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Objectives

- Quick overview of Moodle and capabilities
- Why Moodle
- Basic Demo

Who is this dude?

- Joseph Guarino
- Owner/Sr. IT consultant of Evolutionary IT
- www.evolutionaryit.com
- Teacher at Cambridge Center for Adult Education and Brookline Adult & Community Education

Moodle

- FOSS e-learning, CMS (Course Management System) LMS (Learning Management System), VLE (Virtual Learning Environment) or LCMS (Learning Content Management System)
- Modular Object Oriented Dynamic Learning Environment

Moodle Uses

- Education
- Training
- Development
- Business

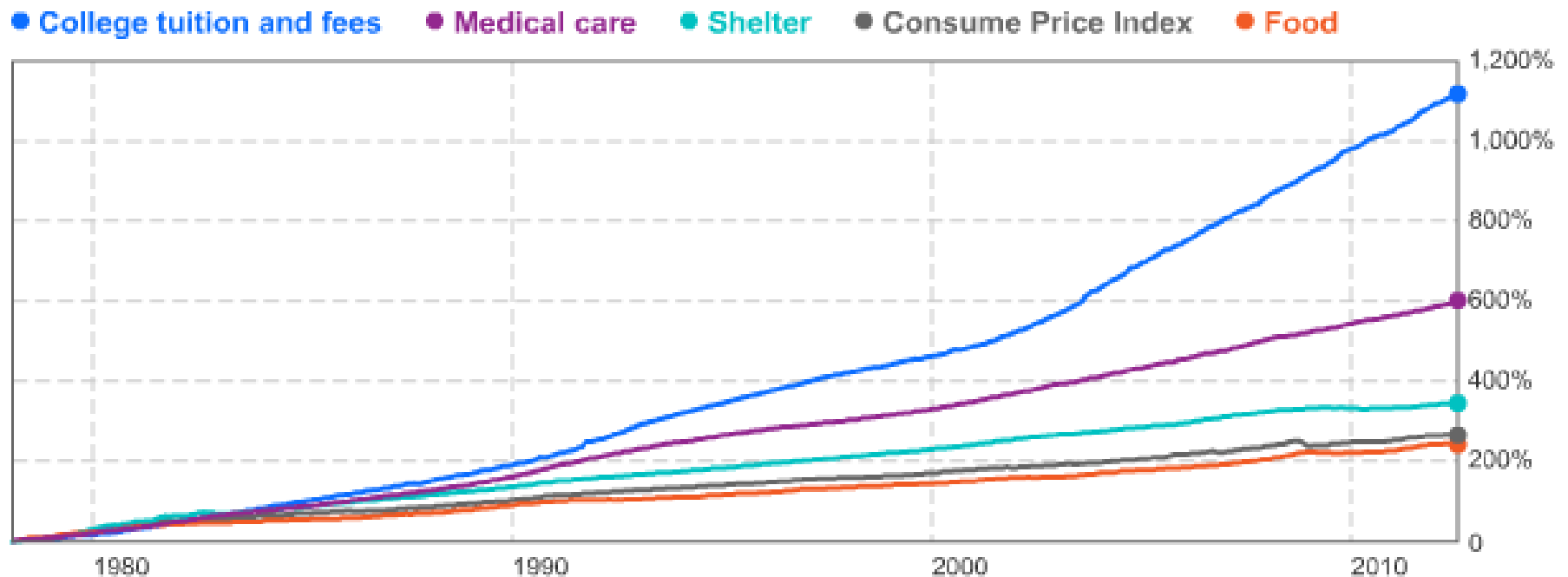
Why is it Relevant?

- Technology can be powerful adjunct in traditional class room
- Technology can be a great cost effective replacement

Rising Tuition Costs

The cost of obtaining a college degree has increased by 1,120 percent over the past 35 years. That, combined with shrinking incomes, is putting college out of reach for millions of young people, said Senator Tom Harkin, an Iowa Democrat, in an e-mailed statement.

Percent change since January 1978



Source: Bloomberg, Labor Department

Online Education Revolution

- MIT Open Courseware
- MITx
- edX

You Can Build Your OWN!

Moodle Background

Moodle

- Moodle Pty Ltd – (Moodle HQ) company behind most of Moodle core development
- Moodle Partner Network – commercial arm of project.
- Partners provide 10% of revenue as donation to Moodle core

Moodle

- Slow paced process of enjoyable tinkering, diddling, and experimenting that leads to insight, creativity and innovation.*
- **Hacking** your way to knowledge

*Moodle for Dummies

Hacker

- Some who enjoys learning or exploring knowledge to gain wisdom
- != cracker, cybercriminal or black hat
- Thanks media!

Moodle Philosophy

- Social constructionist methodology
- Learners (not just teachers) can contribute to teaching
- Learning can and should be collaborative

Moodle

- GNU GPL & community driven
- PHP
- Huge user community - >1 million
- Engaged, global developer community

Software Requirements

- Linux, Windows 2003, BSD, Solaris Unix, Mac OSX
- Focus on LAMP
- Also can use PostgreSQL, MSSQL, Oracle, SQLite as DB
- Apache or IIS recommended

Ubuntu Server Moodle Setup

- `sudo taskset install lamp-server`
- `sudo apt-get install moodle`
- `http://www.yourserver.com/moodle`
- **Set up cron**
- **Follow Moodle security recommendations**

Ubuntu Server Moodle Setup

- Add firewall rules
- Register your site
- Setup SSL/TLS
- Setup your backups
- Security Assessment/Pentest – fix issues
- Now you are ready to go live!

