Google Apps in Education - DDLUB Case Study

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Abstract
The acronym DDLUB will be used to identify the Department for Distance Learning within University of Bucharest, Romania. DDLUB started the activity 15 years ago and the main focus was on designing, implementing and development of the Distance Learning (DL) system of education within University of Bucharest. Currently, DDLUB has BA and MA study programs, running as DL, accredited by the Romanian Agency of Quality Assurance in Romania (ARACIS). During these 15 years, one particular aspect of the DDLUB activity was the use of digital technologies in order to support the specific DL activities having as actors the students and the department's staff. In this respect, early in 2003, eLearning technologies as well as virtual campus were implemented. During this period, 1999-2013, all these digital technologies helped the department to maintain the ARACIS DL standards of quality and accreditation.
Meanwhile, new digital technologies became available and the decision makers of the department took them into consideration. The DDLUB started to implement the platforms Google Apps (free of charge for education) in order to support the communication (synchronous and asynchronous) and collaboration with DL students. This article will present our experience/practice in using Google Apps as a free Learning Management System (LMS). This LMS includes: Google Mail, Google Calendar, Google Documents/Drive, Google Groups, Google Sites, Google Blogger, Google Plus, Google Hangout, YouTube etc. Our choice was to use Google Plus as social network for academic activities (collaborative learning) and to leave Facebook to be used for personal students' needs and preferences (the are 7,000,000 RO accounts on Facebook for 20,000,000 population - January 2014).
From technological point of view, all these achievements were possible because the Internet has good speed in Romania and because almost all the students have personal computers (notebooks, tablets and smartphones) and Internet access. DDLUB has laboratories equipped with modern computers and with tablets and chromebooks.
Starting with February 17th, 2014, the first online course was offered to DL students and to the full-time on-campus students (as an alternative to traditional face-to-face education).

1. DDLUB students and new technologies
During the last years, the authors performed ad-hoc surveys in order to evaluate how the students are using the new technologies. Nowadays students hold minimum 2-3 electronic devices with good Internet access. In Fig.1 is presented the result of a test speed between Bucharest and Florence.

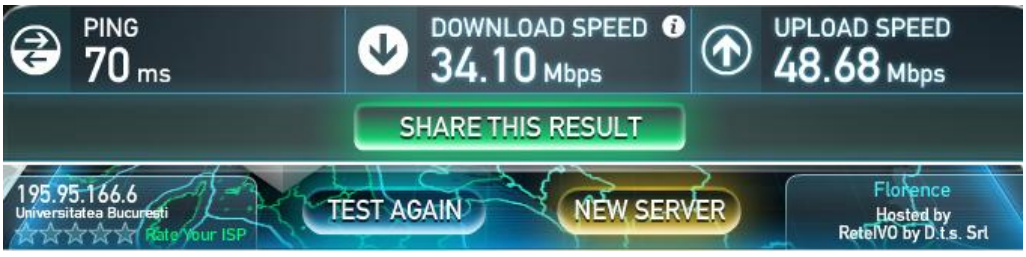

Figure 1. Test of Internet speed between Bucharest (RO) and Florence (IT)

