

Stina Westerlund

Associate professor (PhD)
Department of Creative Studies
Umeå University
stina.westerlund@umu.se

A ‘reverse’ academic drift?

Changes in Swedish educational Crafts

ABSTRACT

The prerequisites for formal training in Swedish educational Crafts have changed over time under the influence of two long-lasting societal processes: academisation and digitalisation. In different, yet interconnected ways, these processes of change are challenging the materiality, the making and the action-based knowledge that characterise educational Crafts. The paper presents how primary school teachers’ view the influence of academisation and digitalisation in their work and explores the consequences that change processes hold for the teaching practice in Crafts. The study is based on qualitative interviews with Craft teachers whose graduation year was between 1983 and 2021. Theoretically, Craft is considered to be a living ecology in an educational system. In the analysis, academic drift on various levels is combined with media-ecology concepts to clarify the diffusion of academisation and digitalisation in both time and space. The findings show academic drift leading to increased text-based knowledge production on several levels, yet also an unexpected weakening of action-based knowledge in Crafts. Balancing student and staff drift is further shown to result in the avoidance of written text in favour of digital visual, oral and bodily mediations in the production of knowledge. The study’s overall results question an ongoing ‘reverse’ academic drift and what is at stake in the Crafts ecology’s efforts to achieve balance.

Keywords:

Craft education, sloyd, digitalisation, educational ecology, primary school

INTRODUCTION

This paper deals with the academisation and digitalisation of education focusing on educational Crafts (Sw. slöjd) and how new conditions for the subject are being created in Swedish primary schools. Academisation is an international phenomenon noticed in Crafts research (Borg, 2016; Holmberg, 2009; Kokko, 2022; Nygren-Landgårds, 2021; Skjelbred & Borgen, 2023). Confidence in research’s ability to strengthen educational practices is firmly established in Sweden, as demonstrated by government investigations and associated reforms since the 1940s. In the early reform proposals there were also pressures for Crafts to become more theoretical in line with other school subjects (Erixon & Wiklund, 2023). The academisation of Crafts was consolidated in the 1970s when teacher education became

integrated into the higher education structure. Sweden was also early to provide in legislation in 2010 that all education should rest on scientific foundation and proven experience (SFS 2010:800).

Crafts is distinctive for the action-based knowledge that develops in actions and making with materials (Andersson, 2020). There is a difficulty to claim Crafts own form of action-based knowledge when higher education structures are based on scientific disciplines in which epistemic and text-based forms of knowledge dominate (Erixon et al., 2023). The belief that academisation and a strengthened scientific basis will guarantee increased quality on all levels of education has been, and remains, strong. Still, Borg (2021) argues that, despite an increase in the academic level, craftsmanship has been made invisible in Crafts research. The tendency relates to Crafts’ particular form of knowledge and the lack of a specific academic discipline, which is the cause of a troublesome gap (Johansson, 2018).

Parallel to academisation of education, the digitalisation of society has made digital elements to a crucial part of teachers’ day-to-day work. The growing interest in new educational technologies has resulted in several Swedish state initiatives to introduce digital technology and to build teachers’ and students’ digital competency (Fransson et al., 2018). Today, digital technology forms an integrated part of teaching (Hallsén, 2013; Selwyn, 2017), also in Crafts.

Academisation and digitalisation, as societal processes, permeating education, simultaneously offers new opportunities while also challenging the manual and tactile work with materials and the forms of transmission of action-based knowledge in Crafts. Digranes et al. (2021) summarise the encounter between the digital and the material in Crafts as “coexistence and collisions”, which also applies to the academisation of Crafts education. Academisation and digitalisation are long-running processes that occur gradually. Teachers’ viewpoints and experiences from teaching Crafts are therefore crucial while mapping the consequences of the changes and what is becoming lost and what is being gained over time.

