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# Hybrid forms of education in Norway: a systems theoretical approach to understanding curriculum change

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## ABSTRACT

Some might fear that the local flavours of education will evaporate when encountering the hegemony of global, cognitive standards of the knowledge economy. This paper, however, shows that the evolution of curriculum can emerge in surprising directions, creating hybrid forms of education. We will investigate forms of meaning that emerge in Norwegian curriculum in the timespan 1988-2020, and show how systems theory can contribute to studying curriculum changes in a temporal perspective. The empirical case for investigation, is a diverse range of material, documenting curriculum changes in the mentioned period. Concepts from the late Luhmann's 'theory of distinctions' will thus be used to give meaning to the emergence of school reforms in Norway. The paper shows that Norwegian policy makers use increasingly complex deparadoxification strategies to deal with an uncertain future, conceptualized as externalization, oscillation, asymmetrisation, and internalization (re-entry). This is most pertinently demonstrated in the latest Norwegian reform LK20, in which a new, hybrid, 'temporal' construct of education, called "new-old-curriculum" or 'competence-Bildung' emerges. We thus contribute to the field of curriculum studies by observing how changing observations of the past and future fuel and legitimize the evolution of new reforms.

## KEYWORDS

Curriculum change; globalization; systems theory; semantic analysis; competency

## Introduction

Since the nineties, curriculum making has been characterized by global pervasiveness *and* great diversity across state school systems (Rosenmund, 2016). As part of the global alignment in curriculum making, Norway, as other European states, has moved from being primarily based on inputs and *Didaktik*, to being more concerned with outputs and teacher efficiency (Mølsted, 2015). This relates to Hopmann's (2003) observations of a shift from process-control to product-control in state curriculum making, and the associated description of the way western states deal with welfare problems shifting from 'management by placements' towards 'management by expectations' (Hopmann, 2008). The latter strategy entails a tendency to solve ill-defined problems with more clearly defined expectations, such as benchmarks, goals and standards, made visible by the massive impact of internationalized accountability policies (Hopmann, 2008).

There is now a substantial amount of research that discusses the global convergence of accountability-policies and out-put and competency-based models for curriculum control, although variation exists in terms of explaining *why* such global ideas spread and *what* happens to them in the encounter with national and local curriculum contexts (Anderson-Levitt, 2008; Hilt et al., 2019;

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Nordin & Sundberg, 2018; Winter, 2012) Although the *spatialized* processes of curriculum making in a global, complex world seems to be a rather well-covered research theme, however, the *temporal* aspects of curriculum making is, except for a few recent studies (Bachmann et al., 2021; Hansen & Puustinen, 2021; Hansen et al., 2021; Lee, 2021), a rather unexplored field of curriculum research.

It is pertinent to assume that the shift towards product-and output-control has consequences for the construction of time in curriculum making. Following a line of thought from Niklas Luhmann's systems theory, curriculum-makers now deal with risks by constructing cognitive expectations on the basis of prospective, future conditions (Luhmann, 2000, p. 266; Sivesind et al., 2016), rather than referring to past decisions, heritage or tradition. Thus, one can assume that in a regime of 'management by expectations', the future, rather than the past, becomes the reference point for curriculum-changes. However, efforts at turning to the past by restoring tradition and a lost moral heritage in curriculum making can also be observed (e.g. Ball, 1993; Neumann et al., 2020), reflecting what Zygmunt Baumann (2017) calls the 'retrotopia' of an ideal past.

The contribution of this paper lies in understanding the complex evolution of global educational reforms as a *temporal* process in which policymakers try to come to terms with an uncertain future by reconciling the educational present with conceptions of the future and the past (See also Mangez & Vanden Broeck 2020). To do so, we will analyse curriculum changes in Norway through concepts from the late Luhmann's (1998, 2013, 2011) 'theory of difference', to give meaning to the different communicative strategies used by Norwegian policy makers, in their efforts at dealing with complexity and an uncertain future. The empirical case for investigation is a diverse range of material, documenting curriculum changes in Norway in the time span of 1988–2020. However, processes related to the newest reform in Norway, *Renewal of the Knowledge Promotion Reform* (LK20), implemented in 2020, will be at the forefront of the analyses.

