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Being in motion through an aesthetic working process

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The article reports the results of an empirical investigation into movement viewed as a quality of an aesthetic working process. Any process presupposes movement - there is no process if one stands still. At times, movement is deliberately provoked by artists wanting to view their work from a different perspective. This was the approach applied in the first-year course of an art teacher's program in Sweden, where movement was provoked by shifts of media (cardboard, sketching, Minecraft) during a four-week working process. The assignment was to work with a 3D shape through these media. The students' process journals (containing text and photography) constituted the material for the study. The results are visualized on an individual level as movement patterns and five characteristic patterns are discerned. Movement within and between media are visualized collectively, showing not only how media shifts stimulate movement but also how the students themselves can provoke movement within a medium. Sketching shows the most movement, typically triggered by the students themselves when they get bored by the repetitiveness of multiple sketching. Minecraft encourages the least amount of movement, which is discussed in relation to preconceptions embedded in the software design. The study relates to a phenomenographic approach.

Keywords: Aesthetic working processes, art teacher education, contextual analysis, visual analysis, phenomenography.

1. Introduction

Balance is a continuous movement in and out of equilibrium. If you try to hold on to it you fall. (Cirkus Cirkör, our translation)

This article is about the necessity of movement, or more specifically, movement seen as a quality of aesthetic working processes, within the context of an art teacher's program in Sweden. A few years ago we were engaged as teachers in a first-year course that focused on, among other things, the students' experiences of and ability to work over an extended period of time. This clear focus on process was somewhat unusual in this particular educational context. Complex qualities of processes tend to be seen as a problem rather than a quality, as they are difficult to control and assess. This is part of a general tendency to rationalize learning today, which we see as problematic. Biesta also find this problematic:

The whole idea of evidence-based education is [...] based on the eradication of risk and a desire for total control over the educational process. [...] The assumption is that education can be understood as a causal process – a process of production – and that the knowledge we need is about the causal connections between inputs and outcomes. I don't think that education is such a process – and I also don't think that education should be *understood* as such a process or, even worse, should be *modeled* as such a process. (Biesta, 2014, p. 146, emphasis in original).

Few processes are as linear and clear-cut as we like to describe them in hindsight. Instead, they tend to be rather messy, with multiple long, short, and sometimes parallel and contradictory processes happening (cf. Hallin, 2015). Educational processes always include a measure of unpredictability, and if you eliminate this you also eliminate learning. To learn to cope with the unpredictable and unknown is a recognized quality of learning in visual art: "Learners are encouraged to progressively extend the arena of possibilities within which they operate, not to seek enduring solutions or answers but to open up unfamiliar territory and new ideas" (Danvers, 2003, p. 50; cf. Austerlitz et al, 2008; Edström, 2008a, b, 2015). Drawing on our own experiences as artists, we sometimes use "tricks" to provoke a working process in order to see our work from a different angle. Such provocations can be described as destabilizations that rattle the process, creating movement (cf. Akama, Pink & Sumartojo, 2018; Edström, 2015). You may invite something unexpected into the process for varying reasons. Maybe you just want to be surprised,

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or maybe you are stuck, have a deadline approaching and need to get “unstuck” for that reason. To provoke a working process means creating a situation that enables destabilization; however, there is no guarantee that this will happen, and the result of such a provocation is per definition unknown. We think of this as a kind of method for creating movement but without the connotations of causality that usually come with the concept. Instead, this method embraces risk and unpredictability.

The course we were engaged in, gave the students space to work for an extended period of time. This would also be an opportunity for the students to experience the unpredictable and unknown, as described. With this in mind, we designed a four-week course segment (a long time in this particular educational context) based on provocation of movement. Movement can be provoked in many ways - our choice was through shifts of media. Media are by no means neutral or passive (cf. Barad, 2007; Law, 2004) and to shift media during an artistic work process is a common method among artists to provoke the process. We used this as a starting point for our course design. The students would work with one 3D form through three different media - cardboard, sketching and Minecraft. The challenge was to work the whole time, putting process before product. The three media offer different ways of experiencing 3D. The first way, building a 3D form out of recycled cardboard, is predominantly a bodily experience. Cardboard as a medium is relatively slow. It puts up a certain physical resistance, giving the student time to become acquainted with the task while working. The second medium, sketching, offers a considerably faster experience. Most students have previous experiences of sketching from school, and they tend to regard sketching as something you do in 2D with pencil and paper. We made no such delimitations, and the students could choose material freely. However, we set a minimum limit of 20 sketches to emphasize the plurality of sketching. The third medium, Minecraft, is about virtually experiencing 3D. Minecraft is a fast medium but, in contrast to the other two media, Minecraft offers a predesigned world that features building blocks (see www.minecraft.net/en-us/). Every media shift was introduced by us, and a feedback seminar in relation to this was held where the students discussed their work in progress and working processes. Three literature seminars were also held during the working process, and the readings for the first seminar served as a starting point for the work. Thereafter the students chose whether or not to incorporate their readings into their work. The working process implied a high degree of self-direction, which confronted the students with their own ways of working and prompted them to ask questions such as, what should I do when I get stuck? (a frequent issue).