Aim and research questions

The aim of the study is to explore the ways in which the academisation and digitalisation influences, interact and creates new conditions for educational Crafts in primary school. Two research questions guide the study:

- 1) How do teachers perceive and describe academisation and digitalisation in relation to the Crafts subject and their teaching?
- 2) Which consequences does academisation influenced by digitalisation hold for the teaching practice in Crafts?

THEORETICAL FRAMEWORK

The study is based on an educational ecology perspective (Goodlad, 1997), in the sense that Crafts is considered an open and dynamic ecosystem, here referred to as a Crafts ecology, that exists and develops in interaction with surrounding parts in the education system.

The study draws on Kyvik’s (2007) development of the overall concept “academic drift” related to various levels of the education system. Academic drift is driven by the pursuit of status and chain reactions can occur when different levels of the system affect each other. “Policy drift” refers to development and change initiated by government agencies involving a gradual shift in the focus and purpose for education. “Programme drift” describes teacher education and primary schools’ drift towards academic values and practices, founded in professionalisation through the scientificisation of the knowledge and establishment of structures for strengthened research capability. “Staff drift”, on one hand, in this paper refers to Crafts teachers initiating elements of academisation in their teaching while, on the other, “student drift” as students’ initiatives in an academisation process can act to drive the aspirations of teachers.

The Swedish School Act’s (SFS 2010:800) call for academisation through strengthened requirements for education to be based on scientific foundations and proven experience. With declining student results in Swedish primary school and neoliberal demands for effectiveness, the legislation exemplify an “epistemic drift” (Elzinga, 1997), that is, policy-driven academisation in terms of externally

regulated research associated with demands for accountability. This is relevant against the background of Crafts’ action-based form of knowledge which has been difficult to assert within the university structure while teacher education generally has come to be aligned. Saugstad (2002) argues that action-based knowledge given its context dependence and concreteness, is devalued in the contemporary understanding by being reduced to technology and hence perceived as knowledge void and bodily anchored, even though it constitutes a particular form of knowledge with its theory integrated into practice. Policy, epistemic and programme drift in teacher education and primary school puts Crafts under the pressure of change that teachers relate to and consider in their teaching and to which students can react.

Academic drift entails certain mediations and forms of knowledge to appear at the expense of others. Yet, digitalisation of education presupposes increased digital mediation of knowledge. According to the media ecology understanding (McLuhan, 1964), media is never neutral. Digital media are thus not innocent, but influence understandings and knowledge production in Crafts. New digital mediating tools are not just an addition to already existing ones, instead a new medium exposes older media to pressure until new forms and positions are found in the ecology. These periods of “coevolution” (Scolari, 2012) are key to how different media cooperate and affects each other, and thereby contributes to change.

METHODS

This study is based on qualitative interviews with eight Crafts teachers in primary school. The participants were selected through a combination of chain selection (Bryman, 2018) and volunteer sampling (Cohen, Manion & Morrison, 2010). To reach a variety (Esiasson et al., 2017), participants with a range in graduation year were selected. An overview of the data is shown in Table 1.

The interviews were semi-structured and mainly consisted of open questions. Academisation, digitalisation and development efforts or change constituted the main interview themes the teachers were asked to relate to and exemplify based on their teaching and perception of Crafts, and to their teacher training. Further questions were also asked about the consequences of various changes.

TABLE 1. Overview of collected interview data.

TEACHER	DEGREE YEAR	MATERIAL ORIENTATION	DATE	INTERVIEW LENGTH
<i>Andreas</i>	2013	Wood and metal work	4 March 2021	65 min
<i>Barbro</i>	1983	Textile work	11 February 2021	59 min
<i>David</i>	1999	Wood and metal work	16 June 2022	55 min
<i>Elin</i>	2021	Textile work	26 August 2022	53 min
<i>Margareta</i>	1992	Textile work	17 February 2021	59 min
<i>Mats</i>	2020	Wood and metal work	15 April 2022	60 min
<i>Ulrica</i>	1995	Textile work	25 January 2021	60 min
<i>Olof</i>	1999	Wood and metal work	15 June 2022	54 min

