Proprietary Platforms for FAD: A Comparative Analysis

Pasquina Campanella Department of Computer Science University of Bari "Aldo Moro" via Orabona,4 – 70126 Bari – Italy pasqua13.cp@libero.it

ABSTRACT

Faced with the development of internet, the educational resources present in network in an informal and unstructured way have grown exponentially. For this reason the need to have tools to extract the constantly evolving knowledge for a varied user is becoming more and more widespread. So starting from evolution put in place by web 2.0, more and more social with prospects of "knowledge management" and "knowledge sharing", in this article the potentials of current technological and methodological tools have been verified with reference to characteristics of proprietary platforms considering progress made by an increasingly innovative technology, content delivery methods, user-based monitoring tests as well as evaluation techniques to better manage online training, which make web user an active participant in the production process. In this direction we achieve what is called lifelong learning.

KEYWORDS

monitoring, platforms, performance, collaborative learning, characteristics.

1 INTRODUCTION

The panoramic of FAD platforms has seen a continuous evolution over the years. The term that technological "platform" refers to infrastructure that allows e-learning activities or management of on-line courses, integrating didactic modules, evaluative checks within learning groups [1], [10], [11], [12]. In favoring the use of advanced and interactive platforms, an analysis of proprietary solutions has been proposed, which aims to be a useful contribution to the various forms of social and collaborative learning and which require new skills in the integrated management of training components

typical of social networks and to guarantee extensibility and flexibility in order to promote knowledge and personalization. The analysis is determined by evidence that the literature partially allows to obtain an objective evaluation of platforms and how they support the learning processes, considering the peculiarities, needs and requirements with reference to web tools [1]. [10], [11], [14]. Already from the '90 are drawn up models to classify, analyze the management systems [4], [7]. Among them is Commonwealth model that has analyzed the different characteristics such as usability, accessibility, collaborative functionality, manuals. installation, technical support, standards compliance, interoperability reusability of content, tracking [15]. Following are different sections on proprietary platforms analyzed in the respective evaluation studies and finally the conclusions and future developments.

2 PROPRIETARY PLATFORMS

Among the main proprietary platforms existing today are listed the most common considering triad sharing, participation and collaboration typical of web 2.0 and in particular blog, feedback, chat, forum, podcasting and wiki in a reticular concept, participated in knowing where to achieve cognitive reconstruction for centrality of e-teaching (Tab.1) [2], [4], [9], [13]:

 Table 1. Ownership proprietary platforms

Piattaforme Proprietarie	Adobe Connect	<u>Centra</u>	Elluminate Live	е/рор	<u>Groove</u>	HotConfer ence	Interwise	<u>LearnLinc</u>	<u>Live</u> Classroom	<u>Live</u> <u>Meeting</u>
	Lotus Learning Space	<u>Marratech</u>	Mega Meeting	<u>Netlearning</u>	<u>Picture</u> <u>Talk</u>	Raindance	Saba Learning Enterprice	<u>SameTime</u>	<u>T-learn</u>	<u>VoxWire</u>
	<u>WebCT</u>	<u>WaveThree</u>	WebConfe rence							

The study is aimed at interaction between learning objects, monitoring activities and results obtained. Online questionnaires, interventions in forum and chat to highlight the different polarities [2], [13]. In providing the courses, comparisons made were used for the user friendly role of online platform, the modalities inherent to multimodal lessons, contents, forms of verification and evaluation used, interactive support. The results that follow show a link between collaborative teaching and satisfaction, a variable influence on level of socialization on the satisfaction obtained. The following analysis assessed the duration of courses, management of courses, quality of material distributed, quality of theoretical lessons transmitted and exercises performed by following self-assessment administering questionnaire (Fig.1):