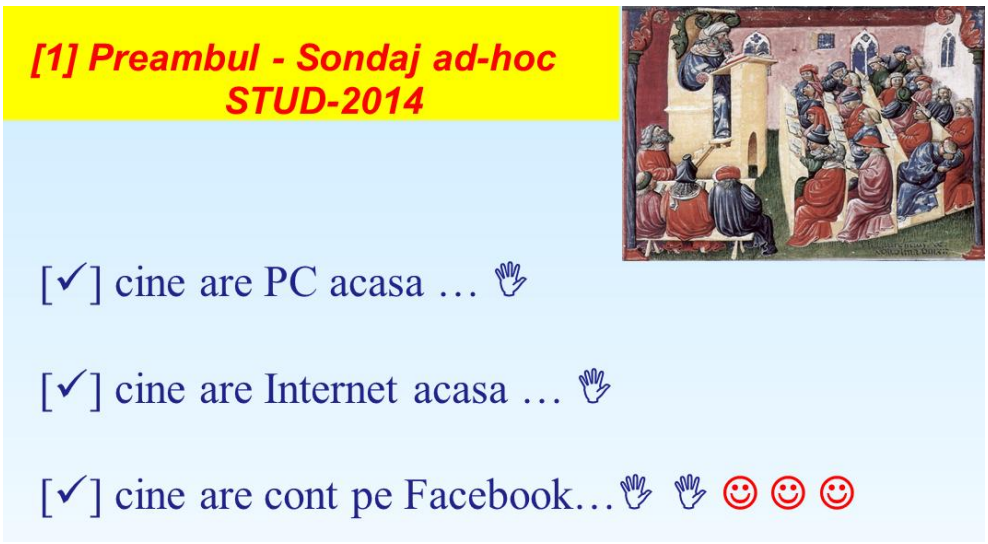

Figure 2. Ad-hoc survey on students' access to Internet

As it concerns Facebook (FB), our students confirm our hypothesis: ALL the students have FB account (!) and they are spending a lot of time on this social network. Following these findings, we proposed the students to implement a "LMS in the cloud", where "LMS" is the well-known acronym for Learning Management System. Based on our previous experience, reported during the 2013 FOE Conference, we decided to implement the Google Apps [1] platforms which are free for education. There many opportunities, maybe 118+ according to [2].

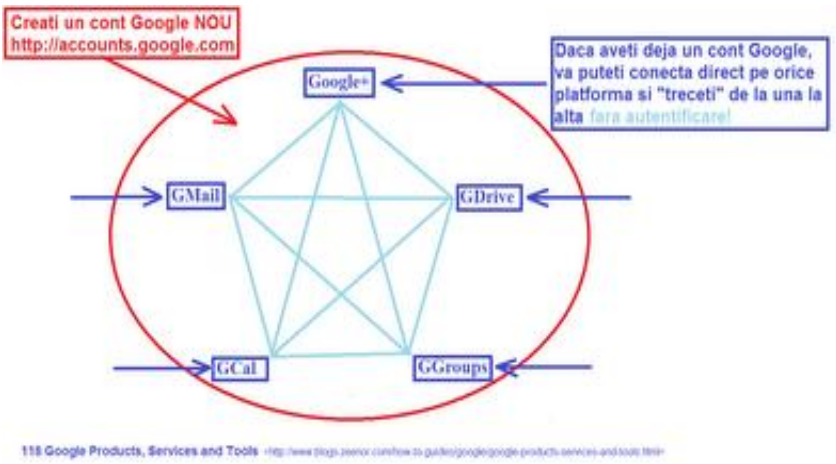

Figure 3. Google Apps used as LMS

Basically, Fig.3, we are using: Google Mail, Google Calendar, Google Drive, Google Groups, Google Sites, Google Blogger, Google Plus, Google Hangout, YouTube.
This DDLUB case study will present some aspects concerning the channels of communication and collaboration between DDLUB staff and students implemented on Google Apps platforms.

2. LMS implementation to support CAI course.

The CAI course ("Computer Assisted Instruction") is delivered to almost 300 students enrolled in the study programs of the Faculty of Psychology and Educational Sciences, University of Bucharest; most

of them are pre-service teachers (primary and secondary school teachers). Hopefully, the CAI competences will be very useful for their future activity.

2.1 CAI home page

We are using the Google Sites platform to create the CAI home page, Fig.4. There, we publish the main information the students need to know; one week in advance, the CAI students can read the details on the activities to be developed during the next week; consequently, they can adapt their agenda according to the interest they have in one or another activity. Many students have jobs and they prefer to perform the activities "online" (if possible).

