ITC INSIDE THE HIGHER EDUCATION:
SPECIAL REFERENCE TO THE VIDEO CONFERENCE ON UM'S "VIRTUAL CLASSROOM", "SKYPE", AND "HANGOUTS" AS TEACHING TOOLS

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Institución u Organismo al que pertenecen: Universidad de Murcia

Indique uno o varios de los seis temas de Interés: (Marque con una {x})

{ } Enseñanza bilingüe e internacionalización

{ } Movilidad, equipos colaborativos y sistemas de coordinación

{X} Experiencias de innovación apoyadas en el uso de TIC. Nuevos escenarios tecnológicos para la enseñanza y el aprendizaje.

{ } Nuevos modelos de enseñanza y metodologías innovadoras. Experiencias de aprendizaje flexible. Acción tutorial.

{ } Organización escolar. Atención a la diversidad.

{ } Políticas educativas y reformas en enseñanza superior. Sistemas de evaluación. Calidad y docencia.

Idioma en el que se va a realizar la defensa: (Marque con una {x})

{ } Español   **{X}** Inglés

Resumen.

En este trabajo los autores tratan de aportar unos breves apuntes sobre el potencial del uso de la videoconferencia para mejorar la enseñanza y el aprendizaje. Para ello, explican brevemente el funcionamiento de tres herramientas relacionadas: la videoconferencia disponible dentro de la plataforma docente "Aula Virtual" de la Universidad de Murcia, así como la de dos más de acceso público, cuales son "Skype" y "Hangouts".

Palabras Claves: E-learning; TIC; Videoconferencia; Skype; Hangouts.

Abstract.

In this paper the authors attempt to provide some notes on the potential use of videoconferencing to enhance teaching and learning. To do this, they explain shortly the functions of three tools related: the videoconference available in the "Virtual Classroom" teaching platform of the University of Murcia, as well as two more with public access, which are "Skype" and "Hangouts".

Keywords: E-learning; ITC; Videoconference; Skype; Hangouts.

I. INTRODUCTION

As Miró Llinares said[1], the creation of the Internet has brought new forms of communication. Cyberspace is a realm of personal intercourse where there is space contraction and expansion of communicative abilities in many areas, including education.

Thus, we can say that the use of ICT ("Information and Communication Technologies") in Spanish universities is a reality, and they offer different many and different online degrees or rely on these technologies to perform some learning activities.

These learning methods based on ICT take opportunities for students and teachers, especially in the field of flexible schedules, accessibility and, in some cases, costs. In this sense, teachers are an essential element when it is starting any change.

Thus, innovation in education, in the teaching-learning system is being fundamentally. However, we think, as Miró Llinares, that the learning needs do not change, nor invent new methodologies, and strategies that are usual in traditional teaching, what happens is that the use of ICT in education means new perspectives on teaching better, therefore they are simply adapted and rediscovered in its online format.

In summary, presenting a new training environment involves consideration of the pedagogical model, the roles of teachers and the possibilities offered by ICT for all remain in balance. Our aim in this communication is to show some of these possibilities, specifically focused on the use of videoconferencing as a teaching tool, either through a specific application within a virtual university campus to use, either through other tools available to any user in the Net, such as "Skype" or "Hangouts".

II. VIDEO CONFERENCE AS A TEACHING TOOL

1. The Video Conference on "Virtual Classroom" ("Aula Virtual")

As introduction, we would like to say that the "Aula Virtual" platform, by its translation in English as "Virtual Classroom", is a common tool used in the University of Murcia for supporting teaching in the different Degrees and Masters classes.

One of the most highlight advantages of this platform, apart from its novelty, is the possibility of keeping in touch with the students by a higher frequency of connection. For example, sending materials, giving brief lessons, or announcing the date of delivery of papers and exams, but actually, what we are going to focus on, is in the use of the Video Conference as a possibility of teaching inside this "Aula Virtual".

