

INTEGRATING COMPUTERIZED MUSICAL EDUCATION INTO AN INTERDISCIPLINARY PARADIGM; PROPOSAL OF APPLICATIONS USING SIBELIUS SOFTWARE

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SUMMARY. This paper presents an interdisciplinary musical education approach for students in the musical field, through the use of Sibelius software applications. Active learning exercises provide students with a challenging and creative learning environment, computerized music education being not only a tool for seminar activities but also an opportunity to prepare students for the challenges of the contemporary world. Because many of the current education issues are best resolved using interdisciplinary approaches, it is important for students to be well trained in specialized disciplines and at the same time to be able to engage in interdisciplinary projects that test their creativity, critical thinking and ability to solve problems. The activities I propose, using Sibelius software for an interdisciplinary musical education, target the above objectives.

Keywords: Sibelius, software, interdisciplinary, music education.

Introduction

Starting from my opinion that active learning exercises provide students with a challenging and creative learning environment, computerized music education being not only a tool for seminar activities but also an opportunity to prepare students for the challenges of the contemporary world, I propose some applications using Sibelius software for an interdisciplinary musical education for students in the musical field. Sibelius is a scorewriter software developed and release by Sibelius Software Limited, now part of Avid Technology. It is the world's largest selling music notation program that can be used for creating, editing, and printing music scores.

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As Heidi Westerlund states, “*the profession of education needs to engage more actively in reflecting on how our societies are changing and how these changes challenge*”² our world. From this perspective, it is obvious the need to modernize the methods of teaching music, in a time when computer and music seem more and more difficult to separate. Research in the field shows that digital technologies have already been assimilated in the learning process from different countries as UK, US and China (King and Evanjelos 2016; Bauer 2014; Webster 2002; Rudolph et al. 2010; Gall and Breece 2013), but there are many other countries that are not using the full potential of the current digital technologies for classroom. Apudo-Achola Malachi writes that “*studies (e.g. Bauer 2014; Gall 2013) indicate that a plethora of digital platforms such as the internet, music softwares, YouTube, iPad, smartphones, Sonic Pi, Google play are currently everywhere replacing the old analogue technologies like Radio, TV and bringing many exciting opportunities for learning activities, impacting what, where and how music learning is delivered.*”³

Discussion:

As mentioned above, Sibelius can be used both for musical creation and for scoring/ printing of scores. For a good assimilation of the tools and capabilities of this software, I propose the following applications for music students, exercises that aim at both computerized musical writing and other musical disciplines.

1. Music listening and writing

By changing the existing notes, keeping the rhythm, the students have to listen to the first bars of the musical works indicated and write their themes in a single monophonic line, on the Sibelius project inserted below. This exercise regards music theory (rhythm and ear training), using of Sibelius tools for writing music, and also Music History (by proposing different auditions for students).

² Heidi Westerlund, *Visions for Intercultural Teacher Identity in C21st Super Diverse Societies*, in Building interdisciplinary and intercultural bridges, BIBACC Publishing, 2017, p.12.

³ Apudo-Achola Malachi, *Towards An Interdisciplinary Pedagogic Framework to Transform Music Learning with Technology-Mediated Environment in Higher Music Education in Kenya*, in Building interdisciplinary and intercultural bridges, BIBACC Publishing, 2017, p. 113.

E.g.1

E. Grieg - Morning Mood



C. Saint- Saens - The Swan



A. Vivaldi - Spring

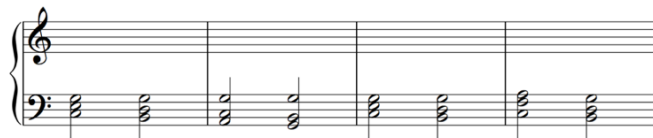


1. Melody and harmony

Sibelius software can also be used in the Harmony classes, with the professor preparing a certain harmonic progression that needs a melodic line composed. This type of activity includes the possibility to listen to the written notes, so that students connect the theoretical harmonic knowledge with the musical reality.

E.g. 2

Compose a melody and notate it on the treble clef. Begin by studying the chords. Naming them may be helpful. Be sure to include a tempo indication, dynamics, and any articulation, phrasing, or other important information for performers.

