

How can the use of digital tools
lead to a learning environment
in which the student can step up to the role of an
active, researching artist.

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How can the use of digital tools
lead to creating a learning environment
in which the student can step up to the role of an **active, researching artist**.

1. What is an active, researching artist?

a) Research subject: what should be researched?

analysis / interpretation
of a musical score?

improvising?

composing?

aspects of the history of
composition?

historical / musicological
backgrounds and contexts?

performance practice?

historical interpretations?

teaching music?

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1. What is an active, researching artist?

b) Prerequisite: A goal (a research question) is agreed with the student.

Using the example of a solo concert e.g. the invention of the theme incl. harmony, design of the development or composition / improvisation of the solo cadenza

Research-based learning must make it possible to try things out and fail.

It also means that the path and the result are completely individual and one cannot expect the same (as a result) from different learners.

Individuality: The learner has to find his own way, with his own learning pace and individual aspects worked out in different depths.

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1. What is an active, researching artist?

3. What conditions are necessary for active and research-based learning? You need

- Study regulations that support this way of working and allow new examination formats
- a teacher who enables research-based learning
- a learning group that tends to work on the same topic so that they can exchange ideas (learn from each other)
- **an appropriate place of instruction that enables joint work with different media (music, text, music samples, audio, video)**
- **Production tools**
- **Presentation tools**
- **Communication tools**
- **extensive research options (e.g. library)**

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2. Learning environment

- the sum of all factors that influence learning

Thesis 1: A “classic” learning environment (university as a place of learning: classroom, library, meeting room, concert hall, etc.) is in principle sufficient to enable and support research-based learning. You don't need any digital tools!

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3. the use of digital tools

Thesis 2: Digital tools can be used in the areas mentioned above to

- **expand the subject of research,**
- **facilitate, optimize, accelerate the work**
- **and present the results in high quality and thus improve them!**

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a) a suitable place that enables work with different media (text, music samples, audio, video)

- A Learning Management System (LMS) can already cover some areas and thus even become its own **virtual learning environment**.
- Different media can be combined with each other in a meaningful way, used **collaboratively**, are also **available outside of the classroom** and can be used **independently of time**.
- An LMS provides communication channels so that a **quick exchange** between all parties is possible.
- An LMS includes Practice tools for **deeper learning**.
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b) extensive research options

- Digital libraries, databases, etc. **facilitate** research
- Analysis programs (e.g. Edirom) can compare musical structures and **accelerate and facilitate** the analysis.
- Programs can process big data and uncover **new fields of research** (musical corpus research)
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c) Communication tools

- Chat rooms, forums, Facebook, Instagram, etc. enable a **quick exchange** of information.
- Video conference systems enable distance teaching in **high quality**.
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d) Production tools

- Sequencing programs / Digital Audio Workstations can deliver musically and sonically **high-quality results**.
- Notation programs can produce **professional scores**.
- Composition programs can **create** experimental music and performative works
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e) Presentation tools

- Programs like e.g. Power Point, Keynote, prezi etc. enable **high quality** presentations
- Visualization programs for music can **optimally illustrate** musical structures.
- Streaming platforms can make their own results available in **high quality**.
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Conclusion

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Thesis 2: Digital tools can be used in the areas mentioned above to

- **expand the subject of research,**
- **facilitate, optimize, accelerate the work**
- **and present the results in high quality and thus improve them!**

Thesis 3: The technical requirements are in place and do not have to be redeveloped. We just have to use them differently and more intensively.