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[1] MIRÓ LLINARES, F. (2013). ‹‹E-Learning aplicado a las Ciencias Penales››. En D.L. Morillas Fernández (Dir.) y S. Rodríguez Ferrández (Coord.), *Innovación Docente y Derecho Penal* (pp. 228-234). Murcia: Editum.

Teaching by Video-Conference (VC) methods aren't new in our days, but it is quite differ experience for most instructors. The main question it'll be: where is the most pedagogy effective in the traditional methods or in the new ones?

We can appreciate this kind of method all over the world, for instance in the College of Business of the Florida Atlantic University. Using multimedia as much as possible in the university students let them keep their interest in the subject going on[2], even further that when they haven't got this type of experiences. In the same way, it could be used by other Universities to promote their services, for example in the program on performance and career development that offers the University of Tasmania[3].

No discussion has the fact that new technology is present all over the world in many different aspects, being one of the most important those which attend to the educational system and its possibilities. It's been doing in the business area, and why not to incorporate these methods for the teaching in the school, High school and University.

Instructions for using this tool are hardly difficult, even if we start by the fact that it's not necessary to download any program and we don't need any previous installation (as Skype used to). For instance, VC System in the University of Murcia platform is based on the following guidelines[4]:

1º. Steps to make a Video Conference room (site):

1 — We should add to the site the tool "Video Conference"

2 — We go to the site where we want to use the tool "Video Conference" and select the tool "Information about the site"
In the option *Edit Tools* we select "Video Conference", click *Continue* and later *Finish* to confirm

Click tool "Video Conference"

4 — Click *New room*

2º. Steps to access to the room:

[2] College of Business (Florida Atlantic University).‹‹Effective teaching using video-conferencing. Notes prepared to assist video-conferencing instructors››. Recovered on January 21 2014 from http://www.fau.edu/oit/instructional/files/effective_vc.pdf.
[3] University of Tasmania. ‹‹Teaching & learning››. Recovered on January 21 2014 from http://www.teaching-learning.utas.edu.au/designing/videoconferencing.
[4] RODRÍGUEZ FERRÁNDEZ, S. (2013). ‹‹Algunas utilidades del Aula Virtual para la docencia en el marco del EEES››. En D.L. Morillas Fernández (Dir.) y S. Rodríguez Ferrández (Coord.), *Innovación Docente y Derecho Penal* (pp. 257-271). Murcia: Editum.
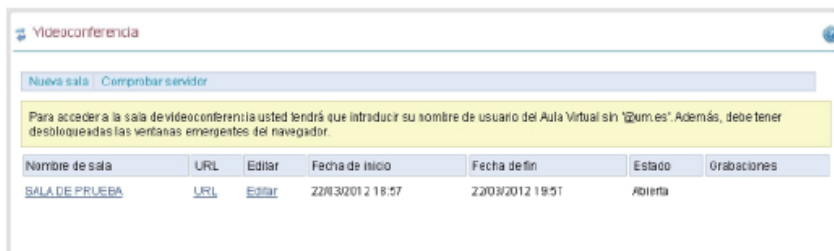
1 Make click in the room's name. You can't get access until the supervisor make it
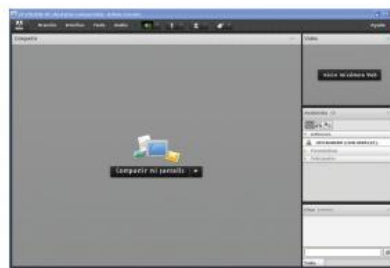
Must take unblocked pop-ups browser

If you pretend to get into through University of Murcia WIFI be sure you're connected to EDUROAM

2 To access you must write your user account without "@um.es"

3 We are inside the room!

4 Follow the instructions to out and end the meeting

Successful learning by VC depends on the interaction between Professor-students and among students, above all understanding that the potential of the "chat" and virtual speech could be more suited to online teaching or distance teaching than with classroom methods.