This temporal analytical approach will add complexity and richness to our understanding of new curriculum reforms. The paper illuminates how policymakers, in their attempts at reconciling present pasts and present futures in curriculum making processes, are faced with paradoxes and indeterminacies that needs to be solved communicatively. The paper suggests that in the period of 1988–2020, Norwegian policy makers use increasingly complex de-paradoxification strategies to solve curricular indeterminacies, finally resulting in hybridization of 'old-' and 'new curriculum' in the newest reform LK20.

### **Systems theory and curriculum studies**

When searching for literature in *Journal of Curriculum Studies* (JCS), we found that systems theory has been inspirational for many researchers in the field of curriculum studies, although these influences have spurred ideas and debates on different theoretical and empirical levels. Accordingly, we will present a short review systematizing these JCS studies in a three-fold matrix a) the use of systems theory in 'constructivist learning theories' b) the use of systems theory in building pedagogical or didactical 'reflection theories', as well as c) the analytical and heuristic use of systems theory in sociological studies of curriculum changes. This matrix will be used to position our own study in this rather diverse field of systems theory and curriculum studies.

Firstly, a well-known, and perhaps also controversial, use of systems theory in curriculum studies, is the so-called constructivist theories of learning (e.g. Rasmussen, 2001) in which Luhmann's concepts and distinctions are used to theorize the relationship between psychic and social systems of meaning. According to Terhart (2003), Luhmann-inspired constructivist theories of learning is a central theoretical component of the heterogenous conception of 'constructivist didactics', emphasizing principles for teaching and learning, such as pupils' own construction of knowledge, self-monitoring, and autonomy, as well as learning in real-time situations. Speaking in general terms, these ways of engaging with Luhmann's theory use his rather abstract vocabulary to re-describe pedagogical phenomena in new and proposedly more fruitful ways.

Secondly, Luhmann's theory has been used to sketch out a *reflection-theory* of education and curriculum-making, to encounter the 'crisis of didactics' and the problems of connecting theory to practice in education. A pertinent example is a recent study by Vollmer (2021), who builds a theory of General Subject Didactics (GSD), inspired by Luhmann's philosophy of science and his notion of observations of different orders. Vollmer's theory of GSD consists of three observational layers (first, second, and third-order observations), used to conceptualize the process of didactic theory-building: from teachers' and pupils' observations in context of subject specific teaching and learning, via observing and researching these observations systematically in the context of subject didactics (SD), to finally comparing and generalizing experiences and observations at the level of General Subject Didactics (GSD). Vollmer (2021) thus applies systems theory to build a fruitful reflection-theory, enabling teachers to build powerful educational knowledge that combine personal experiences with both empirical evidence and abstract thinking.

Thirdly, Luhmann's theory has inspired researchers interested in studying curriculum changes through the lens of systems theory as a sociological theory of education. These studies tend to use Luhmann's theory heuristically and on a second-order level of observations, studying curriculum changes as representations of the educational systems relationship with its societal environment, consisting of politics, economy, family etc. The works of Hopmann (2003, 2008) on school governance and the evaluation of curriculum reforms may be seen as being inspired by systems theory, in his emphasis on the role of institutions and systems as means for problem-solving in a modern society. Other studies from JSC that apply perspectives and concepts from systems theory are studies of the governing of the teaching profession (Lee, 2021; Wermke & Höstfält, 2014), teaching-communication in the age of accountability (Aasebø et al., 2017), the relationship between schools and parents (Gellert, 2005), as well as the relationship between education and the economy (Bank, 2012).

An important work in the use of systems theory in comparative research of curriculum making, is Rosenmund's (2016) analytical framework for comparison of school reforms between different countries, showing how systems theory is suitable for studying non-linear processes of curriculum change within the framework of an all-encompassing systems theory of society. Furthermore, two very recent studies in JCS observe, equal to our study, aspects of temporal constructions in curriculum making from a systems theory perspective. Hansen and Puustinen (2021) studies of how society is presented in Finnish social studies textbooks, contributes to studying curricular representations of temporal forms of knowledge in a functionally differentiated society, while Bachmann et al. (2021) analyses teachers work plans in Norwegian schools through the lens of Luhmann's (2000) distinction between conditional and purposive programmes.

