# ๏ The Workshop of Other Knowledge

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As an art educator, I ask myself daily whether we are offering students the right tools, skills, and technology. Within this writing I would like to share my struggle and the questions I have regarding the learning environment in which we address these tools, skills and technology; namely, the workshop.

First, I would like to address the role of the workshop in relation to the Bauhaus. Celebrating its centenary in 2019, the Bauhaus had a great influence on the role of the workshop within higher arts education. I will look at this history and describe how industrialization and globalization shaped today’s workshop. Then I will address some issues which can help us to reformulate the role of the workshop within (higher) art education. Finally, I would like to look at how current times resonate with the desires and attitudes that shaped the Bauhaus, and how it can inspire us to develop ‘the Workshop of Other Knowledge’ which explores the boundaries of what such a space within higher art education can be.

## The Role of the Workshop in Relation to Bauhaus

The Bauhaus responded to the effects of the ‘First Machine Age’, in which the machine took over traditional work done by hand and craftsmanship, and artists and designers sought new roles within the junction of craft and industrial production. The Bauhaus was responding to a world with many insecurities. World War I had just finished, Germany was bankrupt, and there was great inflation. In this context a new narrative was needed and the Bauhaus had a rather remarkable, positive approach. They developed a utopian vision to make a better world for all through better designed objects and environments. They wanted to fundamentally change the world through design.

Today we are experiencing the emergence of the ‘Second Machine Age’, wherein technologies such as artificial intelligence, robotics, and biotech are fundamentally changing the way we live. The present can be characterised as an age in which the boundaries between the physical, digital, and biological blur. Maybe, in parallel to the Bauhaus, we could say we also live in a time of great societal change and transformation where the cultural, ecological, and technological landscape is shifting and bringing new challenges for artist and designers (Philips et al. 17).

![](images/2\_AldjevanMeer/01\_a\_45510942\_2141428669518578\_7403382277989728256\_o.jpg)

![1. Rogier Klomp, Algorithmic Super Structures, 2018](images/2\_AldjevanMeer/01\_b\_45516002\_2141428989518546\_7150072644539252736\_o.jpg)

## The Workshop of Today

At the Willem de Kooning Academy (WdKA), as at many other art schools, we are putting tremendous efforts into addressing these urgent topics through our art and design education. In response to these developments we have applied fundamental changes in our curricula. In order to make our education more relevant, we have introduced the Autonomous, Social, and Commercial Practices where students work on real-life, practical assignments which transcend the boundaries of their discipline (WdKA, ‘Practices’). Within these educational programmes much effort is put into rethinking systems, notions of authorship, collaboration, and transdisciplinarity (Schutten et al.).

Another major change and innovation has been the reinvention of our workshops. We have seen a great divide between new art and design practices and our craft-oriented education within the workshop. We believed that ‘a changing society’ also calls for new ways of making. New technologies not only alter the way we make things, they also influence how we think about production.

So, we upgraded the workshops and implemented what we call the ‘Stations’ at the WdKA (WdKA ‘Stations’). Within these Stations we are questioning the technology that we currently teach by making room for new technologies and reinventing old technologies. We have changed the workshop from a place for production and execution to a space where research can take place. Also, we have created an environment which allows more frequent and intensive collaboration between teachers and technical staff.

![2. Interaction Station, Willem de Kooning Academy. Photo: Ossip van Duivenbode](images/2\_AldjevanMeer/02\_Ossip\_interactionstation.png)

In 2012, when we re-invented the workshops as Stations, we wanted to support new art and design practices and ways of making, but have we actually achieved these goals? In many respects, despite successes, we are still held back by the past. To gain more insight into where we stand now and how we can develop further, it is good to look at history.

## The Workshop and its History

Educator, writer, and graphic designer Meredith Davis notes, ‘For most of the 20th century, the primary role of design was to make things look and work better, to support the functional and emotional experiences of the consumers, through well-designed artefacts and places’ (Davis, *Teaching Design* 84). As she describes, this twentieth-century, Bauhaus-based notion of an artefact-oriented view of design is very much applicable within today’s vision for the role of technology, and particularly of the workshop in art education. In practice this means professor/tutors teach in the classroom or studio and, in the workshops, technical staff instruct students in technologies to help them realise their ‘products’. Of course, the classes and subjects taught by professors have changed over time. Mass industrialisation and the outsourcing of production have led to a greater distance from manufacturing processes. Postmodern ideas were introduced, which related to these shifts in mass industry and consumerism. Art education developed a more conceptual, critical, and theoretical approach relating to design practices.

