

EUNIS 2017: Audiovisual environments between digitalization and declining budgets

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1. ABSTRACT

Audiovisuals in classroom has been the same for years, but now digitalization and cut of costs are setting up new standards and challenges for upgrading classrooms and providing support to digital era. Helpdesk and procurement are battling with declining budgets and human resources. This paper presents Metropolia’s current plan for the future audiovisuals as well as some data behind decisions. The paper also presents the challenges that we are currently facing and how we are planning to cope with them. Do your users constantly struggle with beamers, because previous user has “fixed the problem” before them? Is there a permanent demand for support person to be present on events “just in case something goes wrong”?

2. Introduction

Even the economy is now getting better, we tend to have more money for investments, rather than for the operating costs. This happens especially in the field of the education and the technology. The fundamentals of the government funding for the Universities have significantly changed. These combined we end up in a situation, where we have the hardware, but we don’t have the person to support it.

When we talk about digitalization and audiovisual systems, we must dig a bit deeper than the hardware-side. Digitalization is not about changing the overhead projector into a document camera. For us, digitalization is a combination of automation and combining information from many sources.

In the recent ECAR 2016 research by EDUCAUSE, we found out these requests from Finnish students about teaching; “Share all the materials through internet, preferably in advance”, “Record lectures”, “Visualize. Use games, real-life data and simulations to enlighten and illustrate”, “Keep the data in one place. Do not disperse the methods”. [1] These requests do not have much to do with the audiovisual technology itself, but with the whole environment where the studying is happening. In this environment, the audiovisual systems are a key layer, and therefore it must work perfectly to provide service.

To meet these expectations in classrooms, we must find technical solutions that are easy to use and automated as far as possible to prevent user related technical problems. Classrooms must share the same user experience in terms of standardized connectivity and adaptability. The technology should be easy to maintain and provide support - remotely for flexible support. The environment has to allow easy installation of devices. We have been collecting data and we have made several piloting, or proof of concepts, builds to provide data and find the best way to improve our classrooms.

3. THE PAST

Metropolia is a legacy of two organizations, which means that our audiovisual systems had dozens of different kinds of implementations. If we had put two normal classrooms side by side, they could have had totally different AV equipment’s. As every time, there was a tender, the outcome was also different. Every auditorium had a different kind of user interface and the amount of hardware was something incomprehensible.

The situation was quite unbearable because of the amount of support needed. Around year 2010 our former ICT-procurer Joni Junnila and ICT-manager Mikko Mäkelä began hardware standardization. This meant that we started to implement classrooms and auditoriums with coherent audiovisual devices, standard coupling and unified user interfaces.

4. THE PRESENT - How AV-technology promotes digitalization

To prepare for BYOD and digitalization we have started process to upgrade all classrooms from VGA-connector and WXGA-resolution into HDMI-connection and WUXGA-resolution with fully automated signal switchers. To maintain standards and unified environments we have process management software to document all classrooms and communicate with the suppliers.

We also have unified the user interface in all auditoriums and brought service called “Self-service auditorium”, where all user can stream whole auditorium by themselves. This service was an answer for the constant need of local support and/or a camera crew to stream.

Since AV is not the tool itself, but an enabler and facilitator, we don't believe that the answer for easy collaboration lies in hardware. Work, picture and audio already transmits to everybody's PC through software and network. Cloud services has made their debut in the two past years and really taught us that they are the tool to enable collaboration regardless of time or place. This observation strengthens the idea about a cake, where AV is one layer, and collaboration is one layer on top of it.

5. The future

Future classrooms will be multifunctional and versatile, we already see this trend rising when we look at the teaching methods or even the classroom furniture's. So, could the AV be versatile too? For our future campuses, we have added a possibility to change the position of teacher's desktop let's say once a year and the place and projection direction of the beamer.

Biggest change will follow in the management. All audiovisual devices will be remotely administrated and controlled through the server. This way we can reduce the amount of time and resources used to giving support on premises. Server is also capable of providing helpdesk tickets about maintenance, lamp hours and many more. Also, we will get detailed usage reports to plan for future implementations and procurements. Technical solutions and details mentioned in this paper will be covered in my presentation.

6. REFERENCES

[1] Educause website (2016). *2016 Students and Technology Research Study*. Retrieved March 1, 2017, from: <https://library.educause.edu/resources/2016/6/2016-students-and-technology-research-study> .

7. AUTHORS' BIOGRAPHIES



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