As we said before, with Video Conferencing for teaching and learning all the students could use this tool without any drawback and no need of downloading or installing any program, but the "Flash Player" if they haven't got it. Besides of that, it is a requirement to follow the class to have got a webcam.

Otherwise, perhaps another important utility lies in making work virtual meetings with other Universities. For example when they share some common research projects, although "Skype" would be better for the same purpose.

Finally, Video Conferencing is now easier than ever. Through your computer, you can reach out to teachers and students from around the world. In this sense, using "Skype" you can make free phone calls to other Skype users over the Internet and it also features Video Conferencing to make live video calls, aspects that we are going to explain immediately.

2. Skype

Focus in the University, it is important to show that as relevant is to teach theory as the need of giving the lesson in a practice way. The main claim by the students is to know what kind of knowledges they need to know to face the demand of a specific workstation.

In this sense, the aim is to provide university students with better labour market skills and preparation for the active future, in a world full of the new technology benefits. For this reason, the incorporation of a kind of tool that they usually put on work in their routine life is the major breakthrough in regard with the connection of the classroom with the outside world.

"Skype" is shown as a potential tool to provide this kind of gains in advanced. It is defined as one of the ITC that can be incorporated into the classroom without too requirements. So, if the class has not supports enough to teaching with more sophisticated methods, maybe the best one could be the application of this instrument.

This tool can be defined as a "Voice over IP (VoIP)" that allows users to make free VoIP calls to other Skype users. In spite of that you can do calls to mobile phones, but maybe the main contribution in the education is based on the group video call.

Easy, fast, and with very good results it's being used "Skype" to connect students from California, South Korea and Canada, showing incredible consequences[5]. In other way, this tool can be able of being your intermediate in your applying for a Graduate Admission in certain University Colleges, as occurs in the University of Cambridge[6].

Nonetheless, as we say before, the main contributions to the University students would be in relation with the group instructions. In this sense, highlight the three following ones[7]:

i) Collaborate with other classes, no matter where they are, and in the same time.

ii) Find guest speakers and invite them into your classroom.

iii) Take a virtual field trip anywhere in the world.

For instance, to brush over this tool to specific matters, as Penal Law, or Criminology, we can find the following advantages:

A) Talking about the Penal Law, we can appreciate many odds, here we have a brief example:

a1) Knowing that Spanish Penal Law come from the German System, it would be a good idea let students to listen to Lecture from some featured Professor from this country in order to explain the students its origins. Or even better, to show the actual German Legal System to give a comparative lessons about the Penal Law in both countries.

a2) Continuing with the international aspects, it could be assumed greater involvement and motivation by the students when they work with foreign people. It

[5] Skype. ‹‹Three Ways to Use Skype In The Classroom››. Recovered on January 21 2014 from https://education.skype.com/.
[6] Example in the Newham College, University of Cabridge: http://www.newn.cam.ac.uk/joining-newnham/undergraduate-admissions/applying/content/interviews.
[7] Skype. ‹‹Three Ways to Use Skype In The Classroom››. Recovered on January 21 2014 from https://education.skype.com/.

lets them to introduce themselves to other students, to meet new people and, most of the time, to learn and practice other different languages. All of that is also better when they are studying the same subjects.

One way of improving connection and integration between students could be doing works together when the Professor gives to them some problems to solve, or asks for them to deliver a specific work in a certain date. This option could be extrapolate to most of the subjects in any University Degree. Definitely, to keep the students connected.

a3) On the other hand, it is very interesting to know how the celebration of a trial is going, how some penal aspects are highlighted and no others, and how the Judge decide the conclusion.

"Skype" could be used as a tool to connect students from the class to the space where the trial is taking place. Otherwise, it'll be interested when there are many students and no all of them can assist to the trial, or maybe when the place is very far away (for instance the Main Court of the Country). In the same sense, could be the possibility of talking and questioning the Judge why of a certain sanction and no other at the end of the procedure, if he wanted to have this kind of contact with the student.