This led to the shared opinion that artists and designers are responsible for the concept but not the execution of the work, and that the technology or media used was inferior to the overall concept and message. In this context, technology or material knowledge was considered less important and took up a peripheral role in the creative process; moreover, it was sometimes even seen as limiting to the imagination. As a result, the role of technology within art education in general has been neglected for decades. Furthermore, ubiquitous digital and networked technologies have not led to major changes in higher art and design education, but instead to greater fragmentation and specialisation.

In my opinion, this is very much reflected in the lack of awareness regarding the development of the workshop and the pedagogy around learning technology, materials, and skills. In most (Northern European) art schools you will find similar workshops, which are mostly related to old media and crafts. They are equipped for the making of ‘artefacts’: the wood, metal, ceramics, and plastic workshops; graphic and print studios; time-based media; photography and film. At the turn of the twenty-first century digital technologies were slowly introduced; think of computers, editing studios, and fabrication technologies like laser cutters, 3D printers, and the like. But unlike traditional media and their tools of production, it was not entirely clear where to position new digital equipment, as it seemed to be relevant for all disciplines (Philips et al. 17).

## The Workshop of Tomorrow

Today, we can no longer neglect the influence of technology and its impact on making and emergent practices within higher art and design education. The workshop or, in the case of the WdKA, the Station, should not be rooted in the twentieth-century but instead, it must be relevant in the twenty-first century. It is time to rethink pedagogy in relation to these technologies and materials and, in doing so, rethink the role of the workshop.

In doing so, the following questions should be taken into consideration:

1. Product versus Process: How does the role of the workshop change when it moves beyond artefact-based practices?
2. Stuck in a rut: Are we able to get rid of predetermined ideas about the conventional toolset artists and designers need?
3. Can we make it or should we make it?: What are the social, political, historical and environmental implications of the tools we use, and in this context what are the potential known and unknown consequences of the things we make?[[1]](#footnote-0)
4. Accelerating digital technologies: What are possible strategies to deal with rapid development of digital technologies?
5. How do we value technical knowledge?: How can we problematize the hierarchical divide between the technical staff or instructors and the tutor?
6. Transdisciplinary practices?: Are we able to welcome other experts/disciplines within the workshop?

### 1. Product Versus Process

Our Stations and most workshops within Northern European art schools are organized through making, which is based on artefacts. As mentioned before, the primary role of design was to make things look and work better, to support the functional and emotional experiences of consumers, through well-designed artefacts and places (Davis 84). The workshop used to support this type of artefact-based practice. But for a long period of time, design and art practices have not focussed solely on making products or artefacts. Artists and designers create processes, transformations, experiences, services and concepts. What does this mean for the practice of making within the workshop? How do we support practices like; conceptual art, transformation design, data design, service design and experience design?

### 2. Stuck in a Rut

I wonder whether we are stuck in a rut and have predetermined ideas about what the artistic toolset of artists and designers should be. Are we teaching the tools, skills and technology students need in this time and age? When designers or artists look at the world and give meaning to it, it does not necessarily mean that they need a camera or pencil. It is important to use tools that fit and relate to the world we live in, and these tools are many. At this moment we are able to look at the world through not only the camera or interpret it with the pencil, but also through technologies like such as AI, microscopes, sensors, and 3D scanners. Next to these tools which give us the possibility to research, observe and interpret the world, we are able to use all sorts materials and media to express ourselves. We can work with dust (Piscaer Servies, see image 3), data, use fermentation processes, our body and literally everything that is at hand. How does this determine and influence the making process within the workshop?  
![3. BluecityLab, intern Lieke van der Maas working with kombucha.](images/02\_AldjevanMeer/04\_bluecitylab.jpg)  
![4. Annemarie Piscaer and Iris de Kievith, ceramic with fine dust glaze by SER-VIES.](images/02\_AldjevanMeer/03\_ser-vies\_kopjes\_.jpg)

### 3. Can We Make It?

With industrialization, globalization and the cheap transport of goods, the relationship we have with the things we buy and consume is completely disturbed (Ketter & Co). Thanks to current debates around climate change and by post-colonial critics, a re-evaluation of this relationship has not only come to the fore but is encouraged. So how do we make things in the world without exploiting people and resources? What tools and materials do we have to offer in the workshop? What is the historical and political meaning of, for instance, a material like yarn? What role can the workshop play in helping students to make more sustainable decisions? These are issues we can no longer ignore and now must call for action.

### 4. Accelerating Digital Technologies

We have more and more (digital) technologies at our disposal. On the one hand you could say that making has become easier—think of all kinds of 2D and 3D printing possibilities and accessibility of computer programming (such as Arduino/Raspberry P). On the other hand, processes of making are also becoming very inaccessible. We do not really understand what lies behind the technologies we are using anymore and have become more dependent on them at the same time. I like what the critical engineers are saying: ‘The greater the dependence on a technology the greater the need to study and expose its inner workings’ (Oliver et al.).