The students kept journals where they documented and reflected on their work processes in writing and photography.

Nyrnes (2012) addresses the movement between different media during aesthetic working processes while analyzing the working process of her father, who was a sculptor, using the rhetorical *topoi* concept. He moved between three different rooms, or *topoi*, while working: the sketching board, the reading corner, and the workshop. To summarize, Nyrnes equates her father's working process with that of a researcher, and developed the *topoi* concept into a knowledge topology. Moving between these three different *topoi* is as central to Nyrnes' topology as it is to our course design. However, while the time for the shifts between media is part our design, Nyrnes' topology presupposes self-directed movement between the *topoi*. Our main focus is also on the shifts between the *topoi*, while Nyrnes focuses on the qualities of the actual *topoi*. But what actually happens in the shifts between media? We decided to study the students' working processes to determine what happens in terms of movement during the shifts between, but also within, the media. Empirical research on qualities of artistic working processes is sparse, and therefore the overall aim of the study is to articulate this and thus contribute to the understanding of such qualities within an educational context.

2. Method and analysis

The design of the study relates to a phenomenographic view of knowledge. Phenomenography defines learning as a qualitative change in the relation between the subject and the experienced object (Johansson, Marton & Svensson, 1985; Marton, 1995; Marton & Booth, 1997; Marton, Dahlgren, Svensson & Säljö, 1977; Svensson, 1984, 1997). Phenomenographic research focuses on variations in peoples' experiences of a phenomenon, and the variation in these experiences is seen as a condition for learning. Variation theory, a more didactic research approach with phenomenographic roots, focuses on experiences of variations in education contexts (e.g. Bowden & Marton, 1988). However, the tendency to define one correct variation that should be taught contradicts our understanding of the artistic work process. We see the actual exploring of possible variations, and the possibly unknown outcome of this, as a quality of learning (cf. Linder & Marshall, 2003). Thus, even if we use variations in a didactic sense, we prefer to relate to the phenomenographic origin. Also, the phenomenographic approach is used as a "tool" to gain access to qualities of the students' working processes. Thus, the actual conceptions are not the object of study, as they would be in a more orthodox phenomenographic study (as defined by Marton, 1981).

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The students' journals constitute the material for this study. We collected material during three years, but ended up using material from only two years (38 students in total). We made the decision not to include the third year because we had reached a point where we considered the results stable. The students were all in their first term of the art teacher's program. Their backgrounds in art vary from secondary school to art academy level. Using students' journals as material means basing the study on the students' own experiences and conceptions. It would also be possible to analyze the actual narratives, or see them as a fourth medium. However, to study the shifts you need to be able to discern them. Keeping a journal is so intertwined in the process that the shifts between the journal as a medium and another media would be nearly impossible to discern. With this stated, the journals would definitely make interesting research objects for a future study.

The material was analyzed by means of contextual analysis (Svensson, 1976, 1986, 2005, 2016). Contextual analysis as a methodology is epistemologically intimately related to phenomenography, but it does not share the phenomenographic limitations when it comes to objects of study. Contextual analysis is open to varying theoretical approaches and objects of study. In a contextual analysis, the object of study/phenomenon is discerned within a context. The phenomenon is treated as a whole and parts are discerned within this whole. The parts are seen as internally related, and thus they cannot be studied isolated from each other. This internal relationship between part and whole is central on all levels of the analysis. The results consist of what prove to be the most significant meanings of the parts and relations in the analysis. In the context of this study, the phenomenon studied is delimited to movement within the students' working processes and the wider context of the course segment. Reading the students' journals, we highlighted significant movements within each working process. The movements were interpreted in relation to each other within the delimited context of each individual's working process. Our interpretations corresponded concerning the directions of the movements. Only in a few cases did they differ in assessment of the degree of an individual movement. For us, this indicates a shared, but not previously articulated, context-specific competency that was verbalized in the analysis process.