In fact, it is very different from the trial simulations that take place in the class with the own students without external professionals.

a4) Joined to that, the Penitentiary Law subject could have important projections by "Skype". Once connecting with the worker of a certain Prison, this person would show to the students how it is and how it works. It would be another way to connect students with the real world, or even more, some specific offenders with less grade of danger could do this kind of labor (do this type of work could provide them certain benefits in regards to his stay and attitude in the Prison).

B) As well as we show above, in the Criminology field we can find a wide variety of utilities in the classes. In this context, the contact with the Authorities should be even more relevant than in the previous case.

Extrapolating what has already been mentioned, it would be interesting work both nationally and internationally aspects, and with the comparisons that could be made at this level. Students could also learn not only from the place where the Authorities work but by the way and functions that they do when receive the new that an offence has committed.

It's extremely complicated to do university practice in the crime scene (where we used to read "don't cross, crime scene"), and that why some technologies methods can let us show the students the real practice in the specific time. It is true that they can show police interventions by video cameras, but if the Authorities are aware that students are listening to them the explication of the crime could be other more appropriated to their instruction. We mean, maybe it's impossible to use this tool in

the moment that police step into the crime scene, but perhaps it is possible once they had all about the main examination done.

To sum up, and besides all of that, one of the main question should be: how we can use "Skype" in the real practice? Easily, you only need a "Skype" account, webcam and the possibility of getting Internet. If you have them, you have all the necessary to teaching by this tool.

It is a free way of teaching, which let us to teach people in every part of the world. Imagine those who live in the poorest areas of a country, where no have nothing, nor teachers enough neither pencils or books to learn. Using the Internet as a source of free tuition could have important effects beyond that we could ever imagine. Or think about the situation in which one student can't go to the University because of getting sick, Skype's video capability let him learn "being present".

Giving the opportunity of institutionalization to this kind of tool can also awake a wide range of chances to the youngest, even when they have no books no other traditional materials. Skype has a tremendous potential for classroom use, to invite new students guests and to speak with them.

3. Hangouts

Hangouts is an instant messaging and video chat platform developed by Google. It allows users to hold conversations between two or more users: they can perform a **group video chat with up to 10 users at a time**. The service can be accessed online through the Gmail or Google+ (before, it only worked on this social network) websites, or through mobile apps available for Android and iOS.

In terms of its inclusion in this paper, we insist in the idea, as we said about Skype before, that we think these tools have a great potential to get a connection of the classroom with the outside world, with the new technology benefits.

Talking about this tool, there is a very interesting document called "31 Ways to Use Google+ in Higher Education"[8]. A part of it is dedicated to suggest how use this social network (Hangouts included) for learning.

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[8] Google. ‹‹31 Ways to Use G+ in Higher Education››. Recovered on January 21 2014 from https://docs.google.com/presentation/d/1WG6RjvDbiv7Z9Vv4qWR2CvFIEvKmZ2qdD1JEv1T5rfo/edit?pli=1#slide=id.p17.

First of all, you can create a "Circle" with all the students in one class and share contents with them.

After this sharing, or even after a lecture, you can create a Hangouts session by groups (remember that a group video chat only works with 10 users maximum) to discuss about the contents and to solve doubts.


In addition, you can review a video of a lecture (previously uploaded at YouTube) sharing it at Hangouts, in order to re-teach difficult concepts (or simply re-watch it). Hangouts even allow you to speak over YouTube videos with the other participants.

Or you can set up a Hangout with the student(s) to review their work, which is very useful especially when you teach in online "Masters" with students in other countries.

