

Colour Education from Past to PC

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ABSTRACT

In contemporary art education we face an extended interest in the digital world. Parallel to this there is a time-pressure in the curriculum on the subjects of form and colour. This leads teachers into new, creative ways of how to transfer knowledge and understanding – old and new – with the help of new media.

A possible tool for colour studies called “The Chromascope” has been developed at Bergen National Academy of the Arts, Norway. This software, based on perception, will be demonstrated and discussed in the lecture, and will be available for further studies after the Conference.”

1. INTRODUCTION

This presentation will deal with colour education before –during - and after the nineties.

We all experienced a media revolution in this decade, and the consequences of this revolution left us with an almost polar situation. Those who considered this shift of paradigm as an exciting opportunity to get rid of old knowledge and traditional ways of teaching, and on the other side, those who feared exactly what the counterpart hoped for; that we in such turbulent times risked a devastating loss of knowledge and experience that was embedded in traditional teaching.

How did the digital revolution hit the Colour Education in the Art Schools?

As we now find ourselves in the afterglow of the digital revolution; have our brightest hopes or darkest fears come true? Or is it in fact “business as usual”; was the digital revolution seemingly arbitrary to the colour education?

We definitely find our situation at the Bergen National Academy of the Arts, to be changed in profound ways. It is our belief that many of you will have the same experiences.

Brushes, pigments and pencils, scissors and materials are now considered slow and old-fashion tools by the students, compared to the fascinating” onscreen cyberspace”. Speed and endless possibilities as in “millions of colour” are the new mantras.

We all know that speed and endless possibilities comes at a price, especially when dealing with computers. For one thing: You must learn to use the pc –you must learn to use it *well* - in order of gaining satisfying speed and enjoying the desired possibilities. And of cause computers must be paid for. This also goes for an (in our opinion) almost endless line of software.

The digital revolution has not left us untouched! The number of Computer-labs are increasing, Computer courses are flourishing. There has been a major shift in the structure of economic investments, and there has been a great impact on the curriculum.

In general we find: Technically demanding activities have gained status. Courses where continuous investments and renewance are not important, somehow risk being left “in the backwaters” of modern times.

We would almost want to put it like this; unfortunately for colour-teaching: This topic was too explored before the digital era! We do not necessarily need to use computers in our courses - and that is almost to our disadvantage! The “image” of colour-education would certainly get a boost, if we could tell our students: The value of their colour-course would be very dependent on their ability to use the computer.

If a seemingly trivial transformation from paper to screen is such an important key to the future success of colour-education, why not just make the move? That is exactly what we thought! We will now show you what steps we have taken so far in the National Academy of the Arts in Bergen. We found this to be a more exiting endeavour than we initially had hoped for; we encountered promising possibilities – but not without its pittyfalls!

2. BACKGROUND

I have been a part time professor in colour at the National Academy of the Arts under changing names of the institution during close to 30 years. In addition to that I have my own studio in Colour Design in a cross vocational Joint Design office in Bergen called "Designfellesskapet. Thus I have had the privilege to work with students, professionals, customers and public and to meet the different needs of competence and understanding of colour. This cross-vocational situation has led me to an approach to colour that has established the main platform for my teaching. I am fully aware of the variety of the student's need for specialised knowledge in their own fields, such as textile and ceramic art, photo, graphic design and interior and furniture design. But, as I was always working with mixed groups from different fields, the specialised knowledge was not emphasised.

The great advantage of this situation however, was that we could establish a common language in the wide spread experiences and questions that were raised in the groups.

So the crucial question has always been: What are connecting the different subjects, and how is it possible to establish knowledge across the borders of disciplines.

3. HISTORY

When I started teaching at the Art school many years ago, no one questioned whether colour should be in the curriculum or not! A four weeks intense course during first year was considered a must.

During the nineties, the emphasise on the visual language and basic understanding of form and colour diminished and were considered less important, both in the Art and in the Design studies.

It seems to me that this was mainly a result of the digital revolution as mentioned, but pressure of these subjects were also strengthened by the shifting waves in the contemporary Art field.

This history can easily be demonstrated from the curricula in these years in our school for the last 15 years: From four weeks, of concentrated colour studies, the time-pressure has gradually diminished the colour studies in the curriculum to a basic colour course: one week, first year!

It is indeed a dire and very frustrating situation for a person that firmly believe that the more you know and understand about colour, the more you will be able to, confident and skilled, to use it as a tool to express your work. Students within the visual arts - whether they are artists or designers - deals with form and content. Taste and talent will of course be of some help, but for professionals a great deal of knowledge and understanding is very important.

So what could I do? I had a responsibility to the school to teach and to do research work and to publish in the field of colour. It gradually became impossible for me to consider the teaching part as sufficient from the time set of to that. How can one possibly be serious with the content of one week without making it into a banal sweep over some funny tricks to try to raise a deeper interest in students that were – in best case - to go to voluntary courses or workshops later in the studies.

It became necessary within the tight time schedule to eliminate many angels of knowledge and emphasise of my own deepest understanding of colour:

Colour is what we see, and colour is inter-disciplinary.

Then three points remained:

- Terminology
- Perception
- Colour influence on form and content.

As the NCS colour system is based purely on perception, it felt naturally to me to choose this as a basic language for my teaching. It describes colour in terms based on visual experiences, both verbal and in graphic symbols. That makes discussions about discoveries and transfer of old and new knowledge concrete and meaningful.