![5. Arthur Boer & Boris Smeenk, *Phony - Make Believe*.](images/2\_AldjevanMeer/05\_36612321\_492931427823031\_6650701431303045120\_n.jpg)

![5. Arthur Boer & Boris Smeenk, *Phony - Make Believe*.](images/2\_AldjevanMeer/05\_example2.jpg)

![5. Arthur Boer & Boris Smeenk, *Phony - Make Believe*.](images/2\_AldjevanMeer/05\_Phony.jpg)

### 5. How Do We Value Technical Knowledge?

In practice, there is a pervasive and classical division between the ‘teaching staff’ and the ‘technical staff’; the instructors who work in the workshop (the Stations). Art and design professors are increasingly distanced from teaching in the workshops and have limited knowledge in this ever-expanding field of complex technologies. The technical staff and instructors in the workshop are supposed to have, as in the Bauhaus period, little influence on a student’s artistic development. They also have a hard time keeping up with these new technologies, and often lack the artistic background, qualities, and practice to formulate appropriate pedagogical approaches that critically examine the use of media and material. What kinds of technical knowledge and literacies are necessary for both teaching and technical staff?

### 6. Transdisciplinary Practice

We return to the Bauhaus and its potentialities as a model of education that ‘wanted to become a force capable of changing society and hoped to form a modern type of human being and environment. In a transdisciplinary community of work, the “building of the future”—and thus also the future itself—was to be conceived and created’ (bauhausarchiv museum für gestaltung). *What might that mean in the present?* Living in the Anthropocene, and facing climate change and global inequality the need for building a new future, new approaches and new narratives are needed. As Annemarie Piscaer from Studio Dust suggests: ‘These ecological issues require inclusive transdisciplinary cooperation’ (Piscaer 5). Artists and designers who want to address these topics require knowledge, experience, and expertise from other disciplines (science). I think this suggests that we have to let go of our artistic ego, get rid of twentieth-century ideas about authorship and learn to communicate and collaborate with others.

## The Workshop of Other Knowledge

When I looked at the Bauhaus, I was inspired by the holistic and open attitude of its teachers and students and their engagement and willingness to experiment. It is very interesting to look at the object lessons and material expeditions of Joseph Albers and László Moholy-Nagy. They taught their students to experiment with different materials through their senses. What I learned was that they were pushing students to question and research the materials of that day and age. This made me wonder whether we are questioning the materials of our own day and age within art education.  
  
In a world where we are getting out of touch with the physical and tangible and have lost control over the virtual, its crucial for designers and artist to again engage with the substantial, real world. As Jan Boelen, a curator of design, architecture and contemporary art aptly noted:

How can we learn a certain attitude to deal with reality of today? Design has the enormous potential to create products that deal with our reality. This productive mode is necessary—to construct and make your own reality rather than becoming a consumer and a slave of reality. But if we are still dreaming of a reality that we can construct ourselves, then what are the skills that we need to know and to be in control of…?[[2]](#footnote-1)

Thinking about this holistic and experimental approach of the Bauhaus, I wondered how we are enabling our students to deal with reality today. This led me to embark on a research project: The Workshop of Other Knowledge, which actually questions what the workshop of tomorrow should be. My research centres around the following question: *What materials, tools and instruments within art education can we provide to investigate and experiment with crucial phenomena of this time and age?*

The Workshop of Other Knowledge (van Meer) aims to create several temporary, experimental, physical learning environments where tools, things, instruments, software, hardware, methods, and equipment are collected. The aim is to create a new learning environment, where new modes of making and designing will be developed by breaking away from standardised ways of seeing and making. Driving questions are: What tools and materials do we have to offer in the workshop in a time and age where we run out of resources? What is the ‘matter’ or ‘material’ we create with?

![6. World Wilder Lab — Kasia Molga and Eric Overmeire, Plandscapes an interactive installation. NeuLab, Neuhaus, Het Nieuwe Instituut.](images/2\_AldjevanMeer/06\_60796899\_2180051505417168\_263343776565559296\_o.jpg)

## NEULAB

The first experiment regarding the Workshop of Other Knowledge was NEULAB, executed during Neuhaus; a temporary and transdisciplinary academy for more-than-human knowledge, hosted by The New Institute (Het Nieuwe Instituut) running from May through to September 2019. Neuhaus reacted to the current era’s planetary burnout with a multifaceted curriculum in the spirit of the Bauhaus (The New Institute, ‘Neuhaus’).