This paper is positioned in the third category of Luhmann-inspired studies of curriculum change, that is observations of curriculum changes by utilizing the elementary form of social systems (system/environment) heuristically. Such a sociological and abductive application of Luhmann's theory does not necessarily entail a subscription to for instance, constructivist learning theories. The paper is rather inspired by Luhmann's (1995) own encouragement to *re-describe* society by the means of his theoretical instruments at the level of second order observations. However, as the use of systems theory in curriculum studies is manifold, we will build our presentation of the analytical framework in the next sections mainly on Luhmann's own works.

### ***A systems theoretical approach to understanding curriculum change***

In the following sections, we will give an introduction to systems theory as analytical framework for analyses. From the late 1980s and onwards, Luhmann's writings are much inspired by the logician George Spencer-Brown's (1969) seminal work *Laws of forms*, marking a difference-theoretical turn of systems theory (Borch, 2011). This paper will present concepts related to this late phase of Luhmann's oeuvre. Spencer-Brown's theory of distinctions allows Luhmann to refine his theory of

social systems as autopoietic (self-producing) systems of communication, by engaging with concepts such as observation, distinction, form, re-entry, paradox, and de-paradoxification. These concepts highlight the *temporal* primacy of systems theory, which offers a unique contribution to understanding curriculum change as efforts at dealing with temporality.

A basic claim of system theory is that education is one of many global, 'autopoietic', functional systems (politics, economy, science, art, etc.) in the world society, serving as an ever-emerging communicative and semantic complex—reproducing its own particular forms of meaning (Hilt, 2016a; Luhmann, 1995). This has consequences for how we think about educational and curricular change, and thus for the analytical approach selected for this paper. Firstly, and in agreement with Rosenmund (2016), we suggest that systems theory is suitable for studying non-linear processes of curriculum change within the framework of an all-encompassing systems theory of society. Secondly, however, as a global, functional system, education is not restricted by spatial or regional boundaries (Luhmann, 2013), thus calling attention instead to the temporal characteristics of curriculum change. Thirdly, global functional systems, such as education, serve as (ever-emerging) reservoirs of meaning that are available for communicative selections, conceptualized as *semantics* (Hilt, 2016a; Luhmann, 1995). This makes systems theory a well-suited approach for studying curriculum changes as semantical changes, that is as emerging forms of *meaning*.

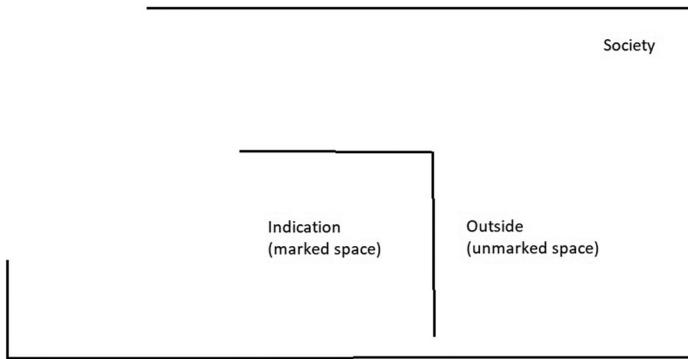
### **Curriculum as observation and self-description**

In this section, we will start with presenting concepts that are of relevance for studying curriculum change from a systems theoretical perspective, namely *meaning*, *distinctions* and *forms*. According to Luhmann, meaning is the fundamental concept of sociology (Habermas & Luhmann, 1971), defining it as a *distinction* between actuality and possibility: 'everything actual has meaning only within a horizon of possibilities indicated along with it' (1995, p. 65). This implies that meaning, in a systems theoretical perspective, is a processing of information according to *distinctions* (Luhmann, 1995). Something is *indicated*, while all else constitutes a horizon of further possibilities. This conceptualization of meaning allows Luhmann to incorporate Spencer-Brown's (1969) *Logic of forms* into his theory, and the injunction 'Draw a distinction'. Without a distinction, nothing will happen; no meaning-making process will emerge.