The study was conducted in line with the Swedish Research Council's ethical guidelines (2017). Conducting a study in the context of one's own teaching practice means a high degree of entanglement. We see this entanglement as a condition for an in-depth analysis of the students' working processes in their contexts rather than a problem of (a nonexistent) neutrality (cf. Kindon, Pain & Kesby, 2007; Law, 2004).

3. Results part I – movement directions and patterns

The analysis was conducted in two steps. In this first part, four significant directions in the students' movements were discerned. A metaphor is used to describe the character of these four directions: *swimming in calm waters*, *diving deep*, *wading in shallow waters*, and *staying on dry land*. The first direction, *swimming in calm waters*, implies working comfortably and without much friction or resistance. The student relates to the assignment in a “safe” way, completing the task and passing the exam. A quotation from one of the student journals illustrates this. The quotation also shows how the assignment initially is conceived as depicting reality (a common view that usually changes in time):

I'm making good progress [with cardboard building]... Everything went well and it turned out just as I wanted. I managed to make it look real, or close enough anyway. I kept my time plan and I didn't run into any major problems or obstacles along the way. (Student 14)

Diving deep is about deliberately taking on friction and resistance instead of avoiding it. To dare to start something without knowing exactly what the outcome will be. This approach is exemplified in this journal quotation:

After making lots of sketches of my [cardboard] shape I felt a bit like I got stuck. I asked my friends to position the shape in front of me from an angle I had not yet sketched. This created new and interesting angles that I had never come up with myself. (Student M)

Wading in shallow waters implies an act of simplification, trying to circumvent obstacles and resistance. The following journal quotation shows the most commonly described circumvention, which is to adjust the visual expression of the initial cardboard construction so that it corresponds with the constraining building block aesthetics of Minecraft (according to most students). As the quotation shows, this conception is, in most cases, not based on first-hand experience:

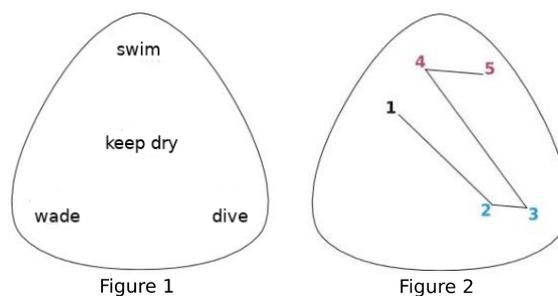
I'm glad I changed the shape of my [cardboard] build, since I can't help thinking that it has to be possible to construct in Minecraft as well. Although I have never worked with Minecraft and I can't really say how it works, but better safe than sorry. (Student 16)

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Staying on dry land indicates a more passive avoidance of obstacles and resistance. Compared to the students *wading in shallow waters*, these students move as little as possible and keep their involvement in the process to a minimum. In some cases, it is simply about trying to put as little energy into the process as possible, but in some cases, other factors play a part. In this journal quotation, it is self-criticism that stops the student:

I finished the same day I started [the cardboard construction] because that's how I work, so I don't have to work with the same shape too long and then start to doubt my creation... I finished all my sketches in thirty minutes... I quickly felt satisfied [with the Minecraft construction] and decided to go home. I didn't want to overdo it, and it felt like the right decision. (Student 1)

The swim-dive-wade-keep dry metaphor evolved during the analysis process as a way to articulate what was discerned in the material. Figure 1 below shows its basic principles. It should be perceived like a map, where staying on dry land constitutes the highest point of a topography. The students moved in relation to the four aspects of the metaphor during their work processes. These movements were visualized as an individual pattern for each student. Through them, relations that otherwise would have been hard to discern and articulate became visible. In this sense, the visualizations not only communicate the results, they also played an active part in the analysis process (cf. Law, 2004; Ruppert, 2016). Figure 2 below shows an example of a movement pattern (Student 12).