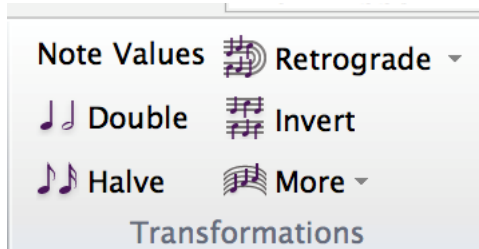


This type of activity encourages the creative fantasy of the student, as a small step toward the actual music creation activities later on.

2. Development of musical motifs

By offering students short musical motifs, they are invited to develop them in terms of composition using all the learned methods (repetition, sequencing, inversion, recurrence, rhythm augmentation and diminution, writing variation), to create 16-20 musical bars that reflect the theoretical knowledge, but are also musically satisfying. This type of application can be used in the Composition classes, but also in the Musical Forms lessons. The important issue is that, contrary to the traditional pencil and sheet notation, the Sibelius software offers the audience the opportunity to listen to the notation, to correlate the theory with the musical practice. Sibelius software also has the tools to develop musical fragments automatically, helping students in their learning process.

E.g. 3



3. Structure analysis

The next text is given to the students: *Listen to the next piece and read the score. Look at the lyrics, particularly punctuation, and try out singing the song to guide you in thinking about how long the sections are. Name the form, and mark the sections in the score. Analyze and explain how the form relates to other elements of the score. (When working in Sibelius, you may find it convenient to use Create Highlight or Edit Color and/or create brackets using the Lines menu to do this.)* This text is accompanied by the following Sibelius score that can be listened to in the software interface:

E.g. 4.

Tum Balalaika YIDDISH FOLK SONG

Verse

Shteyt a bo - cher, shteyt un tracht, Tracht un tracht dem gan - tze
 nacht: Ve-men tsu ne - men un nit far - she - men? Ve-men tsu ne - men un nit far -

Refrain

she - men? Tum - ba - la, tum - ba - la, tum - ba - la - lai - ka, Tum - ba - la,
 tum - ba - la, tum - ba - la lai - ka. Tum - ba - la - lai - ka,
 shpil ba - la - lai - ka, Tum - ba - la - lai - ka, frey-lach zol zeyn.

Translation:

<p>1. Shteyt a bocher, shteyt un tracht, Tracht un tracht dem gantze nacht: Vemen tsu nemen un nit farshemen? Vemen tsu nemen un nit farshemen?</p>	<p>1. A young man stands, stands and ponders, He ponders and ponders all night long: Whom to choose and not offend? Whom to choose and not offend?</p>
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This type of exercise is useful in the Music Analysis class, but also in the World Music lessons or Folk Music seminar activities.

Conclusions

The current society, with all its changes in technology, have imposed the computer as a daily necessity in the lives of young people. This leads to the need to rethink the traditional didactic strategies in order to integrate the computer into the learning process, but also to prepare the students for a future that is progressing towards the digitization of artistic activities.

The examples of interdisciplinary musical activities using the Sibelius software, presented above, are evidence of the multiple possibilities of the digital potential in the musical arts sphere. As Matthew D. Thibeault observes in

a research called *Media as an Invitation to Rethink Music Education*⁴, we have to take into account in current music education three circumstances that belong to the present: commoditization, efficiency, and sound fidelity. I believe that all of these time-specific features can be assimilated into the design of musical didactic activities by introducing the computer into practical exercises. As Douglas Thompson says, „*Sibelius’s invention and appearance in the last decades of the 20th century provided composers with the technology intended to enhance productivity, simplify the more mundane music composition tasks, and empower them to create elegant physical manifestations of their musical imagination’s work—musical scores*”⁵.

The proposal of integrating computerized musical education into an interdisciplinary paradigm does not only refer to activities with students, but requires thorough training among teachers. In order for practical exercises from musical disciplines to take place, teachers need to easily use music writing software and other digital tools.

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⁴ Matthew Thibeault, *Media as an Invitation to Rethink Music Education*, General Music Today, Vol. 27(3), National Association for Music Education, 2014, p.36

⁵ Douglas Earl Thompson, *Select Features in Sibelius 6 for Music Educators*, General Music Today 25(2), National Association for Music Education, 2011, p. 53.