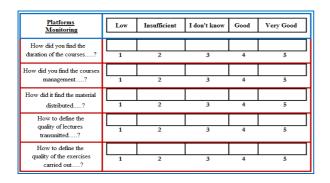


Figure 1. Platforms monitoring questionnaire

Centra

Collaborative web-based platform with web conference functionality, virtual classroom, web seminar, net meeting [2], [4], [12]. The *performance* monitoring performed to a contingent of 100 students (between the ages of 18 and 30) in community gave (Fig.2)

- Course duration: very good with an average of 54% against an insufficient 10% and 24% I do not know;
- **Course management**: good with an average of 54% against a 16% I do not know;
- Material quality distributed: good with an average of 55%;
- Quality theoretical lessons transmitted: very good with an average of 39% against a 25% I do not know;
- **Quality exercises performed**: very good with an average of 56%.

The advantages are: good synchronous and asynchronous communication; media audiovideo interaction; VOIP system and integrated videoconferencing; good real-time interaction.

The disadvantages: interactive gaps, improved in audiovision.

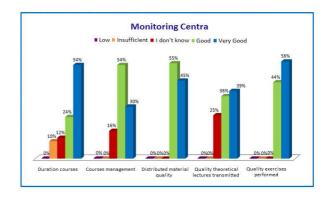


Figure 2. Monitoring Centra

Elluminate Live

Hybrid platform, virtual classroom and e-conferencing, enterprise, academic and lite format. Multiplatform on windows, linux and mac os systems [4], [7], [12]. The monitoring *performance* performed to a quota of 150 participants (aged between 20 and 30) in community has given (Fig.3)

- Course duration: good with an average of 30% against an insufficient 20% and 30% I do not know;
- **♣** Course management: good with an average of 54% against 36% I do not know;
- **4** *Material quality distributed*: good with an average of 40% against a 21% I do not know;
- Quality theoretical lessons transmitted: very good with an average of 40% against a 25% I do not know;
- Quality exercises performed: very good with an average of 42% against a 20% I do not know:

The advantages are: good sharing; interactive evaluation test; importing contents and editing tools

The disadvantages: application and interactive problems, improved by continuing in chat, forum.

The International Journal of E-Learning and Educational Technologies in the Digital Media (IJEETDM) 3(4): 153-160 The Society of Digital Information and Wireless Communications (SDIWC), 2017 ISSN: 2410-0439 (Online)

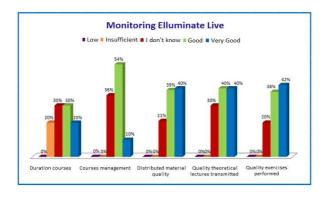


Figure 3. Monitoring Elluminate Live

E/Pop

Content sharing tool, multiplatform windows, mac os [3], [4], [12]. The *performance* monitoring performed to a contingent of 100 trainees (aged between 20 and 30 years) in community gave (Fig.4)

- Course duration: good with an average of 35% against an insufficient 15% and 30% I do not know;
- **Course management**: good with an average of 40% against 35% I do not know;
- Material quality distributed: good with 35% average against 35% I do not know;
- Quality theoretical lessons transmitted: good with an average of 45% against a 30% I do not know;
- Quality exercises performed: very good with an average of 40% against a 21% I do not know:

The advantages are: good sharing; interactive evaluation test; multiplatform compatibility.

The disadvantages: application interactive gaps, improved by continuing to chat. Monitoring was balanced in the various tests conducted.

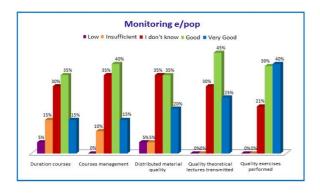


Figure 4. Monitoring e/pop

Groove

Collaborative learning tool, based on PHP [4], [6], [14]. The *performance* monitoring performed to a contingent of 100 participants (aged between 18 and 30) in community gave (Fig.5)

- ♣ Course duration: good with an average of 35% against an insufficient 15% and 20% I do not know:
- Course management: good with an average of 50% against an insufficient 10% and 15% I do not know;
- Material quality distributed: very good with an average of 45% against an insufficient 5% and 5% I do not know;
- Quality theoretical lessons transmitted: very good with an average of 50% against a low 5%:
- **Quality exercises performed**: very good with an average of 60%;

The advantages are: good sharing; interactive evaluation tests; multiplatform compatibility.