The different colors of the numbers indicate the three media: black represents cardboard, blue sketching, and red Minecraft. In this particular example, the movement in the shifts between media is clearly visible. The student starts the process by *swimming in calm waters* while constructing a shape in cardboard. When switching over to sketching s/he is *diving deep*. The student stays deep until the shift over to Minecraft, when s/he goes back to *swimming* and stays there during this last phase of the process. The length of a line between two points and the closeness of the points to

the four aspects are indications of the degree of contrast between before and after. The corners of the visualization are rounded in order to soften the static triangular shape and to indicate a continuous motion similar to the way a hockey rink allows a puck to move on. When analyzing the individual movement patterns, five major characteristics were discerned.

3.1 Moving between swimming in calm waters and diving deep

This category is the most extensive when it comes to the number of students included. Fifteen students move in a clear pattern between *swimming* and *diving*. Fourteen of these oscillate between the two aspects. The remaining student starts off *swimming in calm waters* and gradually moves toward *diving deep* as the process progresses. In time, four more students also move their process as a whole toward *diving deep* while oscillating. An example of this with Student 8 is shown in figure 3 below (Student 12, figure 2 above, also belongs here).

3.2 Swimming in calm waters

Eleven students are included in this category. They all move within the upper half of the visualization. The patterns may spread over this area, as in the example below (figure 4), or stay within a smaller part. The moving patterns show moderate movements and there are no big leaps from one extreme to the other. Moderation signifies this category well – the students swim along relatively calm and safe without notable excesses. An example of this with Student M is shown in figure 4.

3.3 Staying on dry land

This category includes seven students, whose movements stay close to the middle of the visualization (movement patterns in other categories may at some point touch upon *dry land* without belonging to this category as a whole). The patterns indicate very little movement. We interpret these patterns as evasive, avoiding engagement for different reasons, and therefore this category represents an almost non-existent process. At the time of writing, we notice that all students included in this category also dropped out of their studies. An example of this with Student 3 is shown in figure 5.

3.4 Moving between swimming in calm waters and wading in shallow waters

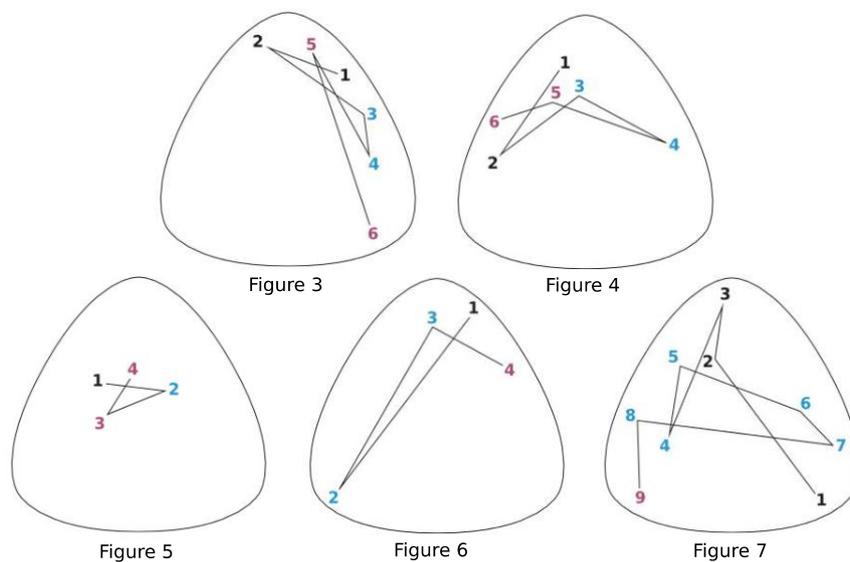
Three students belong to this category, showing movements between *swimming* and *wading*. Categories 4 and 5 are the two categories where the students clearly use *wading in shallow waters*,

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trying to outsmart the assignment and make their processes smoother. An example of this with Student 2 is shown in figure 6.

3.5 Moving between swimming in calm waters, diving deep and wading in shallow waters

Compared to Category 4, the two students belonging to this category make use of all three corners of the visualization, including *diving deep*. The movements here generally also consist of bigger leaps. The movement pattern of Student 13 (figure 7) does not include the aspect of *dry land* while the other student in this category does.



4. Results, part II – movement between and within media

This second part of the results uses the students' movement patterns as a base. Category 3, *staying on dry land*, was excluded due to its general lack of movement.

