

Kristian Kolman: Building digital literacy with using ICT in string pedagogy

Subtitle: eLearning & string teaching

Tags: ICT, Digital literacy, VLE Moodle, Sibelius, String teaching

Abstract:

Teaching computer skills can no longer be confined to the subject of computing. Informatics is becoming increasingly involved in all school subjects, mainly due to the widespread integration into everyday life and work of teachers, as well as education students. Building digital literacy begins in the primary school period. All the burden of the learning process still relies on basic academic abilities of each teacher. Digital literacy implies access to digital media and ICT, they understand and critically evaluate various aspects of digital contents and media, and communicate effectively with them in different contexts.

I would like to present the practical use of three “levels” and Six Key Competences proposed for digital literacy development with virtual learning environment (Moodle) and notation software (Sibelius) in my virtual classroom, hence the use of electronic materials has brought several positive effects on the education process and the academic achievement of pupils in music schools.

Introduction

Some years ago I wrote several manuals for violin and viola. My first textbook was Scale system for violin and viola, organized into three chapters. Shortly afterwards the System was followed by Violin and Viola school, named Marry Violin and Marry Viola, also Happy Violin and Happy Viola. Three manuals have covered the first three years of teaching violin and viola. Meanwhile I have constantly developed an idea how to transform the existing printed material into the most accessible electronic textbooks. Having taught violin and viola in School of music Celje, I have also cooperated with ZRSS - Slovenian Institute of Education on the project Multiplicator and eEducation as a part of team eMusic. The project supported by the European Structural Fund was covering all subject areas from science, technology to arts on primary and secondary level of education. As a lecturer to a notation software Sibelius, I took note of the newest ICT, especially with technologies for distance learning. Setting up the Moodle virtual classroom lecture for Sibelius Course was one of the key requirements of the ZRSS - Slovenian Institute of Education. I felt as a lonely rider between mathematicians, physicists, geographers and linguists, who were already excellently handled with new didactic environment Moodle. But the challenge was big enough, and alongside I started thinking about making a virtual classroom for teaching violin and viola.

My virtual classroom

As a first step I like to focus and define my project and complete a short summary to develop a good list of funding prospects. I took seven basic questions to answer: **Why, Who, What, When, Where, How and How much.**

Why: (Why am I doing the work, in other words, description of the need for the project? This is one of the most important questions.)

Since Digital Literacy implies access to digital media and ICT, it can present very motivated learning process in string pedagogy. Virtual classroom¹ in Moodle² allows you to:

- Finding new teaching approaches and the possibility of using ICT in teaching music.
- Exchange of experience in working with ICT in music education.
- Create your own e-learning contents (music notation with Sibelius and the conversion to other digital formats MIDI, WAVE, PDF ...).
- Collaborative work at a distance with the help of music informatics.
- Planning (and implementation) classes using e-learning materials.
- Presentation of new and existing e-learning materials.

Who: (Who is involved? Who will do the work and who will benefit?)

As a framework for a virtual classroom I took the recommendation of Allan Martin. DigEuLit – a European Framework for Digital Literacy: a Progress Report, Allan Martin, University of Glasgow, 2005³. I have found that it is first necessary to raise digital literacy of all participants of the teaching process, teachers, pupils and parents as well.

What: (What change will you make, what is the goal? What will be different and better as a result?)

My intention is to show that the use of ICT has brought several positive effects on the education process in music schools.

- There are three “levels” or stages proposed for digital literacy development.
 - Level I: DIGITAL COMPETENCE (skills, concepts, approaches, attitudes, etc.)
 - Level II: DIGITAL USAGE (professional/discipline application)
 - Level III: DIGITAL TRANSFORMATION (innovation/creativity)

At the foundation of the system are Six Key Competences. This covers a wide range of topics, encompasses skill levels from basic visual recognition and manual skills to more critical, evaluative and conceptual approaches, and also includes attitudes and awarenesses.

- 1st Competence: Knowledge and capacity for critical use of ICT.
- 2nd Competence: The ability to communicate remotely and collaborate.
- 3rd Competence: The ability to search, collection, processing and analysis (critical analysis) of data, information and concepts.
- 4th Competence: Safe use and compliance with legal and ethical use of information and publications.
- 5th Competence: Development, production, maintenance and publication of products (materials).
- 6th Competence: The ability to plan, conduct and evaluate teaching (teaching and learning) with the use of ICT.