The transcribed interviews were analysed in two stages. The first stage, based on thematic analysis (Bryman, 2018) over several steps, concentrated the first research question. After an open coding, themes were conceptualised to clarify the content. Twelve initial themes were broken down to form six themes, including change over time as well as interesting differences in the statements provided by

teachers trained earlier or later. For example, the theme *Increasingly theorised Crafts knowledge* showed significant differences regarding how the teachers related to written documentation and reflection. To deal with the complexity in the ecological approach and to visualise the connections between the academic drift on different levels and coevolution among mediating tools in use, in the second stage the analysis was extended and directed to the second research question. Ecology and system theories share the non-linear and anti-reductionistic approach and have informed each other (Logan, 2015). The analysis hence included influences from “human system inquiry” (Banathy & Jenlink, 2013) applicable to educational contexts. Crafts ecology is thereby defined as a “purposeful and purpose-seeking” system, and the view provide insights into teachers’ “ways of knowing, thinking, and reasoning” (Banathy & Jenlink, 2013, p. 49). This stage entailed constructing a system map (see Figure 1.) with feedback loops to visualise the main structures and the interconnectedness of elements in data, providing a “sense of the system” (Sevaldson, 2017, p. 8). Feedback loops links chains of variables together and are either reinforcing loops (marked R), moving the system and thereby functioning as drivers of adjustments and change or balancing loops (marked B) that preserve stability (cf. Sedlacko et al., 2014).