4.1 Between media

Movements in the shift from one medium to another implies that the shift provokes the student to move. Two journal quotations exemplify such movements: the first relates to the shift from cardboard to sketching and the other from sketching to Minecraft:

Initially I related rather uniformly to the shape but moving from 3D to 2D gave me a different perception and in a way also a constraint. [It was] an exciting shift where I was able to relate to the shape with a different view and let it transform into something new. (Student 17)

While working [in Minecraft] I was all of a sudden constricted to square blocks but at the same time a whole new world opened up with different preconditions. This became a first breaking point [in my process]. I had to let go of the mode of expression and focus instead on the visual interpretation. (Student 9)

Both of these quotations imply a movement interpreted as moving toward *diving deep*. The next quotation exemplifies how the shift from sketching to Minecraft provoked a move in the opposite direction, toward *swimming*:

Working in Minecraft was limited because it is like building with Lego in a virtual space. Creating soft, rounded shapes is a problem, or it was to me. So I had to straighten all my curves and work from the best of my knowledge with the technique. Compared to building in cardboard, it's like night and day. Building in cardboard allowed different shapes and you could bend, make rounded shapes and it was easier to control your expression since it was analogue. (Student A)

A comparison between the two shifts embraced by the study shows the following:

First shift (from cardboard to sketching): 18 students move, 13 stand still.

Second shift (from sketching to Minecraft): all students move.

This is interesting, but it does not reveal the character of the movements. From where, and toward what, is the student moving? Is it a larger or smaller movement? The movements related to the two shifts of media in each individual pattern, were isolated and compiled into two new visualizations (figures 8 and 9). One arrow represents one movement, and the length of the arrow implies the degree of movement. Lack of movement was indicated with a dot. The arrows tell us not only whether or not the students moved, and if so, in which direction they moved in, but also where they have moved from and moved toward - these relations would have been very difficult to discern without the visualizations.

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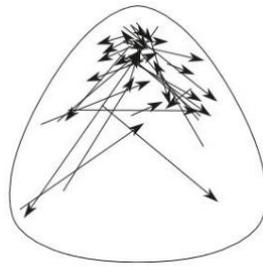


Figure 8: first shift

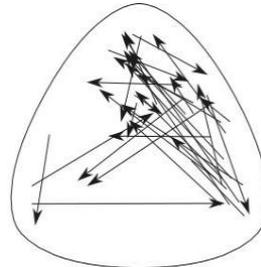


Figure 9: second shift

The visualization of the first shift shows a concentration of movement within the *swimming* area. Most of the movements are moderate. Those that do not move stand still within the same area. The second shift is of a different character. The majority of the arrows indicate a movement from *diving deep* toward *swimming in calm waters*. The fact that all students move in this second shift takes on a different meaning when the relation between before and after is visualized, showing that the majority of the students move from *diving* toward a safer *swimming* position. Also, the arrows are longer than in the first shift, indicating a higher degree of contrast between before and after.

4.2 Within media

Movements within a medium indicate that the student has provoked movement, for example, by changing from pencil to ink brush or from 2D to 3D while sketching. Other examples include hands-on shifts of perspective, like turning the cardboard shape upside down while depicting it or leaving the ground in Minecraft and building something up in the air instead. Changing materials during an artistic work process is a common method among artists to change perspective. Thus, a change in material may have a different meaning to a student with experience from art academy level than it would have for someone with a secondary school art background. Journal quotations will exemplify movements within media. Student K reflects in hindsight over the cardboard construction, where s/he moved towards *wading in shallow waters* (similar to Student 16, quoted earlier):

I have to say, that knowing that this was going to be shaped in Minecraft had an impact on my construction in cardboard which was the initial step. I had no previous experience of Minecraft and I didn't want to make things unnecessarily complicated. Now I regret I did not experiment until the end [of the process] because Minecraft wasn't as difficult as I thought.
(Student K)

Student M (quoted earlier) exemplified movement within sketching through a hands-on shift of perspective. Student 8 gets bored and changes material while sketching which provokes movement and thus the process gains speed:

Anyhow, I decided to make some sketches with ink instead of pencil [first sketches were in pencil]. The change of materials is in itself a creative development process that adds diversity to my work. The variation makes the assignment more interesting and fun, since the motif is a bit monotonous. (Student 8)

In Minecraft, Student N describes how s/he first made a copy of the shape s/he had been working on. As the work proceeds, Minecraft's characteristics prompt the student to leave the depicted perspective. It starts out as play, but later develops into the main construction:

It didn't take long after I started the serious work [the copy/depiction] until I left my construction and started to dig tunnels underground. It started with a deep hole, I filled the hole with dynamite and blew away. I kept blowing until I came up with the idea to blow a tunnel between my build and someone else's. Finally I had created a tunnel from mine to x's and y's constructions. (Student N)

A comparison between movements within the three different media shows the following:

Cardboard: 19 students move, 3 stand still.

