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A Brief Study and Analysis of Proprietary E-Learning Software Solutions in the Current Technology World

Dr. V. Radhakrishnan
Assistant Professor
Department of Commerce
Tagore College of Arts and Science,
Chrompet, Chennai-44.

Dr. S. Sathishkumar
Assistant Professor
Department of Business Administration
Tagore College of Arts and Science
Chrompet, Chennai -44

Abstract
Restrictive e-learning software solutions have continually directed the world with their never-seen features, alongside especially high license costs. Recent estimations exhibit that several evaluations have shifted regarding elite software solutions as the industry is increasingly challenged by the open-source community and its growing customer base. Open-source software solutions presently offer many more captivating advantages for the end-client than just free source code. This article attempts to examine the reality behind recent hypotheses about the future of the proprietary software market, especially regarding proprietary e-learning solutions. Towards this end, a detailed assessment of literature and market data concerning proprietary and open-source divisions was conducted using Percentage and Comparative Market Share Analysis. Considering the literature assessment and the present market scenario, pure proprietary e-learning software solutions face significant structural decline unless they adapt.
Keywords: Proprietary e-learning, open-source software, software solutions, market share analysis.

I. INTRODUCTION

Long before the open-source model became pervasive, the makers of proprietary solutions established a dominant industry. The proprietary software industry made massive gains in market share and profitability because of its commendable innovative capabilities. However, with its rapid expansion, the industry became rigid and controlling. Around the same time, the open-source model gained attention and began its steady growth. Various pioneers in the proprietary e-learning industry had earlier assumed they would not be impacted by their smaller, decentralized open-source competitors. Today, the tables have turned. CNET News compares the current state of the proprietary software industry with the fall of the Roman Empire. The author, who is the COO of a prominent organization, agrees with historian Edward Gibbon's view that Rome fell not because of its weakness, but rather as a result of its overwhelming rigidity and size. The proprietary business remains strong with major names such as Microsoft and IBM. However, aside from a small group of major corporations, will others in the industry withstand the test of time? Considering the current challenges in the proprietary industry due to renewed interest in the open-source model, it raises an important question: is this the end of traditional proprietary e-learning solutions?

Importance of Open Source

Over time, an institution using any kind of e-learning platform seeks to expand its existing tools. A major advantage of using an open-source e-learning solution is its capacity for expansion. Open-source solutions give an institution numerous opportunities to test and add new modules and tools to their existing e-learning system completely free of cost. Furthermore, the open-source community, through the support of independent developers, continually builds a widely accessible and free application ecosystem. In contrast, proprietary solutions frequently offer their products and tools in rigid bundles. To obtain an additional feature, an institution must often pay extra licensing fees. With a proprietary solution, it becomes increasingly difficult to perform—or obtain vendor approval to perform—even minor customizations to match the institution's specific needs.

A study conducted by the online magazine *Computer Economics* showed that clients dislike being dependent on software vendors for every operational task related to their software solution. For example, institutional administrators are frequently forced to accept costly product upgrades even when they do not need them. When releasing new software upgrades, most vendors discontinue technical support for older versions. On the other hand, with open-source software, no institution is forced to accept unwanted updates, and extensive community support remains available to resolve issues on older versions.

Research Methodology and Analytical Tool

To objectively evaluate whether proprietary or open-source models will dominate the academic and technology market in the coming decades, this study relies on empirical market indicators rather than assumptions.

- **Research Design:** Descriptive and analytical research based on secondary market survey data.
- **Sources of Data:** Secondary data compiled from established web technology and market tracking agencies, including Netcraft, W3Techs, *The Guardian*, and browser market share statistics.
- **Analytical Tool Used: Percentage Analysis and Comparative Market Share Analysis** (comparing proprietary versus open-source adoption rates across web servers, content management systems, and web browsers).

Data Analysis and Interpretation

Comparative Market Share Across Technology Infrastructure

An evaluation of secondary industry reports demonstrates strong open-source adoption across core digital infrastructure:

- **Web Servers (Net craft Survey):** Approximately **64.67%** of all primary web servers across domains operate on Apache (open-source), whereas only **15.00%** operate on Microsoft servers (proprietary).
- **Content Management Systems (W3Techs Survey):** The market leaders in content management systems are WordPress (**54.30%** market share) and Joomla (**9.00%** market share). Together, these two open-source platforms control **63.30%** of the CMS market.
- **Mobile Operating Systems (*The Guardian* Report):** Within eighteen months of launch, Google's Android (open-source) expanded rapidly in the UK smartphone market, outpacing proprietary mobile operating systems including Nokia's Symbian, RIM's BlackBerry, and Apple's iOS.