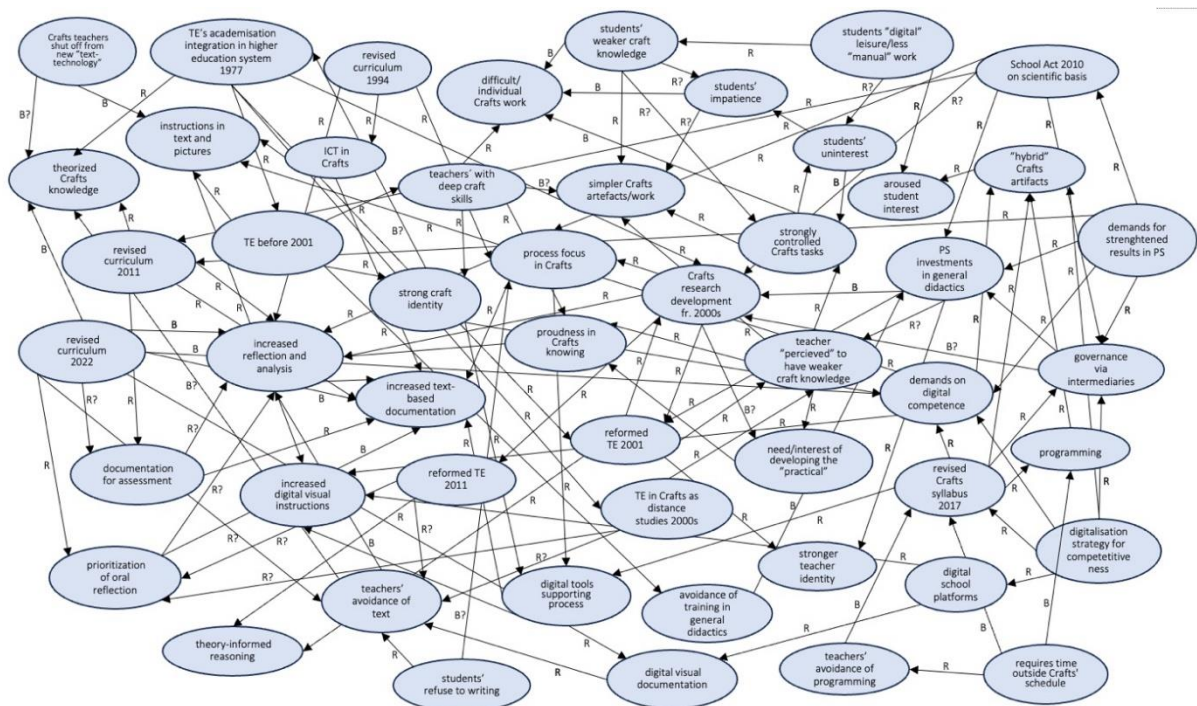


FIGURE 1. Initial system map showing interconnections in data. Abbreviations are used for teacher education (TE) and primary school (PS).

RESULTS

In this section, a segment with three interconnected feedback loops showing layers in the initial system map is used to exemplify the results. Selected excerpts from thematised data form a narrative illustrating changes in Crafts (see Figure 2. that was further developed from Figure 1.).

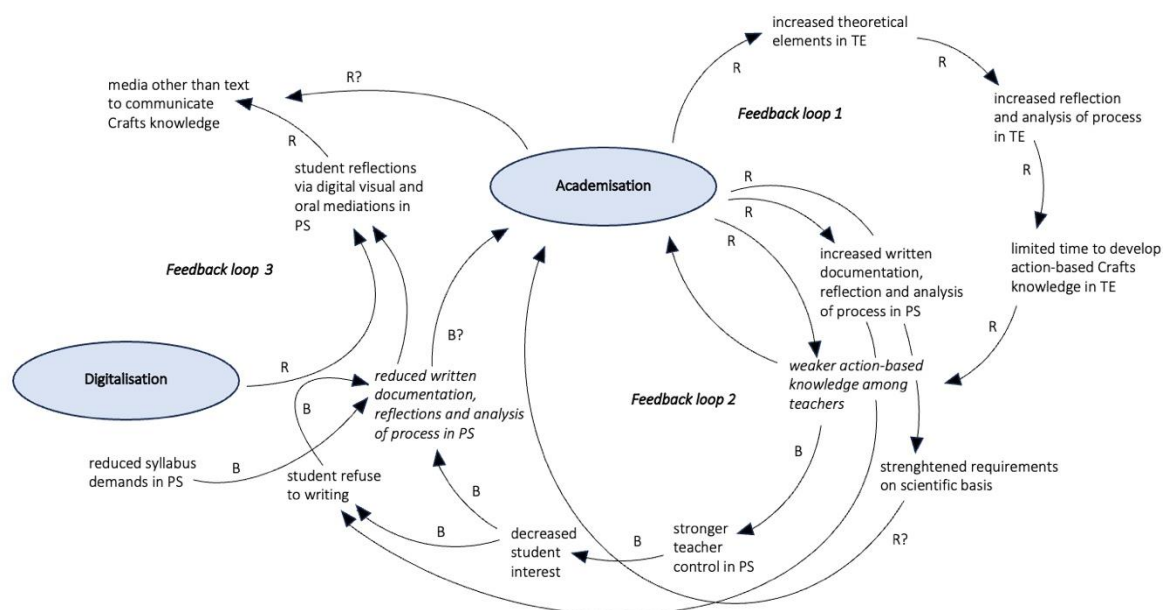


FIGURE 2. Three feedback loops showing changes in the Crafts ecology.

Feedback loop 1: Academisation of Crafts teacher education

Academisation of Crafts in teacher education is prominent in this reinforcing feedback loop. The teachers who graduated earlier describe few yet very theoretical and heavy elements of pedagogy in an otherwise mainly action-based education. This contrasted with other parts of the training that were action-based, with a large proportion of oral reports. They noted current students' extensive report writing in the training, i.e., that knowledge in the profession is nowadays developed through writing. There is also a tendency for the teachers who graduated later to relate to scientific theories to a greater extent when describing their teaching. It is considered beneficial to be able to "back it up" and show interconnections between teaching and the scientific basis (Anders grad. 2013). The earlier graduates instead noted that proven experience has probably formed the development of their teaching. The lowered requirements for prior knowledge in Crafts to be admitted to the teacher education programme and the reduced time during training to develop action-based knowledge seem to have led to a somewhat weaker subject knowledge among the later graduated. This manifests in uncertainty about introducing certain craft techniques in teaching. Along this line, later graduated teachers appear to feel more limited in their teaching of Crafts, but more confident in how to theorise and conceptualise the learning that takes place.