Sketching: 28 students move, 3 stand still.

Minecraft: 10 students move, 21 stand still.

The most striking thing here is that almost everyone moves within sketching, and many stand still within Minecraft. Visualizations of movements within the media (figures 10, 11 and 12) show that *swimming in calm waters* dominates within cardboard. Those that stand still are positioned within the area, and most arrows show moderate movements while some arrows go down to the left corner, *wading in shallow waters*. Seen as a whole, these arrows occur more frequently within cardboard. However, it is worth noting that four out of five of these movements are related to Minecraft (students trying to smooth the way for the upcoming Minecraft build, see Students K and 16 quoted earlier). Within sketching, a clear majority move between *swimming* and *diving*. Within Minecraft the arrows are fewer and shorter, and mostly within *swimming*.

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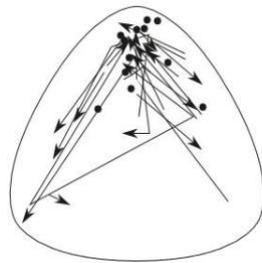


Figure 10: cardboard

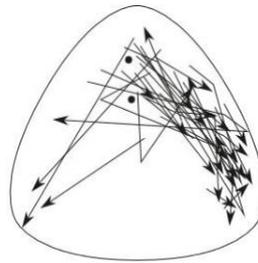


Figure 11: sketching

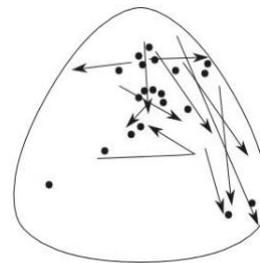


Figure 12: Minecraft

5. Discussion

We set out to study the students' working processes guided by the question what happens in terms of movement in the shifts between and within the media. Movement within a medium occurred more frequently than we initially expected, and was as relevant for the understanding of the processes as the movements provoked by the shifts. Here we discuss what we view as the main aspects of the results.

5.1 *Being in motion*

The results show some students taking big leaps while others move moderately or not at all. A student that take big leaps would experience more contrast while moving between two aspects than a student that moves within one aspect. We do not see extensive movements as a condition for a working process; however, being in motion is essential. To stop moving briefly may well be part of a process but standing still is a contradiction. It may be tempting to interpret *diving deep*, for example, as better than *staying on dry land*. Instead, we suggest that the experienced variation between two aspects determines the possible value of a movement rather than the specific characteristics of an aspect. For example, standing still at *diving deep* would be undesirable and most likely an unbearable experience while a movement from *diving deep* toward *wading in shallow waters* may provoke movement if the leap is extensive enough to create a significant contrast between before and after. The individual context determines the possible value of a movement. Consequently, the results of this study make no claim to be valid outside the present context. However, the method of including several media in a working process is transferable to other contexts and frequently used, but maybe rarely reflected upon as such. To read a book, write a reflection based on the reading, and discuss the book in class is one example of this, as well as Nyernes' knowledge topology mentioned before (Nyernes, 2012). In terms of phenomenography, this way of working varies the experience of a phenomenon, which is a condition for learning (e.g. Marton & Booth, 1997).

5.2 Monotony and repetition

Of the three media, sketching is the medium with the most movement within the single medium. All students moved significantly, and it is here that we see the biggest leaps within the study. Most students got bored by the repetition of sketching, but the demand of a minimum of 20 sketches made them work in spite of this. The previously quoted Students 8 and M exemplified how the monotonous, repeated sketching prompted them to provoke the process and regain momentum. A majority of the students describe similar situations related to sketching, which explains a large number of the movements toward *diving deep*. Thus, being bored worked brilliantly as a provocateur of movement. Repetition in itself has didactic potential. A repetitive or serial way of working brings subtle differences between the parts to the fore. The discerning of these variations holds a learning quality and may function as a type of feedback during the working process. This is discussed by Nyernes (2013, p. 34, emphasis in original):