The disadvantages: interactive application problems, improved by continuing in chat, forum. Balanced monitoring in the various tests.



Figure 5. Monitoring Groove

HotConference

E-learning tool for collaborative sharing, based on PHP [5], [7], [12]. The *performance* monitoring performed to a quota of 150 participants (aged between 19 and 25) in community gave (Fig.6)

- **♣** Course duration: good with an average of 45% against an insufficient 5% and 5% I do not know;
- **4** Course management: very good with an average of 50% against an insufficient 10% and 5% I do not know;

- Material quality distributed: good with an average of 50% against an insufficient 10% and 15% I do not know;
- Quality theoretical lessons transmitted: very good with 45% against an insufficient 5% and 5% I do not know;
- Quality exercises performed: good with an average of 48% against a 9% low and an insufficient 5%.

The advantages are: good sharing; interactive evaluation tests; multiplatform compatibility. The disadvantages: interactive and collaborative problems, improved by continuing to chat. Test monitoring conducted somewhat balanced.

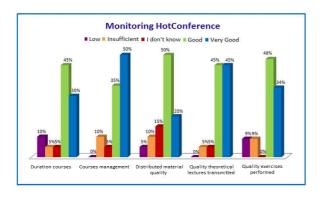


Figure 6. Monitoring HotConference

LearnLinc

E-learning tool for collaborative learning, synchronous and asynchronous solution [4], [8], [12]. The evaluation of the performances to a contingent of 100 participants (aged between 20 and 25) in the community reported duration of the courses with an average of 60%, quality of material distributed with an average of 40%, quality of lessons, exercises and test with an average of 50% (Fig.7). Balanced monitoring in the various tests conducted.

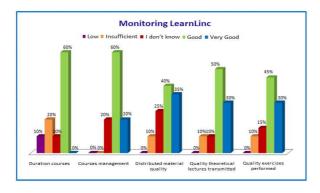


Figure 7. Monitoring LearnLinc

Lotus Learning Space

Groupware platform, consists of *learning space* core and *learning space collaboration* [4], [8], [12]. The *performance* monitoring performed to a contingent of 100 students (aged between 20 and 30 years) in community gave (Fig.8)

- **Course duration**: good with an average of 50% against an insufficient 10%, a 20% poor and a 10% I do not know;
- 4 Course management: good with an average of 45% against an insufficient 10% and 10% I do not know;
- ♣ *Material quality distributed*: good with an average of 45% against an insufficient 15%, a low 5% and a 5% I do not know;
- **Quality theoretical lessons transmitted**: good with an average of 60% against a 15% insufficient and 15% I do not know;
- **Quality exercises performed**: good with an average of 60% against an insufficient 10% and a 10% I do not know.

The advantages are: good sharing; interactive evaluation tests; multiplatform compatibility
The disadvantages: interactive and application problems, improved by continuing to chat. Test monitoring conducted somewhat balanced.

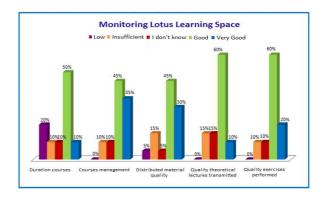


Figure 8. Monitoring Lotus Learning Space

Netlearning

Collaborative platform for synchronous and asynchronous training activities [8], [4], [12]. Functionality is scalability, modularity, personalization, reporting. The *performance* monitoring performed to a contingent of 100 participants (between the ages of 25 and 35) in community gave (Fig.9)

- **Let Course duration**: very good with an average of 55% against a 15% I do not know;
- **♣** *Course management*: good with an average of 60% against a 10% I do not know;

The International Journal of E-Learning and Educational Technologies in the Digital Media (IJEETDM) 3(4): 153-160 The Society of Digital Information and Wireless Communications (SDIWC), 2017 ISSN: 2410-0439 (Online)

- Material quality distributed: good with an average of 50% against a 10% I do not know;
- Quality theoretical lessons transmitted: very good with an average of 50% against an 8% I do not know;
- **Quality exercises performed**: good with an average of 54% against a 4% I do not know.