Academic drift appears as a program drift (Kyvik, 2007) that aims for increased quality and stronger research capability, but unexpectedly seems to result in weakened action-based knowledge among the later graduated teachers. Policy drift since the 1970s, the integration of teacher education into the university structure, and the reforms of teacher education aimed at strengthening research capability that followed have all had an impact. Academisation in this loop is expressed as an increase in text-based development of knowledge and a more prominent connection to scientific theories as the basis for teaching.

Feedback loop 2: Academisation of Crafts in primary school

Although Crafts education in primary school has also experienced academisation, this reinforcing feedback loop differs from the loop for teacher education. Academisation appears as consisting of three parts: text-based instruction, theorising through written documentation, and a Crafts scientific basis.

The previously educated teachers mentioned text-based instructions as a theoretical element that students encounter in Crafts. Over time, time-consuming manual texting and self-drawn pictures have been replaced by digitally produced instructions, simplifying the work, and enabling the inclusion

of photos and links to video clips. Action-based school subjects not being allowed to use the copier when it was first introduced is described as “a strange uphill climb in Crafts, towards the computers” (Barbro grad. 1983). Digitised instructions were viewed as superior to practical demonstrations due to the ability to repeat, convey details and arouse student interest, and are thereby described as “a revolution” in Crafts (Ulrica grad. 1995). Later graduated teachers revealed a somewhat opposite attitude by favouring practical demonstrations, considered to be better and more expedient.

Earlier graduated teachers gave a consistent picture that their teaching had become more theoretical by increased elements of written documentation. On the one hand, this has happened at a “crazy pace” and to an extent that “planning, evaluation and assessment has become a kind of theory” (Ulrica grad. 1995). On the other hand, reflection is strongly highlighted and valued for Crafts knowledge to “become experiential and something deeper” (Martin grad. 1999). Curriculum regulations are perceived as challenging the balance between the theoretical and action-based parts of Crafts. More recently graduated teachers seemed to be holding off on introducing structures for students’ documentary work and tend to avoid written documentation and reflections. Oral reporting and reflections to “squeeze out more” by follow-up questions are in favour to “get rid of” the writing, dismissed as an easy way to tick off the curriculum requirements (Elin grad. 2021).

The scientific basis of Crafts is something the teachers find difficult to formulate, as if it was never defined and therefore develops with each teacher through a bricolage of pieces, “like a backwards scientific foundation” (Olof grad. 1999). Craft pedagogy, making and the action-based knowledge are mentioned as a conceivable content, although that scientific basis in schools’ practice mostly appears as general pedagogy. Consequently, mandatory in-service training can be difficult for Crafts teachers to apply. Alignment in national efforts to strengthen scientific basis in primary schools appears to add to the fact that local school management faces difficulties in handling subjects with a different epistemology. Research-based development in educational Crafts then risks being left up to individual teachers.

The loop for academisation in primary school is an extensive policy drift due to syllabus demands on written documentation, yet also a strong program drift (Kyvik, 2007) to strengthen general pedagogy through efforts with support from intermediary actors, characteristic for last decades (Sundberg & Adolfsson, 2015). Also evident is a balancing loop in a reverse staff drift (Kyvik, 2007), i.e., later graduated teachers’ avoidance of written instructions and documentations in an act to restore balance in the Crafts ecology. This ‘reverse’ staff drift stems from periods of coevolution (Scolari, 2012) when text-based, analogue instructions were decreasing and digital, visually based mediations together with demonstrations of Crafts work based on bodily and oral mediations were putting textual mediations of instruction and documentation under pressure.

