroom model**
- **Mobile-enabled, device-agnostic eLearning content**
- **Engage experts in the virtual classroom through online community**
- **Easy access to *context-relevant* reference materials**



Data-driven Assessment

- Interaction Data (SCORM)
- Multi-level Assessment
- Evaluation survey data
- Synchronous, Asynchronous data capture
- Learner Dashboards

Tutor-led sessions

- Weekly / Fortnightly Cycle
- Progress Review
- Proactive Interventions
- Technology facilitation
- In-house Quizzes
- Data Collection

Mobile-enabled *e*Learning

- Progressive, Self-paced, directed modular courses
- Deployed as Stand-alone mobile Apps
- Built-in quizzes and repetitive learner assessment
- Interactive Community support (Slack)

Research Opportunity

- Framing a study of Digital Literacy within a developing context with constrained resources using a new emerging Learning Framework
  - *Connectivism*: technology-enabled learning as a function of connections rather than channel; social network aspects of learning; learning as sense-making of patterns
- Empirical Context
  - 300 young women learners over 3 cohorts in a unique socio-cultural context
  - Baseline digital skills profile
  - Progressive assessment / performance data
  - Interaction data (individual & social)
- Building novel eLearning objects that enable an interactive, blended learning model
- Study the role of a layered social support community and the patterns of connections that take place

Preliminary Insights – Cohort 1 (50 students)

- Test Assumptions through measurement & evidence *(eg. baseline digital profile)*
- Use an activist champion (*role model*) as a catalyst for mobilizing the community
- Allow for iterative, flexible learning
- Build-in progressive, multi-layered assessment mechanisms
- Be Adaptive and responsive to what the Data tells you
- Evaluate performance outcomes against multi-variate factors to determine what works (*what doesn't*) in deploying scalable digital skills capacity-building programs
- Mitigate the "*transactional distance*" challenge of eLearning with blended learning models that combine data-driven interventions with a social support community