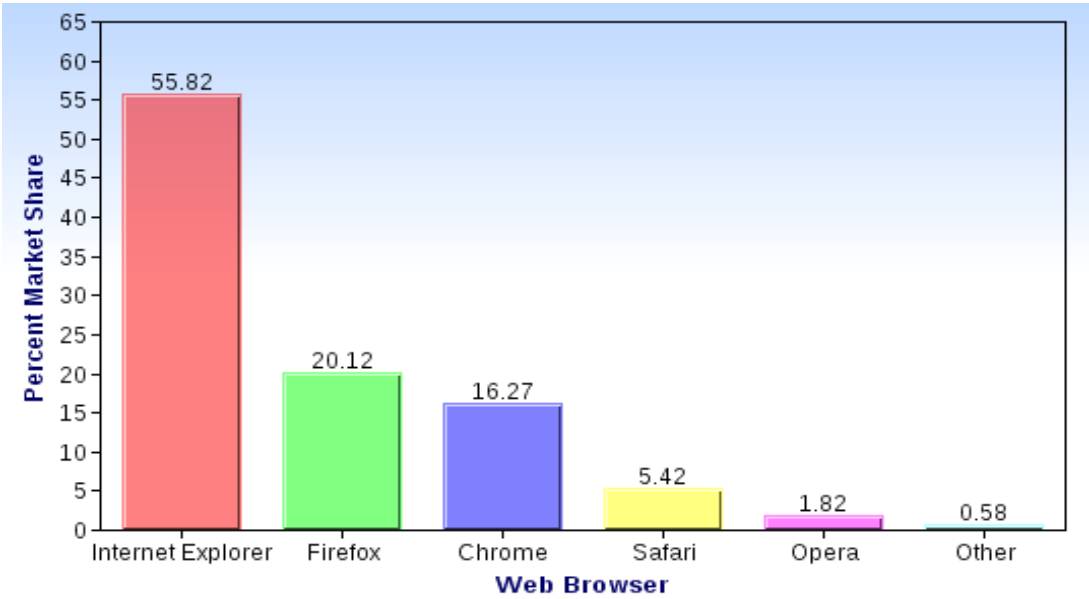
Percentage Analysis of Web Browser Usage

Although Microsoft's proprietary web browser (Internet Explorer) held a strong historical market presence, open-source and open-core browsers such as Mozilla Firefox and Google Chrome steadily gained popularity. Table 1 and Figure 1 present the percentage breakdown of web browser market share.

Table 1
Percentage Analysis of Web Browser Market Share

S. No.	Web Browser	Software Model Type	Market Share (%)
1	Internet Explorer	Proprietary	55.82%
2	Firefox	Open Source	20.12%
3	Chrome	Open Source / Chromium-based	16.27%
4	Safari	Proprietary	5.42%
5	Opera	Proprietary	1.82%
6	Other	Mixed / Other	0.58%
Total			**100.00%**

(Note: Percentage figures reflect the exact values reported in Figure 1; minor rounding accounts for the 0.03% variance.



[INSERT FIGURE 1 IMAGE HERE: "Figure.1 Browser Usage" Bar Chart from Original Document]

Interpretation of Analytical Findings

1. **Substantial Open-Source Penetration:** Grouping the browser market share data by software model reveals that while proprietary browsers (Internet Explorer, Safari, and Opera) collectively account for **63.06%** of usage, open-source browsers (Firefox at **20.12%** and Chrome at **16.27%**) have already captured **36.39%** of the market.
2. **Shift in Learning Management Systems (LMS):** A similar competitive pattern is evident in the e-learning LMS market among open-source platforms (**Moodle** and **Sakai**) and proprietary platforms (**Blackboard** and **WebCT**).
3. **Key Determinants of Open E-Learning Adoption:** Based on the comparative analysis, the essential features that define an ideal open online e-learning solution include:
    - **Open Source Code:** Full access to inspect and customize underlying software architecture.
    - **Freedom for Courses:** Seamless migration of course content from one LMS framework to another, or effortless authoring and exporting via platforms like WordPress.
    - **Free Accessibility:** Unrestricted access to learning resources from anywhere, rather than confinement inside a locked Learning Management Solution.
    - **Open Integration:** Compatibility with external academic and administrative frameworks for simple system integration.
    - **High Scalability:** Ability to scale institutional user capacity without prohibitive per-seat licensing penalties.

II.CONCLUSION

Today, vendors of proprietary e-learning software solutions must do more than rely on the outdated claim that open-source platforms are less secure or lack reliable technical support. What prospective and existing buyers of proprietary e-learning software fear most is vendor lock-in—specifically, the difficulty of migrating their data and courses away when they decide to discontinue using the product. As indicated by the *Computer Economics* findings, if vendors of proprietary software provide transparent exit and migration options rather than trapping buyers into rigid contracts, customers will be far less inclined to abandon their platforms. If proprietary e-learning software adopts a hybrid approach—offering strong interoperability with external platforms, including open-source tools—it can rebuild trust with institutional IT leaders and secure its long-term survival.

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