Feedback loop 3: Refusal to write and a reversed academic drift

The last feedback loop is a balancing one. Later graduated teachers’ action-based Crafts knowledge seems to be weaker than those who graduated earlier. They appear to be more limited in their teaching, as they expressed to avoid certain techniques and limit students’ options, leading to a lack of motivation. They realised the importance of a more interest-driven teaching, yet giving students greater freedom also means greater difficulty for the teacher. On the contrary, earlier graduated teachers stated that students no longer make as challenging items as before and that dexterity is decreasing. To limit classroom chaos, the degree of difficulty in Crafts has dropped.

The avoidance of text-based instructions and written documentations in favour of digitally mediated visual instructions and practical demonstrations, is central in this loop. Teachers’ state that students have difficulty with persistence, which may explain the reduction of text-based instructions. Later graduated teachers’ choice of oral reporting instead of written documentation seems to depend on students’ resistance; if oral, then no one refuses. The resistance is an expression of student drift (Kyvik, 2007) affecting teachers’ actions. An important reinforcing element in this loop is the new curriculum (SNAE, 2022) in force since July 2022 in which the previous syllabus’ wording on students’ ability to analyse and evaluate work processes has been replaced by the softer wording reflect on.

This loop arises as a balancing reaction to the other loops and is reinforced by changes in the curriculum, indicating a policy drift (Kyvik, 2007). The weaker subject knowledge on the part of both teachers and students seems able to coincide with resistance on the part of the students, which prompts the teachers to negotiate with the students about forms of documentation. Student drift (Kyvik, 2007) is thus becoming a driving force for teachers’ actions in a loop that appears as a ‘reversed’ academic drift.

DISCUSSION

What are the consequences of academisation and digitalisation for educational Crafts? The three feedback loops reveal how on different levels of the education system academic drift is interconnected and the ways the reactions between levels shape the Crafts ecology. The previous movement towards an increase in text-based mediations for developing knowledge in Crafts seems to have slowed down and been balanced by a ‘reverse’ academic drift with strengthened positions for digital visual, oral, and bodily mediations. A finding is that earlier graduated teachers have a greater faith in the text and its memory-supporting ability, attributing it with a higher value and importance as concerns its capacity to develop in-depth Crafts knowledge. Still, they also note that the development has led to an imbalance in Crafts. Later graduated teachers try to rectify this imbalance by avoiding text in favour of other mediations. How can this reversed academic drift and the aversion to text among the later graduated be understood and what are its consequences? It should be recalled that academic drift is also about the pursuit of status, and what gives status can change. To acquire knowledge that is mastered physically, Ekström (2008) argues, in Crafts education means not taking detours but to using the modalities that are best suited, which some of the later graduated teachers refer to. Also, opposition to the written text was connected to an increased focus on assessment, which defines the teaching content in ways that are perceived as not benefitting for the subject and exemplifying the policy-driven academisation that Elzinga (1997) calls epistemic drift. The later graduated were also trained with a different access to digital technologies than their colleagues. Vliege (2018) explored what the changing conditions and digital technologies in education mean and concluded that newcomers have “the opportunity to go on with what really matters, also in unforeseeable and truly new ways” (p. 59), a finding that could apply to the development in Crafts.

Although academisation is traditionally associated with text, but the pressure directed at textual mediations in this study does not necessarily refer to academisation or scientificisation, but instead concerns textual mediations in Crafts per se. This paper’s title suggests a ‘reverse’ academic drift in Crafts ecology, whether this means less academisation in Crafts in primary school or future academisation that better considers Crafts’ action-based knowledge form is a question that remains unsettled.