At its core the Bauhaus project revolved around the ‘New Human Being’. It was not about learning a profession, but about the universal education/formation of the personality. Making processes and practices have been very much human-centred ever since. Everything we make and design is in the favour or service of humans. NEULAB questions this kind of making within a world where we are running out of resources and where non-human systems like algorithms are influencing our lives. This raised another question: Can we make and collaborate with other entities?

But what does it mean to learn to meet the needs of non-humans, can we show solidarity to other entities while making? In NEULAB we explored this relationship with non-human entities through making. What is our relationship with plants, animals, things, machines, and AI? How can we work with them instead of having them work for us?

In three installations (The New Institute, ‘Neulab’) created by different artists,[[3]](#footnote-2) Neuhäusler participants were asked to deploy their own creativity, and concentrate on the following three non-human entities: Algorithm—Plants—Things. These installations were explicitly a do-it-yourself activity and by doing/making the relationships are examined and experienced (The New Institute, ‘Neuhaus Neulab 7/8’).

![7. Endoscope installation made by RNUL. NeuLab table, Neuhaus, Het Nieuwe Instituut.](images/2\_AldjevanMeer/07\_60835266\_2180057082083277\_4239467728601088\_o.jpg)

![8. Photo of results working with the Hybrid Design Tool; an interactive tool by Rawshaping. NeuLab table, Neuhaus, Het Nieuwe Instituut.](images/2\_AldjevanMeer/08\_10-06\_16-12-35-1560175955\_FhuNIjQY\_upload.jpg)

![9. Hackers and Designers, Momentary Zine; a publication tool. NeuLab, Neuhaus, Het Nieuwe Instituut.](images/2\_AldjevanMeer/09\_SNPL1192.JPG)

## Conclusion

In conclusion, I want to stress the significance of developing new visions around pedagogies related to technology, skill education, and specifically, experiential learning which takes place in the art school. Most importantly, this vision should not be developed separately but overarching all curricula, embedding ‘critical making’ as an integral part of learning. By formulating better skill education regarding technology and making, it will enable students to deal with reality and connect to the world. In order to do this, it is necessary to let go of standardised ideas and embrace new making processes and practices, and foster research into the ethical implications of making. It is also essential to acknowledge that this cannot be done alone. We need to cooperate and collaborate with humans, experts from other disciplines, and non-human entities and let go of former hierarchical divides.

Hopefully this collaborative effort will lead to different learning environments within our art schools and will inspire teaching and technical staff, students and external partners to reimagine and envision the world differently, and engage with the tools to respond more accurately to the crucial phenomena of this time and age!

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## List of Images

###### 1. Rogier Klomp, Algorithmic Super Structures, 2018. Retrieved from www.facebook.com/pg/KLOMPtv-1710045382656911/posts/

###### 2. Interaction Station, Willem de Kooning Academy. Photo: Ossip van Duivenbode

###### 3. BluecityLab, intern Lieke van der Maas working with kombucha. Photo: [www.bluecitylab.nl](http://www.bluecitylab.nl)

###### 4. Annemarie Piscaer & Iris de Kievith, ceramic with fine dust glaze by SER-VIES. Photo: Roel van Tour. Retrieved from https://www.ser-vies.nl/

###### 5. Arthur Boer & Boris Smeenk, Phony – Make Believe. Photo: Arthur Boer & Boris Smeenk. Retrieved from 2018.gogbot.nl/portfolio/boris-smeenk/

###### 6. World Wilder Lab; Kasia Molga and Eric Overmeire, Plandscapes an interactive installation. NeuLab, Neuhaus, Het Nieuwe Instituut. Photo: Het Nieuwe Instituut. Retrieved from neuhaus.hetnieuweinstituut.nl/lokalen/neulab

###### 7. Endoscope installation made by RNUL. NeuLab table, Neuhaus, Het Nieuwe Instituut. Photo: Het Nieuwe Instituut. Retrieved from neuhaus.hetnieuweinstituut.nl/lokalen/neulab

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1. ###### The Dutch translation of ‘Can we make it?’ is ‘Kunnen we het maken?’. The phrase has a double meaning, literally ‘Can we make it?’ but figuratively it suggests ‘You cannot do that!’. I have translated this as ‘Can we make it or should we make it?’ in order to capture the kind of complexity and contradiction represented in the original Dutch understanding of the question.

   [↑](#footnote-ref-0)
2. ###### See Rajagopal, *Metropolitan Magazine*. Jan Boelen curated the 4th Istanbul Design Biennial *A School of Schools*.

   [↑](#footnote-ref-1)
3. ###### Neulab was created with work by RNUL, Arthur Boer, Boris Smeenk, Kasia Molga, Eric Overmeire, Hackers & Designers and Rawshaping Technologies.

   [↑](#footnote-ref-2)