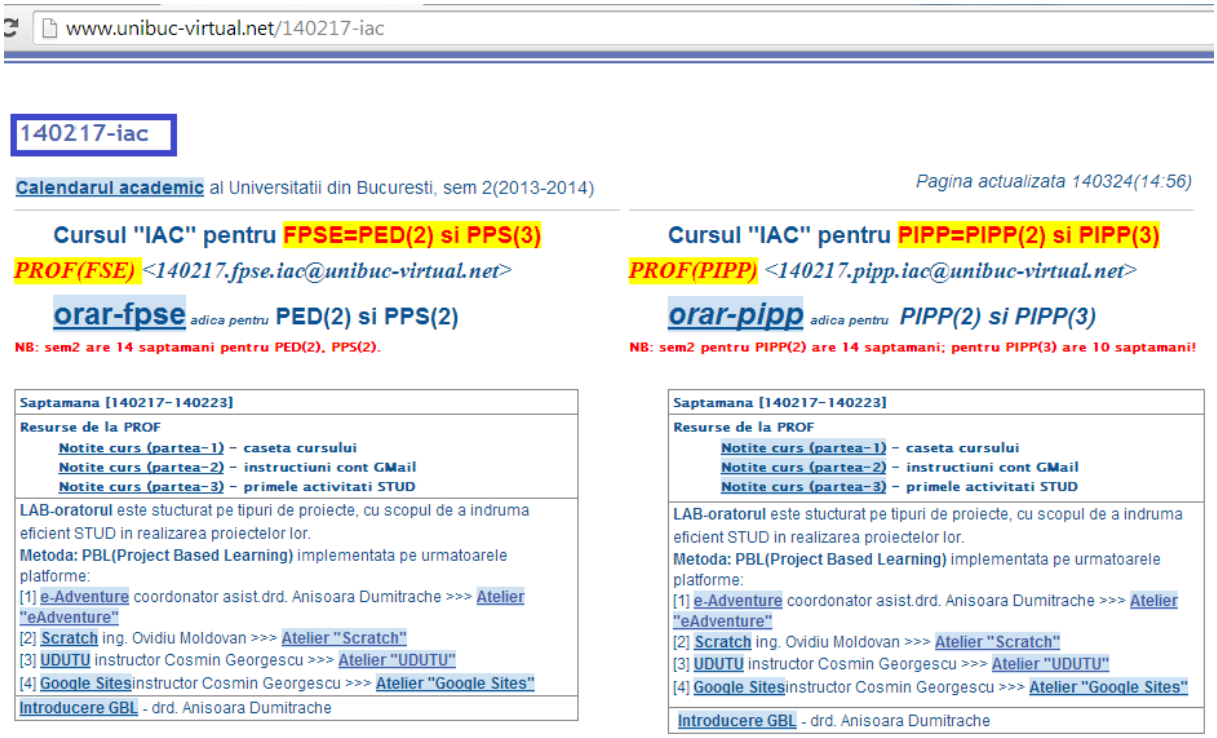

Figure 4. CAI course - the home page

From the point of view of the web designers this page seems to be very colored! Please consider this one to be "one page from my lecture notes"; color legend: (i) text in red is important; (ii) text in red on yellow background is very important; (iii) text having blue as background indicates the existence of a web-link. The study programs have the following acronyms: PED-Pedagogy, PPS-Special Psychopedagogy, PIPP-Pedagogy of Primary and Preschool Teachers.

2.2 CAI learning resources

In every week, the learning resources are made available to the students: lecture notes (in pdf format) and video-lecture (that might be considered equivalent to face-to-face presentation, professor in front of the students). These learning resources can be accessed "any time, any place, anywhere, any pace" and as many times as the students like.

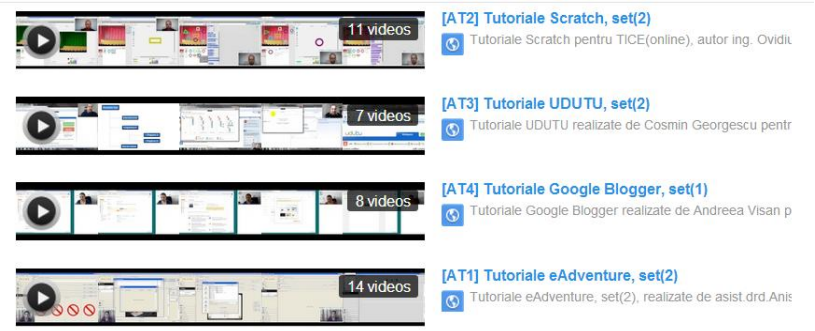

Figure 5. Video-tutorials published as YouTube Playlists.

The practical activity associated with CAI course is implemented using free software: “eAdventure”, “Scratch”, “Udutu” and Google Blogger /Sites. The students are invited to evaluate these platforms based on video-tutorials (~10 min) created by DDLUB staff (they are published under “Atelier…” links). On 23 March, 2014, new video-tutorials (2-3 min long) were published as YouTube Playlists, [3-6], Fig.5. The students are invited to perform the self-study; after that, they decide to develop a project using one of these free software platform. The students’ projects are evaluated and contribute to their final evaluation.

2.3 Formative assessment

The “formative assessment” is defined by [7] as: ”… a range of formal and informal assessment procedures employed by teachers during the learning process in order to modify teaching and learning activities to improve student attainment. It typically involves qualitative feedback (rather than scores) for both student and teacher that focuses on the details of content and performance. It is commonly contrasted with summative assessment, which seeks to monitor educational outcomes, often for purposes of external accountability”.