The advantages are: good sharing; interactive evaluation tests; multiplatform compatibility. The disadvantages: problems related to menu management, improved by customizing the interface. Monitoring of tests conducted optimally balanced.

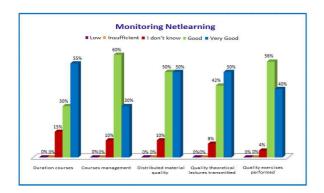


Figure 9. Monitoring Netlearning

Saba Learning Enterprice

The modular platform consists of Saba Publisher and Saba Content for mixed learning (on-line, off-line, classroom) and customizable [4], [6], [12]. The *performance* monitoring performed to a contingent of 100 participants (aged between 20 and 30 years) in community gave (Fig.10)

- **Course duration**: good with an average of 60% against a 5% I do not know;
- **Course management**: very good with an average of 43% against a 17% I do not know;
- **■** *Material quality distributed*: good with an average of 55% against a 10% I do not know;
- Quality theoretical lessons transmitted: good with an average of 44% against a 14% I do not know:
- **Quality exercises performed**: good with 53% average against 17% I do not know.

The advantages are: good sharing; interactive evaluation tests; multiplatform compatibility. The disadvantages: interactive and collaborative problems, improved by continuing in chat, forum. Monitoring almost optimally balanced in the various tests conducted.

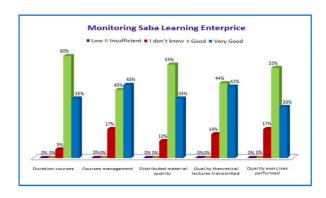


Figure 10. Monitoring Saba Learning Enterprice

T-learn

Collaborative, synchronous and asynchronous learning platform [4], [7], [12]. The *performance* monitoring performed to a contingent of 100 participants (aged between 20 and 30 years) in community gave (Fig.11)

- **Course duration**: good, very good with an average of 30% against an insufficient 10%, 13% poor and 17% I do not know;
- **4** *Course management*: good with an average of 50% against an insufficient 10% and 12% poor;
- Material quality distributed: good with an average of 45% against an insufficient 5%, 9% poor and 11% I do not know;
- **Quality theoretical lessons transmitted**: good with an average of 34% against a 10% insufficient and poor and 14% I do not know;
- **Quality exercises performed**: good with an average of 43% against an insufficient 5%, 10% poor and 12% I do not know.

The advantages are: good sharing; interactive evaluation tests; multiplatform compatibility. The disadvantages: interactive and application problems, improved by continuing to chat. Monitoring almost optimally balanced in the various tests conducted.

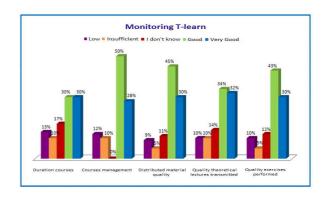


Figure 11. Monitoring T-learn

WebCT

Standalone platform, allows evaluation systems (quizzes, tests, self tests) [3], [5], [12]. The performance monitoring performed to a contingent of 100 participants (aged between 20 and 30) in community reported (Fig.12)

- ♣ Course duration: good-very good with an average of 40% against a low 1% and 19% I do not know;
- **♣** Course management: good with an average of 50% against a low 5% and 10% I do not know:
- Material quality distributed: good with an average of 50% against a 9% poor and a 10% I do not know:
- **4 Quality theoretical lessons transmitted**: good with an average of 43% against an 11% poor and 15% I do not know;
- Quality exercises performed: good with an average of 42% against an 8% poor and 12% I do not know.

