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## Teaching Music With Technology

A Concept Whose Time Has Come

**Thomas Rudolph, Ed. D**

Director of Music

School District of Haverford Township

Email: [tom@tomrudolph.com](mailto:tom@tomrudolph.com)

presentation slides available at:

[www.tomrudolph.com/handouts](http://www.tomrudolph.com/handouts)

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## Results of using technology

Training 4000+ music educators:

1. Productive tools for teachers
2. Creative, performance and learning tools for students
3. Not a panacea

*In US summer TI:ME courses, over 2,000 teachers in exit questionnaires rate their teaching productivity to conservatively increase by an average of 52%*

## Dr. Peter Webster's Research:

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*“So, is music technology effective and is it worth the trouble? On balance and on a very basic level, the answer to this question is yes. Does music technology hold the key for solving all our music teaching problems? Of course not. Are there abuses in its use? Absolutely. Does it always improve learning? No, much depends on the context—especially the teacher and its use instructionally. Is it worth the trouble to keep studying its role in music teaching and learning? Unconditionally, yes.”*

*From:*

*“The New Handbook of Research on Music Teaching and Learning”*

*Edited by Colwell and Richardson page 416*

## The music curriculum of the future:

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- Performance ensembles (performers):
  - About the same (chorus, band, orch.)
  - Students/teachers using technology to enhance learning, creativity, practice and performance.
- General music classes (consumers)
  - Incorporate technology as tools (crayons) for music education: electronic instrument labs, computers, internet, and multimedia.

## Technology and the US National Standards....

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<http://www.menc.org/resources/view/national-standards-for-music-education>

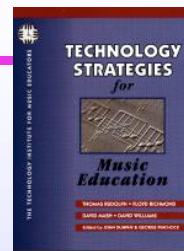
Evaluate: will technology make a difference and is it worth the investment in time, training, and money?

## The 6 areas of technology as defined by TI:ME

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[www.ti-me.org](http://www.ti-me.org)

- 1. Electronic Instruments
- 2. Music Production
- 3. Music Notation Software
- 4. Instructional Applications
- 5. Multimedia
- 6. Productivity Tools, Classroom and Lab Management

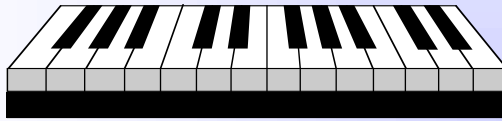


# 1. Electronic Musical Instruments

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## ■ **May Not:**

- Replace acoustic instruments
- Replace existing ensembles (band, orchestra)



# 1. Electronic Musical Instruments

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## ■ **May be used...**

*Perform; Read, Improvise, Compose*

1. As a versatile classroom performance instrument for the consumers
2. As crayons for music education
3. Replace missing instruments in ensembles
4. Used in labs for performing, creating and improvising music
5. Performance Ensembles - electronic and electro-acoustic ensemble



## Innovative Instruments

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*Perform, Read, Improvise*

- Kaossilator [www.korgusa.com](http://www.korgusa.com)  
<http://www.youtube.com/watch?v=HIg9aIJuhzg&feature=related>
- Sound Beam [www.soundtree.com](http://www.soundtree.com)  
<http://www.youtube.com/watch?v=iG1FDrLa-28>
- Korg Nano Keys  
<http://www.youtube.com/watch?v=a8qcaCHlwk>
- Laptop Orchestras  
<http://musicthing.blogspot.com/2007/11/laptop-orchestras-from-around-world.html>

## 2. Music Production

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*Improvise, Compose, and Arrange*

- **Applications:**
  - To create accompaniments for ensembles
  - Create practice recordings for students
    - Band-in-a-Box [www.pgmusic.com](http://www.pgmusic.com)
  - A student's tool to compose and arrange music (reading music not required)
- Apple GarageBand Lesson plans:
  - <http://edcommunity.apple.com/ali/search.php?collectionID=429>

## 2. Music Production

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*Listen, Analyze, and Describe*

### ■ Digitized Media

- Digital recording software
- Self-contained recording devices
- Burning Practice CDs
- Working with Digital audio in HS Electives
  - Haverford High School Digital Recording Website:

<http://www.feinmusic.com/digitalrecording/Welcome.html>

## 3. Music Notation Software

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*Read, Notate, Improvise, Compose, and Arrange*

### ■ Applications:

- A teacher's tool - arranging, composing and writing warm-ups and methods
- A student's virtual staff
- Used in the computer lab or MIDI lab to enhance creativity



## 3. Music Notation Software



### ■ Notation Software Tools:

- Finale
- Sibelius
  - Sibelius Scorch Technology  
<http://tomrudolph.com/haverfordjazz/practice.html>
  - Sibelius Worksheets
  - Sibelius Ideas