Share your screen and collaborate with Hangouts with Extras
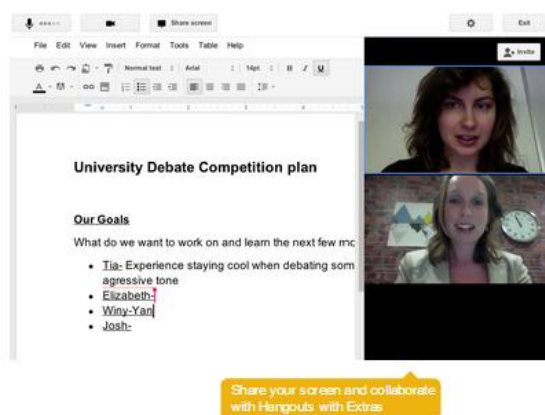
As you see in the picture above, it's important to know that Hangouts with some "Extras" also allow you to share your screen or collaboratively edit "Google Docs".

Finally, with the adequate program, you can record your own Hangouts session, and then upload it too, for example in YouTube, as you can see here, in "Hangout with prof. Edwin Bakker"[9] or "Hangouts On Air with Stanford Professor Noah Diffenbaugh"[10].

If you are interested in how to use Hangouts, a Google+ member, named Will Deyamport, has created a public group called "Google Hangouts in education"[11]. You can find there interesting tutorial videos, as "Engaging Students with Google Hangouts"[12], or even more useful, "Google+: Setting Up a Class Using Hangouts"[13].

III. CONCLUSIONS

1.- The use of ICT in education means new perspectives on teaching better. One of these new perspectives is the use of videoconferencing as a teaching tool.

2.- Video-Conference (VC) methods aren't new in our days and we can appreciate this kind of method all over the world.

3.- Here, in the University of Murcia, we can use Video Conference as a possibility of teaching inside our virtual learning platform, called "Aula Virtual" ("Virtual Classroom").

4.- In addition, there are free and public tools which have a great potential to get a connection of the classroom with the outside world, with the new technology benefits.

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[9] http://www.youtube.com/watch?v=x7Tpqlvn9nY
[10] http://www.youtube.com/watch?v=iNJFw2bkWtQ
[11] https://plus.google.com/communities/109532576382533836103
[12] http://www.youtube.com/watch?v=U3JLv_vkd1I
[13] https://www.youtube.com/watch?v=LIM--jfnKeU

5.- One of these is "Skype", and we can use it, for example, to find guest speakers and invite them into your classroom. Especially, we have found so many ways to make "Skype" useful for teaching in Penal Law and in Criminology.

6.- The another free and public tool is "Hangouts". We have suggested a few possibilities to integrate it in our teaching methods, as you can review a video of a lecture to re-teach difficult concepts.

Bibliography and references.

Book Chapters

MIRÓ LLINARES, F. (2013). ‹‹E-Learning aplicado a las Ciencias Penales››. En D.L. Morillas Fernández (Dir.) y S. Rodríguez Ferrández (Coord.), *Innovación Docente y Derecho Penal* (pp. 228-234). Murcia: Editum.

RODRÍGUEZ FERRÁNDEZ, S. (2013). ‹‹Algunas utilidades del Aula Virtual para la docencia en el marco del EEES››. En D.L. Morillas Fernández (Dir.) y S. Rodríguez Ferrández (Coord.), *Innovación Docente y Derecho Penal* (pp. 257-271). Murcia: Editum.

Web References

College of Business (Florida Atlantic University).‹‹Effective teaching using video-conferencing. Notes prepared to assist video-conferencing instructors››. Recovered on January 21 2014 from http://www.fau.edu/oit/instructional/files/effective_vc.pdf.

Google. ‹‹31 Ways to Use G+ in Higher Education››. Recovered on January 21 2014 from https://docs.google.com/presentation/d/1WG6RjvDbiv7Z9Vv4qWR2CvFIEvKmZ2qdD1JEv1T5rfo/edit?pli=1#slide=id.p17.

Skype. ‹‹Three Ways to Use Skype In The Classroom››. Recovered on January 21 2014 from https://education.skype.com/.

University of Tasmania. ‹‹Teaching & learning››. Recovered on January 21 2014 from http://www.teaching-learning.utas.edu.au/designing/videoconferencing.