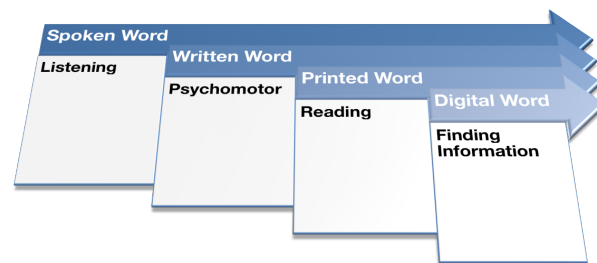




The PEARL Project. Introduction of the Digital Word.

In the spirit of finding better ways of delivering education to students, a wide and rich history of delivery systems have seen fruition as beneficial to teaching and learning.

The time is now where we are presented with an additional way of learning. We are at an age where Digital is the new vernacular. Information is at our fingertips. The requirements and systems for delivery change but the benefits are far and wide.



In the same way the spoken word, the written word and the printed word have enabled us to communicate; the digital word will help us bring education to greater levels.

The Personal Learning Device (PEARL) enables education to use the Digital Word to be used for learning. This opens up a multitude of opportunities to receive information. We need to harness this ability. The adoption in schools is critical and would lend to several uncertainties. We have crafted a method of introducing this to the schools so that the learning processes would remain and the implementation would be school policy driven rather than the common mistake of making it technology driven.

PEARL Project Implementation Flowchart



At the heart of the PEARL Implementation is ELMA (Education and Learning Management Application). ELMA was developed through a partnership between Galileo School Services and Exakt, Inc. The processes and procedures before and after the actual ELMA set-up is covered by the methodology to prepare the school to implement and maintain PEARL.

ELMA creates a safe environment for teachers and academic managers by giving them full control of the technology environment inside and outside of the classroom.

A partnership between:

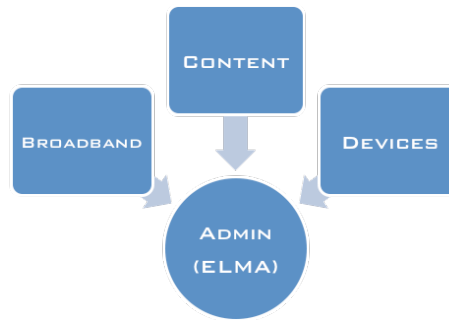


Education and Learning Management Application (ELMA)

ELMA is a Central Administration and Management System and Methodology designed to be able to apply the use of the influx of available technology for the use of Schools. There are 4 main areas of importance that have been identified as key to the success of the use of the tablet computer and the technology, people and processes around it.

These are the **ABCD**s:

- **ADMINISTRATIVE POLICY**
- **BROADBAND ACCESS**
- **CONTENT MANAGEMENT**
- **DEVICES**



ELMA was designed from the pilot project of LSGH, the first Personal Learning Device (PEARL) project in the Philippines, best practices were determined that would be helpful to other schools wanting to deliver the same value to their students and education system.

"We would never have been able to do it successfully without ELMA"
- Bro. Felipe Belleza, FSC, La Salle Greenhills President

The proper administration and management of ABCD will be the drivers for success of the use of the Personal Learning Device for Schools – this is ELMA.

The continually changing landscape is providing new ways and means of using technology for Education. We are here to make sense of it all and ensure that the proper policies and procedures are in place for the users to maximize the use of these new developments in technology.

It is clear that all 4 main areas will continue to change. Management is key to making sure the schools are able to adopt to these changes. ELMA is here to make sense of it all. It is open, dynamic and able to cater to these various changes for successful implementation in schools.

A partnership between:

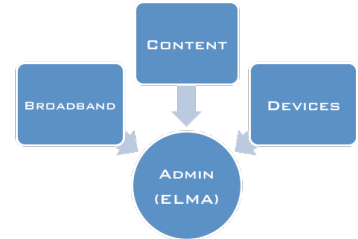


Administration

The Administration and Management delivered by ELMA is at the heart of the Personal Learning Device implementation. It manages the BCD components of the implementation and ensures that these other components will work harmoniously together to deliver an enriching experience to all the users.

It includes the following functions:

- Unique ID (Profile)
- PIM (Email, Contacts and Calendar)
- Broadband Management
- Content Management
- APIs for Application Developers
- Device Management
- Central Administrative Support



Unique ID, PIM and APIs

The Methodology and Management System for Administration starts with providing each user a Unique ID (Profile). Profile Management is needed to create a personality for each person in the Program. This profile is used when specific Content and Devices are assigned to the person through ELMA. A profile is created for all persons concerned in the program. This includes the Students, Teachers, Administrators and other School Personnel required.

With the profile, basic Personal Information Management Functions are given to the user. This includes Contacts, Calendars, Email, and other personal Information Management Tools.

Broadband Management

Interconnectivity is essential for ELMA from pre-deployment to production. A stable network infrastructure is needed to accommodate the number of equipment that will be connecting to the server to make sure policies and content are up-to-date all the time. Internet access will also be the main form of communication of the administrators, teachers and students. The minimum requirements needed by the school to run ELMA will be given to the school and tested to ensure proper implementation and maintenance of the system.

Proper consideration should be given to the following parameters:

- Applications to be used (browsing, email, video, e-learning)
- Number of users
- Number of devices

ELMA also provides the necessary controls and settings needed to ensure maximum reliability and optimum use of the broadband connections and the tablets by the students.

A partnership between:



Content Management

Content Management is key to manage the various sources of information necessary to be available to the people concerned. A quick rundown of available sources currently include:



Content is continually changing and the need to make the content both open and controlled is a major task for the school. The content approved by the school can be distributed through ELMA. With hosted information and connected devices, through ELMA, updates to the content are seamless. This enables the school to provide the students with the most up to date information and materials available.

APIs FOR CONTENT PROVIDERS

For the content to be delivered to the devices, specific requirements are given to content providers whether they are to deliver web based content, ebooks or applications. *APIs are provided to application developers to be able to have single sign on access and see the profiles of the user groups in the ELMA system as well as to make full use of the PIM functionality that can be integrated into their application

Device Management

Device Management is important to ensure that the equipment used by the people can be used at the school.

There are a myriad of available devices in the market today. ELMA supports a wide array of these tablets. In partnership with the device manufacturers, we have created a test lab for the different devices in order to ensure that they will work with ELMA and its functions - most importantly the Broadband and Content provided by the school. Devices that have already been tested to work with ELMA will be ELMA Certified by Galileo and Exakt.



DEVICE SECURITY

It has become apparent that Security is very important in terms of the Equipment used for PEARL. In line with this, we have provide TARA (Theft Apprehension and Asset Recovery Application). It is a solution from the combined efforts of security software as well as the services of an insurance provider.



Some Device Management Functions:

1. Settings Management
2. Password Protection for Tablets
3. Wipe Device
4. Device Tracking

A partnership between:



For more details:

Web: <http://www.exakt.com.ph/school-tablet-program.html>

Email: elma@exakt.com.ph