REFERENCES

- Andersson, J. (2020). *Kommunikation i slöjd och hantverksbaserad undervisning* [Communication in handicraft and craft-based teaching]. [Doctoral dissertation, Göteborgs universitet]. Centrum för utbildningsvetenskap och lärarforskning (CUL).
- Banathy, B. H., & Jenlink, P. M. (2013). Systems inquiry and its application in education. In J. M. Spector, M.D. Merrill, J. Elen, M. J Bishop. *Handbook of research on educational communications and technology* (pp. 37–57). Routledge.
- Borg, K. (2016). Vem har makten och ansvaret för utveckling eller avveckling av ett skolämne? Reformen och förändringar i slöjdläraundervisning och slöjdlärautbildning 1960–2011 [Who has the power and responsibility for development or discontinuation of a school subject? Reforms and changes in the teaching of sloyd teachers and sloyd teacher training 1960–2011]. *Tilde*, 16, 29–86. https://www.umu.se/globalassets/organisation/fakulteter/humfak/institutionen-for-estetiska-amnen-i-lararutbildningen/tilde/rapportserie/tilde_16.pdf
- Borg, K. (2021). Tendenser inom slöjdens forskningsområde [Tendencies within the field of sloyd research]. *Techne Series A*, 28(4), 231–254. <https://doi.org/10.7577/TechneA.4738>
- Bryman, A. (2018). *Samhällsvetenskapliga metoder* [Social research methods]. (3d ed.) Liber.
- Cohen, L., Manion, L., & Morrison, K. (2010). *Research methods in education*. Routledge.
- Digranes, I., Gao, B., Nimkulrat, N., Rissanen, T., & Stenersen, A. L. (2021). Editorial track 6a. Materiality in the Digital Age. *FormAkademisk*, 14(4). <https://doi.org/10.7577/formakademisk.4663>
- Ekström, A. (2008). Kroppsligt lärande i slöjdundervisning [Embodied learning in craft education]. In A-L Rostvall & S. Selander (Eds.), *Design för lärande*. Norstedt.
- Elzinga, A. (1997). The science-society contract in historical transformation: With special reference to 'epistemic drift'. *Social Science Information*, 36(3), 411–445. <https://doi.org/10.1177/053901897036003002>
- Erixon, P-O., Jeansson, Å., Westerlund, S., & Wikberg, S. (2023). Diversification and division – 'academic drift' in Swedish teacher education in the aesthetic school subjects in a new higher education structure, *Education inquiry*, (ahead-of-print), 1–27. <https://doi.org/10.1080/20004508.2023.2213473>
- Erixon, P-O., & Wikberg, S. (2023). Early academic drift in teacher education in the aesthetic school subjects from the 1040s to 1970s – a Swedish case. *Arts Education Policy Review*. <https://doi.org/10.1080/10632913.2023.2225789>
- Esiasson, P., Gilljam, M., Oscarsson, H., Towns, A., & Wängnerud, L. (2017). *Metodpraktikan: Konsten att studera samhälle, individ och marknad* [Method practice: The art of studying society, the individual and the market]. Wolters Kluwer.
- Fransson, G., Lindberg, O. J., Olofsson, A. D. (2018). Adequate digital competence – a closer reading of the new national strategy for digitalization of the schools in Sweden. *Seminar.net: Media technology and lifelong learning*, 14(2), 217–228. <https://doi.org/10.7577/seminar.2982>
- Goodlad, J. I. (1997). *In Praise of Education*. Teachers College Press.
- Hallsén, S. (2013). *Lärautbildning i skolans tjänst?: en policyanalys av statliga argument för förändring* [Teacher education in the service of the school?: A policy analysis of government arguments for change]. [Doctoral dissertation, Uppsala universitet]. Uppsala Studies in Education.
- Holmberg, A. (2009). *Hantverksskicklighet och kreativitet: Kontinuitet och förändring i en lokal textillärautbildning 1955–2001* [Craftmanship and creativity: Continuity and change in a local teacher education 1955–2001]. [Doctoral dissertation, Uppsala universitet]. Studia textilia.
- Kokko, S. (2022). Orientations on studying crafts in higher education. *Craft Research*, 13(2), 411–432. https://doi.org/10.1386/crre_00086_1
- Kyvik, S. (2007). Academic drift – a reinterpretation. In J. Enders & F. van Vught (Eds.). *Towards a cartography of higher education policy change. A Festschrift in Honour of Guy Neave*. (pp. 333–338). Center for Higher Education Policy Studies (CHEPS).