¹ www.violina.com

² <https://moodle.org/>

³ http://www.jelit.org/65/01/JeLit_Paper_31.pdf?utm_source=twitterfeed&utm_medium=twitter



table 1: Six Key Competences

When: (When is the start and what is the length of project?)

The five-year project e-Education has just finished this year, followed by a project Multiplier in 2008 and before this project Q (ro), from 2003. Therefore, I have included all the examples of good practice in the construction of the exact time frame based on the Slovenian national curriculum.

Where: (Where can the activity take place?)

Since Virtual learning environment can be presented on any computer device from PC, tablet to smart phone as well, it is not limited to School or Home only. Practically it can be used anywhere where internet access is. Some students have told me that they prefer to peek into the virtual classroom or on the bus or on the train on the way home. (C2)

How: (How to improve or upgrade the teaching process with using virtual learning environment and notation software?)

The virtual learning environment Moodle enables users to extend learning beyond the traditional classroom or other types of distance learning models.

Building Moodle Courses (for teaching Violin, Viola, Chamber Music, Music Theory, Solfeggio ...) makes me working in blocks, adding various forms of resources and activities

- Blocks: Courses, Self Completion, Calendar, Settings, Activities, Navigation, Forums, Files
- Sources: (File (pdf, doc, mid, xml, sib, mus,)..., Folder, Page, Web Page (Sibelius Scorch), URL, Embedded Text (SlideShare, issuu), Video (YouTube, Hulu, Vimeo, or any video embed code))
- Activities: (survey, workshop, forum, chat, quiz, lesson, dictionary, wiki)

Courses are organised in categories Violin, Viola, Chamber music, Orchestra, Music theory and Music informatics. In the following course system is divided with subcategories like violin primary level, violin secondary level...

The virtual classroom is covered by 8 classes of violin, viola and a separate music theory at the primary level and 4 classes at the secondary level. Each class has its own course. As the school year runs from September to June, the curriculum is divided into ten (monthly) chapters.

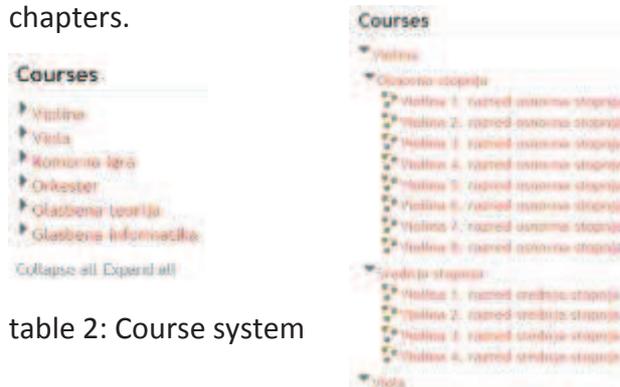


table 2: Course system

Sibelius Software has developed a complex set of different modules to effectively support all levels of digital music literacy.

- Modules: Classroom control, Worksheet Creator, Arranger, Parts, Versions, Ideas.
- Plug-ins: Accidentals, Composing tools, Transformations, Simplify Notation, Analysis, Proof-reading.
- File Conversions: import-exporter.

How much: (How much money do you estimate you'll need?)

My main goal has always been to think within the financial accessibility, so I have always preferred free software. I also tried to obtain an academic license for Shareware like Sibelius Software. Cooperation with the Slovene Ministry of Education and Slovene Academic Research Network ARNES has allowed access and co-funding of ICT.

- MS Open School Licence, **Shareware**
- Moodle (Apache HTTP Server, MySQL Data Base), **Free**
- Arnes: hosting on Virtual Servers, VoxArnes Video conferences, **Free**
- Sibelius Software, **Academic Licence**

BIOGRAPHY:

Kristian Kolman graduated violin with prof. Rok Klopčič and viola with prof. Svava Bernhardsdottir at Ljubljana University - Academy of Music. He was a member of the Maribor Philharmonic Orchestra as well as various chamber groups. Presently, he is teaching violin and viola in Celje School of Music. To support his teaching activity he authored several manuals for violin and viola. 2003 he has been invited to prepare a complete guide for a juvenile magazine PIL on a theme of Violin by Mladinska knjiga publishing house. He wrote several scientific articles for Slovenian Academic Bulletin "Music in School" and 2009 for Strad (Ask the teacher).

He also assigned special place in the research of the examinations in music informatisation. Slovenian education institute has appointed him as a head of an expert group, called e-music, as well as a "multiplier" for the notation software Sibelius and made numerous presentations and courses of notation software for Slovenian teachers. He is also active as a secretary of Slovenia branch of ESTA.