The advantages are: good sharing; interactive evaluation tests; multi-platform compatibility, flexibility, scalability

The disadvantages: collaborative problems, improved by continuing in chat, forum. Monitoring somewhat balanced in the various tests conducted.

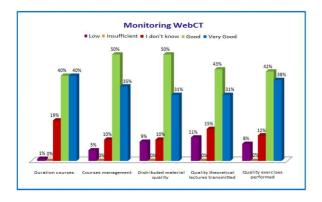


Figure 12. Monitoring WebCT

WebConference

Platform e-meeting, allows the sharing of applications [2], [4], [12]. Multi-platform windows, mac os, solaris. The *performance* monitoring carried out to a contingent of 100 participants (between the ages of 25 and 35) in community reported (Fig.13)

- ♣ Course duration: good with an average of 41%, against an insufficient 10% and 19% I do not know;
- **4** Course management: good with an average of 47%, against an insufficient 5% and 15% I do not know;
- ♣ Material quality distributed: good with an average of 45%, against a poor 9% and a 10% I do not know:
- Quality theoretical lessons transmitted: good with an average of 53% against an 11% I do not know;
- Quality exercises performed: very good with an average of 50% against a low 5% and 2% I do not know.

The advantages are: good sharing; interactive evaluation tests; cross-platform compatibility. The disadvantages: interactive and application problems, improved by continuing in chat, forum. Monitoring in the various tests conducted somewhat balanced.

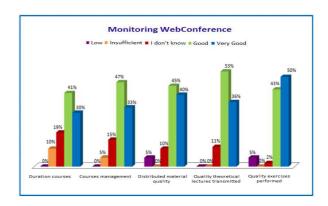


Figure 13. Monitoring WebConference

Saba Learning Enterprice and LearnLinc are the platforms that reported the best results by duration of the courses; for material quality distributed are WebCT, Saba Learning Enterprice, Netlearning and Hotconference; for quality theoretical lessons transmitted and quality exercises performed are Groove and Lotus Learning Space.

3 CONCLUSIONS AND FUTURE DEVELOPMENTS

You live in an era of transformative technological communication, in a dynamism in which training takes on ever more relevant trend. In conclusion new developments to integrate

tools (formal / informal), methodologies (provisional / collaborative) and contexts (presence / distance), which accompany the user even after the formal phase and in this potentials of current proprietary platforms have been analyzed today existing. In particular, the study concerned monitoring of training activities in provision of content in order to identify those features considered fundamental considering evolution made by an increasingly innovative technology, which puts the user at center in the use of new content. In this scenario, social collaborative learning has been considered, which leads to transform the system from a container of educational material into a tool for sharing and managing knowledge. experiments, which involved planning and delivery of courses, tracking of activities, evaluation reports, forum or discussions, application sharing, communication between learning objects, showed a positive trend considering the simulations in terms traceability and results of satisfaction questionnaires given to students, in terms of acquisition of knowledge and changes in performance by those who participated in a flexible learning process. In delivery of courses, observations and comparisons have been used to better understand the user friendly role of the navigability of online platform, the modalities of use related to multimodal lessons, contents, materials, forms of verification and evaluation used, the interactive support during the phases of course. There are still improvements that affect the interface of most platforms and lack of flexibility. The analysis was decisive considering the peculiarities present literature concerning indepth studies in the field. At the moment further developments tend to favor interoperability in which everyone is a consumer and a producer of knowledge.