- Johansson, M. (2018). Doktorsavhandlingar inom det nordiska slöjdfältet [Doctoral theses in the Nordic sloyd field]. *Techne Series A*, 25(3), 109–123. <https://journals.oslomet.no/index.php/techneA/article/view/3031>
- Logan, R. K. (2015). General systems theory and media ecology: Parallel disciplines that animate each other. *Explorations in Media Ecology*, 14(1), 39–51. https://doi.org/10.1386/eme.14.1-2.39_1
- McLuhan, M. (1964). *Understanding media: The extensions of man*. Routledge.
- Nygren-Landgårds, C. (2021). Forskning på bredden av vetenskapsområdet [Research on the breadth of the scientific field]. *Techne Series A*, 28(4), 165–178. <https://doi.org/10.7577/TechneA.4734>
- Saugstad, T. (2002). Educational theory and practice in an Aristotelian perspective. *Scandinavian Journal of Educational Research*, 46(4), 373–390. <https://doi.org/10.1080/0031383022000024561>
- Scolari, C. A. (2012). Media ecology: Exploring the metaphor to expand the theory. *Communication Theory*, 22, 204–225. <https://doi.org/10.1111/j.1468-2885.2012.01404.x>
- Sedlacko, M., Martinuzzi, A., Røpke, I., Videira, N., & Antunes, P. (2014). Participatory systems mapping for sustainable consumption: Discussion of a method promoting systemic insights. *Ecological Economics*, 106, 33–43. <https://doi.org/10.1016/j.ecolecon.2014.07.002>
- Selwyn, N. (2017). Skolan och digitaliseringen: Blir utbildning bättre med digital teknik? [Is technology good for education?]. Daidalos AB.
- Sevaldson, B. (2017). Redesigning systems thinking. *FormAkademisk*, 10(1). <https://doi.org/10.7577/formakademisk.1755>
- Skjelbred, B. H., & Borgen, J. S. (2023). Formingsforskning i en ny tid? Forskningstradisjon, kunnskapsutvikling og endring i faget kunst og håndverk [Forming research in a new era? Research traditions, knowledge development and change in the Art and crafts subject]. *FormAkademisk*, 16(2). <https://doi.org/10.7577/formakademisk.4813>
- Swedish National Agency of Education (SNAE). (2022). Läroplan för grundskolan, förskoleklassen och fritidshemmet 2022 [Curriculum for the compulsory school, preschool class and school-age educare]. Norstedts juridik. <https://www.skolverket.se/publikationsserier/styrdokument/2022/laroplan-for-grundskolan-forskoleklassen-och-fritidshemmet---lgr22>
- Sundberg, D., & Adolfsson, C-H. (2015). Att forskningsbasera skolan – en analys av utbildningspolitiska frågeställningar och initiativ över en 20 års period [Basing the school on research – an analysis of educational policy issues and initiatives over a 20-year period]. Vetenskapsrådet. https://www.vr.se/download/18.2412c5311624176023d25a34/1555422926860/Att-forskningsbasera-skolan_VR_2015.pdf
- SFS (2010:800). *Skollag* [The Swedish school act]. Utbildningsdepartementet. https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/skollag-2010800_sfs-2010-800
- Vliege, J. (2018). Education in a digital age: How old and new technologies shape our subjectivities. *Explorations in Media Ecology*, 17(1), 57-61. https://doi.org/10.1386/eme.17.1.57_1