DDLUB is using the “reflexive diary method” implemented on Google Drive: every student is invited to create a Google document based on his Google personal and unique account. The document has to named “JR-{student name}” where JR is the acronym for “Jurnal Reflexiv” in Romanian language. At the end of every week, the students have to fill this document with a short description of the activities performed and with personal thoughts about CAI subject. Every JR has to be shared with the professor email address. Fig.6 presents a screen capture of the partial list of the JRs received by the CAI professor.

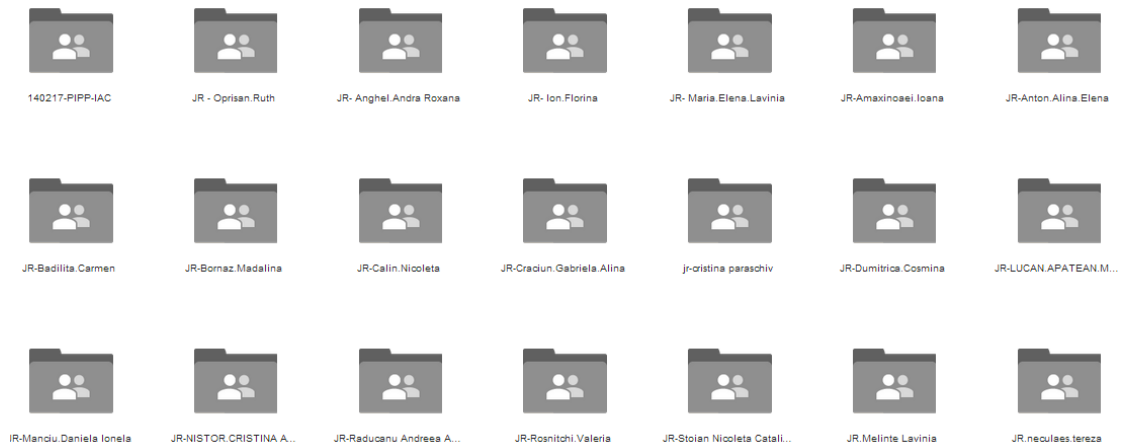

Figure 6. A screen capture of the partial list of the JRs received by the CAI professor

The volume and the quality of these documents are evaluated and are contributing to the final student mark.

2.4 Collaborative learning on Google+

Google Plus platform is used to encourage “collaborative learning”. Fig.7 presents some examples.

Figure 7. Google+ Communities associated with DDLUB courses

All the students are invited to join a Google+ Community, special created for every course and group of students, e.g. Fig.7. This community is structured for 5 categories of posts: INFO (general information), posts done by STUD and PROF, PBL (place to publish students’ projects), Events.

Figure 8. The Google+ Community associated to CAI for PIPP students

Unfortunately, during the face-to-face events, only 20% of the students are present but, using electronic platforms for communication and collaboration, more than 90% of the students are actively involved in the academic activities.

The students’ feedback might be considered very positive; there are many posts: very interesting or very useful from the point of view of technical information. The students are requested to post but, to select carefully the information, in strong correlation with subject of the course.

3. Conclusions

This article presents DDLUB’s experience in implementing and using Google Apps as a free Learning Management System (LMS). Nowadays, LMS become an important part of a system of education. During the last 15 years, the DDLUB, has tested different Learning Management Systems (Blackboard, Moodle, Dokeos, Canvas) including one “in-house” development [8]. Starting with 2010, we changed our focus on Google Apps which is free of charge for education.

We can confirm the “Top Ten Advantages of Google’s Cloud”, listed by [9]: “(1) cloud computing is in Google’s DNA; (2) faster access to innovation drives higher productivity; (3) users adopt new

functionality with less disruption; (4) employees can be productive from anywhere; (5) Google's cloud enables faster collaboration; (6) Google's immense security investments help protect customers; (7) less data is stored on vulnerable devices; (8) customers get higher reliability and uptime; (9) Google Apps offers extensive flexibility and control; (10) customers spend less through Google's economies of scale".

There are many other DDLUB's achievements, related to Google Apps for education, that will be reported in our future papers.

References

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[3] http://www.youtube.com/playlist?list=PLbXTs4liyn-KV37UriwOksGEXX5bcFXFq
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