REFERENCES

- 1. Banzato M., Corcione D., Piattaforme per la didattica in rete, TD-tecnologie didattiche n. 33, pp. 22-31, edizioni menabò, Ortona, (2004).
- Campanella P., Piattaforme per l'uso integrato di risorse formative nei processi di e-learning, Atti Didamatica 2015 – Studio ergo lavoro – dalla società della conoscenza alla società delle competenze, Aica, 15-16-17/04/2015, Genova, Italy.
- 3. Campanella P., Piattaforme Proprietarie: Un'analisi metodologica, Atti Didamatica 2015 Studio ergo

- lavoro dalla società della conoscenza alla società delle competenze, 15-16-17/04/2015, Aica, Genova, Italy
- 4. Campanella P., Platforms and methods for the integrated use of educational resources in the processes of e-learning, Ed-Media 2011, world conference on educational multimedia, hypermedia and telecommunications 2011, chesapeake aace, in t. Bastiaens & m. Ebner (eds.), Proc. of the world conference on educational multimedia, hypermedia and telecommunications 2011, chesapeake, va: AACE, 27-28-29-30/06-01/07/2011, pp. 2375-2384, Lisbona, Portogallo.
- 5. Campanella P., Functional Comparison of the Tools and Commercial Platforms in distance e-learning, Proc. of the IADIS International conference e-learning 2011, 20-21-22-23/07/2011, Roma, Italy.
- 6. Campanella P., Platforms for use integrated resources formative processes in e-learning, Proc. the 2nd international conference on digital information processing, data mining, and wireless communications (DIPDMWC2015), 16-18/12/2015, Islamic azad University, uae branch, pp. 181-186, Dubai.
- 7. Campanella P., Learning Management Systems: A Comparative Analysis of Open-source and Proprietary Platforms, Proc. the 2nd International conference on digital information processing, data mining, and wireless communications (DIPDMWC2015), 16-18/12/2015, Islamic azad University, uae branch, pp. 187-192, Dubai.
- 8. Campanella P., A Comparative Assessment of E-learning Platforms, Proc. the 2nd International conference on digital information processing, data mining, and wireless communications (DIPDMWC2015), 16-18/12/2015, Islamic azad University, uae branch, pp. 193-198, Dubai.
- 9. Campanella S., Dimauro G., Ferrante A., Impedovo D., Impedovo S., Lucchese M. G., Modugno R., Pirlo G., Sarcinella L., Stasolla E., Trullo C. A., E-learning platforms in the Italian Universities: The technological solutions at the University of Bari, WSEAS Transactions on advances in engineering education, issue 1, vol. 5, pp. 12-19, (2008).
- 10. Colace F., De Santo M., Vento M., Evaluating on-line learning platforms: A case study, Proc. of the 36th Hawaii International conference on system sciences (hicss'03), IEEE press, Hawaii.
- 11. Colombo D., Formazione a distanza, ambienti e piattaforme telematiche a confronto, (2001).
- 12. Garcia D. F., Uria C., Granda J. C., Suarez F. J., Gonzalez F., A functional evaluation of the commercial platforms and tools for synchronous distance e-learning, Proc. of the 3rd wseas/iasme international conference on educational technologies, pp. 330-335, Arcachon, France, (2007).
- 13. Impedovo S., Campanella P., Facchini G., Pirlo G., Modugno R., Sarcinella L., Learning Management Systems: Un'analisi comparativa delle piattaforme open-source e proprietarie, Atti Didamatica 2011 Informatica per la didattica, 04-05-06/05/2011, Aica, Torino, Italy.
- 14. Luciani S., Caratteristiche tecniche e funzionalità didattiche delle piattaforme per l'apprendimento on-

The International Journal of E-Learning and Educational Technologies in the Digital Media (IJEETDM) 3(4): 153-160 The Society of Digital Information and Wireless Communications (SDIWC), 2017 ISSN: 2410-0439 (Online)

- line, in Formazione e cambiamento, web magazine sulla Formazione, (2004).
- 15. Pedroni M., Dall'interoperabilità delle piattaforme all'integrabilità dei moduli interattivi, Omniacom editore, pp. 731-735, Atti Didamatica 2004, Aica, Ferrara, 06-08/05/2004.