## 3. Music Notation Software



### ■ Web Applications

#### Downloading MIDI files

- Classical MIDI Archives  
[www.classicalarchives.com](http://www.classicalarchives.com)
- Choral Public Domain Library [www.cpdll.org](http://www.cpdll.org)
- Posting Notation files in Web Pages
  - Sibelius Scorch [www.sibelius.com](http://www.sibelius.com)
  - Vermont MIDI Site [www.vtmidi.org](http://www.vtmidi.org)

## 4. Instructional Software: practice and accompaniment

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*Sing, Perform*

- Practice and Accompaniment
  - Band-in-Box [www.pgmusic.com](http://www.pgmusic.com)
  - SmartMusic [www.smartmusic.com](http://www.smartmusic.com)
  - [www.jamstudio.com](http://www.jamstudio.com)



- Web Delivery
  - Band methods online
  - Practice online  
<http://psdweb.parklandsd.org/hpo/>

## 4. Instructional Software: Computer-Assisted Instruction

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*Read, Notate, Listen, Analyze, and Describe*

- **Applications**
  - Enhance independent learning
  - Provide a motivational drill and practice medium:  
music games
  - Individualized instruction.





## 4. Instructional Software: Computer-Assisted Instruction

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- Interactive software

- [www.harmonicvision.com](http://www.harmonicvision.com)

- [www.groovymusic.com](http://www.groovymusic.com)

- Web delivery

- [www.creatingmusic.com](http://www.creatingmusic.com)

- [www.musictheory.net](http://www.musictheory.net)

- GarageBand 2009

- <http://www.youtube.com/watch?v=2dIHajXzyTg>

## 5. Multimedia

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*Connect*

- **Applications:**

- Provide a medium for curriculum integration

- Produce digital media projects

- Author web pages

- Score music to video

- Sibelius, Finale, Music Production Software

- [http://www.tomrudolph.com/presentations/Scoring%20with%20Sibelius\\_09.pdf](http://www.tomrudolph.com/presentations/Scoring%20with%20Sibelius_09.pdf)

## 5. Multimedia: Internet

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*Connect*

### ■ Applications

- Link students and teachers to information throughout the world - The ultimate communication tool
- Provide a communication medium: web pages, e-mail, MIDI files, distance learning



## 5. Multimedia: Internet

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*Connect*

### ■ WebQuest

- Use the internet to explore historical background of composers, Australian Music Webquest

[http://metmagazine.com/mag/wonderful\\_world\\_webquests/](http://metmagazine.com/mag/wonderful_world_webquests/)

Podcasts

■ Keith Mason: <http://www.musictechforme.com/>

■ Jim Frankel: <http://fams.podomatic.com/>

## 5. Multimedia: Internet

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*Connect*

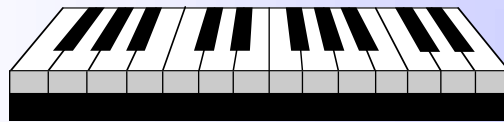
### ■ Music Education Blogs:

- Joe Pisano: <http://mustech.net/>
- Jim Frankel: <http://jamesfrankel.musiced.net/>
- Amy Burns: <http://amymburns.musiced.net/>
- Tom Rudolph:  
<http://tomrudolph.berkleemusicblogs.com/>

## 6. Productivity Tools, Classroom and Lab Management

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- Manage daily work more effectively. 
- Develop a basic understanding of computer systems and concepts.
- Teaching in a technology facility requires technical knowledge.



## Reference Publications...

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- TI:ME Publications <http://www.ti-me.org/findpublications.html>
  - Technology Strategies for Music Education
  - Technology Guide for Music Educators
- Strategies for Teaching: Technology  
<http://www.rowmaneducation.com/Catalog/SingleBook.shtml?command=Search&db=^DB/CATALOG.db&eqSKUdata=1565451406>
- Teaching Music with Technology, 2nd edition (Rudolph)  
[www.giamusic.com](http://www.giamusic.com)
- MENC Opportunity to Learn Standards for Music Technology  
<http://www.menc.org/resources/view/opportunity-to-learn-standards-for-music-technology>

## Training and Support

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- Seek out training in technology
  - [www.musicednet.com](http://www.musicednet.com)
  - Technology Institute for Music Educators  
[www.ti-me.org/ti-me/summer.html](http://www.ti-me.org/ti-me/summer.html)
  - Attend a TI:ME National or Regional Conference
  - Berklee Music [www.berkleemusic.com](http://www.berkleemusic.com)
- Join Music Education Technology Organizations:
  - TI:ME [www.ti-me.org](http://www.ti-me.org)
  - ATMI [www.music.org/atmi/default.htm](http://www.music.org/atmi/default.htm)
- Read MusicTech Magazine
  - <http://www.musictechmag.co.uk/>

## Action steps...

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- Focus on how to use technology in innovative and productive ways.
- Investigate how to integrate technology into the existing music curriculum.
- Seek out funding through technology budgets and grants.
  - [www.musicednet.com](http://www.musicednet.com)
  - [www.digitaleducationrevolution.gov.au](http://www.digitaleducationrevolution.gov.au)

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