In addition to that, the Colour Institute in Stockholm has developed excellent material for use on different levels of courses and studies. For many years my introduction to colour for the students has been through some of these exercises. Even advanced students appreciate this starting approach, and to work with collages or sorting up colour samples. To touch and treat the colours this way is a pure training of the eyes and at the same time it is a simple and easy way to establish an

understanding of a structure that really feels “natural”. It appears like an old knowledge is developed to a level of consciousness that make the knowledge live.

Through this we build a terminology that describes the visual experiences both verbally and in graphic symbols. With this as a common language, it is possible to go into deeper studies, and to discuss the results of work and discoveries with words that were unambiguous understood.

Within the timeframes we could do some interaction exercises ex g, Josef Albers, and describe the discoveries in the NCS-language.

We could also start to look for the influence of colour on form expressions or on the content and meaning of messages in different art fields, but here again: how far could we go in the time available?

To paint exercises and series of experiments, it seems necessary with at least some training with pigment mixing. But as we all know: –Things take time. So we also had to skip that!

What remained was introduction of the NCS language, lectures and demonstrations. Very little time for curiosity and interactivity and exciting new personal discoveries.

So: Frustrated, angry, passing my sixties and still fighting for “the right of colour” in the school, I was close to giving up.

4. START OF PROJECT

In the “middle of Past and the PC,” I was very fortunate to meet a former student who had earlier demonstrated great skill both in colour understanding, and in computer work like web design and programming – Sven Jacobsen. He pinpointed the problem very clearly: The students with a fast growing interest in working on screen could see no link between the “old” knowledge of colour, and how the colour appeared in their data-work! Instead of mixing colour, they “pushed and dragged” handles and arrows. The RGB system behind the production of colour made the old-colour understanding alien to them.

The fact that colour on screen are emitted light, gives them a quality so different from the experience of reflected light from surfaces built up from pigments and dyes. It seemed so hard to find the link between the different worlds that could establish a base for studies and extended knowledge about colour. What could we do to build that link?

We got support from the Academy for a pre-project to investigate the problem field.

I had to learn to use Photoshop to be confronted with that part of the colour world, and we had exciting discussions about the possibilities and the challenges of the new medium.

My experience from teaching and colour design met his high competence in digital work, and we exchanged visions and ideas. The discussions led us to the idea of a data program for colour education, and we applied again for funding, and presented sketches and frames for what we wanted to build and achieve. The Academy took interest in developing such a new tool. We were granted new project funds for that, and so we could start a one-year project to develop the “Chromascope” which we will demonstrate for you here.

5. THE CHROMASCOPE

The program is based on Perception as described by Ewald Hering. The main goal is to use our ability to judge and describe colour from their similarity to the six elementary colours. and “over-rule the RGB tyranny,” This way of “producing” the colour we want on the screen, from a visible point of view, and not from a technical one, makes this program unique.

The interface shows the three main parts: Calibration, Colour producing and Work-shops

We will like to stress the fact that we, of course, had no intention to solve the problems of the unstable presentation of colour in different devices. Our definition of “calibration” is to make your own data screen personal according to the NCS theory in a way that “what you do is what you get” from the symbols of NCS as the pointer.

With a screen “calibrated” on such a perceptual principle our intention has been to build a colour course based on perception. Old knowledge and new experiences should be related to the terminology and graphic symbols of NCS. The calibration itself is a demanding, but marvellous way of perceptual training. It is worth the time it takes –approximately on hour or more. When it is done,

however, you have possibilities to work with colour on the screen, and relate it to the NCS symbols – and maybe also to the notations.

The colour desired can be produced as series or scales in the “mixing-room.” Colours will be defined in the symbols, with possibilities to find both NCS notations and RGB notations for each colour. An indicator of lightness is also present.

The most exciting part is of course the Workshops with the in-built Atelier. Here the students may do interactive colour studies of different kind, and with endless possibilities. They may try out old theories and discover new experiences. After basic studies they may expand their experiments in different way in a multiply of more “formal” exercises in pre-shaped workshops. But they can also, make their own design sketches in the Atelier which has a simple drawing program connected to the colour picker, and where the information of the colours used can be stored in swatches.

6. CONCLUSION

What we show here in Granada is the status of the program so far. It will in fact be the first official presentation. We have, however, tested it in many colour courses arranged by the school during the last year. Both basic and more advanced courses and a post-educational course last fall.

We also connected it to a workshop about visual phenomena where professor Lois Swirloff had one week of really advanced training with students in tactile work, and we could try out more examples on the screen afterwards.

This tool has proved to be appealing for those who like to do self-studies and dive deeper into knowledge about colour in addition to what you can achieve during short colour courses.

Working with interaction of colour described by Josef Albers, or with Johannes Ittens “seven contrast” is possible, and can be related to the NCS descriptions. But most exciting will be investigations on the influence of the different colour components for the form and content-part of any visual expression. In all this cases we really see the versatility of the program.

The multitude of examples, and the speed of production are of course important, but we also had to face that it could be a big problem, especially in the beginning “It goes too fast” for reflections.

So we had to develop a small exercise book as a base, to restrain the students in the starting experiments. By “writing down” the experiences in the NCS symbols, and even get the NCS-codes on the colour used, the knowledge remains, and can be linked to what they have learned in earlier courses based on the NCS system.