For the most part, we think of the core of art as being a unique and singular expression. However, if art is unique, the series should not be understood as being in opposition to one of a kind; rather it represents a new way of considering plurality. The series highlights the change and plurality inscribed in objects that simultaneously resemble one another and yet are different. In the series, evaluation is linked to the form of the art object itself. Evaluation is inscribed in both the production and the reception of art. [...] In the series, pupils *experience* the differences. Artistic work implies specificity and singularity. However, in order to develop distinctions, one has to concentrate on the *small differences*. This means that one makes 'similar' objects; and that the interesting aspects are the differences *between* the objects – not the features that make the objects resemble each other. One might also say that the series serves the difference, and highlights its own empty space, the space between the objects. Art didactics is in this row of concrete examples, incorporated into their very forms.

In terms of phenomenography, this discerning of differences exemplifies an active generation and exploration of various ways to experience a phenomenon (cf. Linder & Marshall, 2003; Edström, 2008b). The sketching processes in the present study are examples of this, as is the course design as a whole. Experiencing a 3D shape transform through three different media is a serial way of working where the discerning of differences opens up for comparison. The comparing of discerned differences are frequently seen in the students' journals, and it clearly helps the students articulate their process and move on.

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5.3 Programmed world views

When shifting to Minecraft, most students move from *diving deep* to the safer area of *swimming in calm waters*. After reaching the *swimming* area, the majority of the students stand still. Minecraft is the medium where *standing still* occurs most frequently. One may argue that few of the students had any previous, hands-on experiences of Minecraft, but the basics of Minecraft are easy to learn even with no prior experience. In only a couple hours, the students learned how to orientate themselves in and interact with the virtual world (cf. Callaghan, 2016). Thus, we do not see technical difficulties being the reason why so many students stand still. Rather, we see the predesigned world of Minecraft as the main reason. For example, Students 9 and A (previously quoted) described how the Lego-like construction blocks of Minecraft constrained the visual expressions of their cardboard constructions, and how Minecraft's aesthetics overrode the desired visual expression. Most students tended to adjust accordingly, few took initiative to find a solution in favor of their desired expression. Thus, the predesigned context constrains the students' work; they get stuck, so to speak, in the visuality of Minecraft. This relates to Manovich (2013, 2014) who describes software as the new media of our time. The qualities of the digital are not in the ones and zeros but rather lie in the software, where the digital is transformed into an interface that make sense to us: "Like the alphabet, mathematics, the printing press, combustion engine, electricity, and integrated circuits, software re-adjusts and re-shapes everything it is applied to – or at least, it has a potential to do this" (Manovich, 2014, s. 80). Considering the extensive digitalization of everyday life, a growing part of our experiences of the world are defined by software, but the awareness of this is startlingly low. In other words, the students experiences of Minecraft's virtual reality are defined by the software developers' world views. Their wiggle room is structured and delimited by a programmer, even if Minecraft's world seems to be a place of endless possibilities (several games, including Minecraft, allows the user to influence the program, e.g. through the use of mods, but this possibility was not used by our students). Someone has designed the possibilities offered and eliminated problems that the users may encounter. In this way, Minecraft restricts the students' working processes, but it works well as a variation of experiencing 3D and as a provocateur of movement in the second shift of media.

5.4 Digital reflection

To specifically study digital media was never our intention. However, Minecraft came to play a bigger role in the results than expected, and we would like to comment on digital media in and today's digitalization of educational contexts. We rarely hear anyone talk about analogue media today, and when it comes to digital media it is often spoken of in terms borrowed from an information technology discourse. This view tends to be applied to learning as well, which reduces learning to the transfer of information. Learning as well as medium are seen as something static and context-neutral, which is problematic (cf. Biesta, 2014). Instead, we propose a shift of focus from medium to context, of which the digital is treated as a part. Pink et al (2016, p. 19) call this *non-digital-centric-ness* - to de-center the digital if you want to study the digital: "...the idea of studying media in a way that always puts media at the center of analysis would be problematic because it would pay too little attention to the ways in which media are part of wider sets of environments and relations-" Tobin (2015, no pagination) addresses this as well: "[L]et's move away from fixation on the digital – but let us also try to move away from essentializing games as an object of study. To flatten the [game] into an essential digital object is clearly a problem." Our study is one example of this, where the character of Minecraft is discerned only in relation to the other two media, thus illustrating the importance of studying the context in order to discern the specific.

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