

# **Open Source Software as Solution in State Funded Community Colleges**

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## **Annotated Outline**

### **Executive Summary**

#### **Increasing importance and evolving role of community colleges.**

Community Colleges vs. Universities

Student sectors served

Financial Resources available

#### **Challenges faced by community colleges:**

Tightening budgets

Need to keep up with rapidly changing technology

#### **Proposal – Using Open Source Software in schools**

Advantages:

Low to no cost

Comparable functionality

Disadvantages:

Non-standard tools

Questionable support and security

Purpose of paper and recommendations

## **Community Colleges and the new state of higher education**

Defining Community Colleges – public and private

### **The changing role of community colleges**

Serving the community by graduating more degree students, expanding the economy

More students earning four-year degrees entirely at community colleges

Serves non-traditional students; high minority enrollment

Open enrollment policy and low student tuition; rely primarily on state or federal funding.

## **Challenges facing community colleges**

Providing university quality education, preparing students for job market success on reduced budgets.

Need for higher education system to educate students on a global scale.

### **FINANCIAL**

Dependent on government funding; highly sensitive to budget cuts

Public comm. colleges have little freedom to raise tuition.

### **FACULTY**

High professor turnover rate

Reliance on visiting and part time professors

### **SOFTWARE AND NETWORKING**

Networking capabilities and expensive software tools essential to learning.

Software literacy required for professional success.

Large, four-year universities have deals with commercial software publishers.

Traditionally licensed, closed source software still expensive for students and institutions.

## **Seeking solutions in Open Source Software**

### **The case for open source**

Community colleges lack the financial resources and facilities of larger universities.

Expense of software a major burden for both institutions and students

Flexibility and low cost of *open source software* ideal for community colleges; can help achieve the goal of alleviating cost while providing best educational experience possible.

### **Open source in colleges today**

Both community colleges and four-year private and public universities experimenting with incorporating open source software.

Chronicle for Higher Education reports open source as an alternative to commercial software

Quote: Chris Lehmann, The Beacon School, New York. "Same amount of technology infusion without open source would have been prohibitively expensive.

### **Defining Open Source: A closer look at the technology**

Definition of Open Source Software

### **CATEGORIES OF OPEN SOURCE SOFTWARE IN COMMUNITY COLLEGES**

#### **Applied Fields**

Idea of applying knowledge of a particular subject (e.g.: electronic design, finance, mathematics)

**Document Editing:** Word processing, note taking, PDF manipulation

## **Networking and Internet**

### **SPECIFIC OPEN SOURCE TOOLS THAT FIT THESE NEEDS:**

Applied Fields: **FreePCB**

Document Editing: **OpenOffice.org**

Networking and Internet: **Mozilla Firefox**

Education – Course Management: **Sakai**

Above products offer the functionality of their commercial alternatives without the price tag.

## **Advantages and limitations of open source software tools for community college use**

Colleges must weigh the benefits of adapting open source tools for their own situation and needs: Financial Flexibility, interoperability, security and opportunity to contribute to the open source community.

### **Short and long term costs**

Pro:

Open source software is free or very inexpensive to implement, upgrade. Offers financial flexibility to budget strapped institutions, poor students.

Con:

Commercial software often offered to educational institutions at deeply discounted rates. Requires hiring of programming specialists to maintain and upgrade code.

### **Support**

Pro:

24-hour technical support provided freely by the open source community

Con:

Closed source, commercial software bound by warranty, tech support provided by and guaranteed by publisher.

Open source software the work of many individuals; limited accountability for bugs, updates, usability.

### **Security**

Pro:

Most established OSS programs highly scrutinized by the open source community.

Security issues swiftly dealt with by the community.

Access to code simplifies control of data.

Con:

Burden of maintenance and upkeep on the intuition.

Code and data vulnerable to hackers.

Security not guaranteed by the manufacturer.

## **Interoperability and system sharing**

Pro:

Ability to share resources with other colleges around the country helps turn out students who are educated and well trained in current technologies.

Open source offers interoperability at little to no cost, no restrictions on licenses.

## **Benefits and burdens to students**

Pro:

Students have access to suitable learning tools, professional skill development.

Con:

Most students already use industry standard programs like Microsoft Office.

Burden on students to learn a new software platform.

Open source platforms like OpenOffice have little to no name recognition or professional credibility

## **Innovation, Idealism and Open Source**

Pro:

Noble concept behind open source: backers argue that software should be free and accessible to all.

Active, passionate open source community.

Con:

Commerce, financial incentive drives innovation

Open source defies concept of copyright, profit motive that have produced great products like Microsoft and Adobe

## **Conclusion: Open Source Software can help the cash-strapped community college system fulfill its educational promise**

OSS will allow educators flexibility in classroom technology.

Vital that students learn technical skills in college that they will use throughout their career.

Despite some disadvantages in comparison with popular, commercially licensed software, OSS offers compelling benefits to be worthy of consideration in institutions of higher education.