Moodle Directory Structure

- /pathto/moodle/mod/ - modules (i.e. activities and resources)
- /pathto/moodle/blocks/ - blocks (in the sidebars)
- /pathto/moodle/question/type/ - questiontypes
- /pathto/moodle/course/format/ - course formats
- /pathto/moodle/admin/report/ - admin reports
- /pathto/moodle/theme/ - themes

Moodle Config File

- /pathto/moodle/config.php
- Created by installer
- [Documentation on Config.php](#)

Other Server Install Docs

- General Install Docs
- Unix or Linux Install Docs
- Windows Server

Moodle Key Features

Moodle Key Features

- Easy to use content management
- Collection of powerful course management features
- Interactive social software that fosters learning

Social Software

- Social software applications include communication tools and interactive tools.
- They focus on establishing and maintaining a connection among users, facilitating the mechanics of conversation...

[Wikipedia](#)

Moodle Key Features

- Great plugin architecture
- Core features are extensible through them
- Plugins and blocks allow extending features and placing content

Moodle Key Features

- Server management features
- Server statistics
- Server logs
- Server course backup

Activities

Activities & Resources

- Most common denominator in makeup of courses
- Activities: Assignments, forums, wikis, quizzes
- Resources: Pages, links, IMS content

Activities

- Assignment - Communicate tasks, collect work and provide grades and feedback.
- Chat – Text based real-time synchronous discussions for students/teachers.
- Choice - Teacher to ask a question and offer several possible responses.

Activities

- Database – Allows students to create, update and search bank of entries.
- External Tool – Allows students to interact with learning resources and activities on other web sites.
- Forum - Asynchronous discussions

Activities

- Glossary – Allows students to create and maintain a list of definitions of key terms – Think dictionary.
- Lesson – Allows a teacher to deliver content and/or practice activities in interesting and flexible ways.
- Quiz – Allows a teacher to create quizzes of various types, including multiple choice, matching, short-answer and numerical

Activities

- SCORM package - SCORM package is a collection of files which are packaged according to an agreed standard for learning objects.
- SCORM is a standards and specifications for web-based e-learning
- Survey – Allows teachers to gather data about student class assessment. Gives teachers ability to self-assess.

Activities

- Wiki – Allows participants to collaboratively add and edit a collection of web pages.
- Workshop – Offers peer assessment. Students can submit any digital content (files).
- Many others in **Modules and Plugins**

Resources

Resources

- Book - Teacher to create a multi-page resource in a book-like format
- File - Teacher to provide a file as a course resource.
- Folder – Allows teachers to display numerous files in a folder

Resources

- IMS content package - A collection of files which are packaged according to an agreed standard so they can be reused in different systems.
- Label - Label module enables text and multimedia to be inserted into the course page in between links to other resources and activities.
- Page – Allows a teacher to create a web page resource using the text /HTML editor.
- URL – Allows a teacher to create a link to any online resource.

Grading

Grading

- Grading features allow student assessment
- Gradebook is a central repository of all student grades

Plugin/Modules

Plugins/Modules

- Extend the functionality beyond core
- Many activities, resource types, question types, auth mechanisms, themes, enrollment, content filtering, etc.
- /pathtomoodle/mod
- Moodle Modules & Plugins

Blocks

Blocks

- Allow you to add additional features or content to a page
- “Block” of content
- /pathtomoodle/blocks
- Moodle Modules & Plugins

Themes

Themes

- Control your layout and design
- Both free and commercially supported themes
- /pathtomoodle/theme
- Moodle Themes

Other Key Features

Language Packs

- Internationalized
- Moodle Language packs
- <http://download.moodle.org/langpack/>

Authentication Plugins

- Multiple authentication mechanisms are supported
- LDAP, CAS server (SSO), External DB, PAM, RADIUS, etc.

Student Registration

- Manual account creation
- Email based self-registration
- Guest access

E-Commerce/Payment Options

- Yes you can offer paid training
- Payment gateway – Authorize.net
- PayPal

Key Moodle Security

Users/Roles

- Each user has a specific role
- Moodle roles have different permissions
- Default roles – Administrator, Teacher, Non-Editing Teacher, Course Creator, Student, Guest.

Moodle User Types

- **Administrator** - Can do anything on the site. Think root.
- **Course creator** - Create new course and teach them.
- **Teacher** - Can do anything within a course like changing activities and grading
- **Non-editing teacher** - Teach in courses, grade but not alter courses
- **Student** - Attend a course and use base Moodle features
- **Guest** - Minimal privileges - cannot add or edit content

Basic Moodle Interface Terms

Moodle Interface

- Moodle site/Moodle site front page – All your organization's courses – top level
- Moodle Course – Your actual course
- Course Front Page – Home page of your course

Moodle Security

- Always patch your system
- Sign up for the mailing list
- Follow the [Security Recommendations](#)
- Use SSL/TLS
- Anti-malware support (ClamAV)
- Backup!

Moodle Hosting

- Supernumerary hosting options
- Cloud options
- Moodle Partner Network

Virtual/Cloud Options

- Bitnami VMware & Cloud (Amazon)
<http://bitnami.org/stack/moodle>
- Turnkey Linux VM's and Cloud
- <http://www.turnkeylinux.org/moodle>

Moodle Integration

- Some integration with Drupal, Joomla, Postnuke
- Integrate with existing CMS (Content Management System)

Moodle Integration

- Big Blue Button - Desktop sharing, Whiteboard, Integrated VoIP, Record & playback, Presentation mode, Webcam Support
- <http://www.bigbluebutton.org/>

Moodle Links

- <http://www.moodle.org>
- <http://docs.moodle.org>
- <http://demo.moodle.net>
- <https://moodle.org/forums>
- <https://moodle.org/downloads/>
- <https://moodle.org/news/>

Find me online in all social networks at:

<http://network.evolutionaryit.com>

Thank You!

BLU

Moodle community

FOSS communities everywhere!