The theory of distinctions, further developed in Luhmann's later works, thus entails that one always observes by drawing a line between *this* and *something else*. (Luhmann & Behnke, 1994). A distinction, for example, education/environment, is selected, and one of the two sides is indicated as a marked space, for example, 'education'. Even though it is the indication that is made explicit, an observation is always a distinction. The other side, in this case 'environment', is always present, but the distinction is hidden; it constitutes an 'unmarked space'. All observations are based on a distinction and an indication, which together are conceptualized as a *form* of meaning (Luhmann & Behnke, 1994). Form and distinction can be illustrated like in Figure 1.

Luhmann (1995) states that a social system is not a *given* entity but emerges as a *difference* between a system (self-reference) and its environment (other-reference). A system thus develops through the kind of boundary-making implied in Spencer-Brown's theory of difference, creating itself as a chain of distinctions (Luhmann, 2006a). The distinction between education and its societal environment is, for instance, being constituted when the same type of operations, communication with *the intention to educate*, are selectively connected (Luhmann, 2006b), thus setting the boundary between educational operations and everything else. It is thus the recursive meaning-making and self-production of distinctions that constitutes the autopoietic functioning of social systems—communication that connects to further communication (Luhmann, 2006a, p. 46).

Engaging with systems theory in analyses of curriculum changes, implies being committed to 'second order observations' of the educational system. In a so-called first-order observation, the observer only sees the marked side of the distinction, unaware of the contingency and blind spot of the observation. A second-order observation is more advanced, however, and occurs when the same



Illustrating the form of meaning: the form is a difference between what is indicated and its outside. For instance: the form system is a difference between system (marked space) and environment (unmarked space)

Figure 1.

or different observer observes the distinctions used in the first observation, illuminating the double-sidedness and contingency of forms (Luhmann & Behnke, 1994). In this paper we will thus ‘observe observations’, uncovering the educational forms and distinctions that emerge in Norwegian curriculum in the timespan 1988–2000.

### **Temporality and curriculum**

Luhmann (1998, p. 67) states ‘As never before, the continuity from past to future is broken in our time’, thus turning attention to the problem of temporality in social systems. In modern society, each of the functional sub-systems establishes a highly selective set of system/environment relations (Luhmann, 1995), leaving each perspective with the burden and privilege of constituting its own world (Corsi, 2020). Due to this global, differentiated nature of worldwide communication, *contingency* is a defining feature. The complexity of society increases at an accelerated pace, rendering the future fundamentally uncertain.

Systems must deal with this complexity, and the excess of opportunities related to meaningful communication, either by self-organization on the operative (structural) level and/or by selection at the semantic level (Luhmann & Schorr, 2000, p. 58). On the *structural* level, distinctions are operatively accomplished by self-organization, the ‘simple continuation of their own operations’ (Luhmann, 1998, p. 10). Social systems are thus characterized by a fundamental instability. Elements have the character of events—they vanish immediately after their appearance and are continually replaced by other elements (Luhmann, 1995). Thus, social systems are not *spatialized*, but radically *temporalized* systems.

Still, although the production of meaning emerges as unstable and changeable events in the world, some forms of meaning are *preserved* by social systems and constitute a semantic reservoir for communication. On the semantical level, one can thus observe preserved structures of meaning, in other words: ‘a supply of possible themes that are available for quick and readily understandable reception in concrete communicative processes’ (Luhmann, 1995, p. 163). Hence, while meaning is seen as specific operations, semantics are condensed, durable and generalized forms of meaning (Hilt, 2016b).

*Semantics* are produced as the system observe, reflect, and describe its own identity—as distinct from its environment. If the system can distinguish between itself and the outside, so that it does not

become enmeshed with its environment, operations can be observed, accounted for, and controlled. Self-observations thus allow for reflexivity. The system can observe either its system side (self-reference), its environment side (other-reference), or the unity of the system/environment distinction (identity, rationality) (Luhmann, 1998).

In the educational system, observations set a difference between the pedagogical intention to educate (self-reference) and the educational outcome (other-reference). Curriculum, as programmed education, ensures the wholeness or unity of this distinction (identity, rationality), limits the space of opportunities related to meaningful education, and conditions further educational communication (Luhmann, 2006b; Luhmann & Schorr, 2000). In Luhmann's (2006b) theory, curriculum is thus conceptualized as selected meaning (semantics) or 'decision-making programmes', in which the system observes and describes itself and its environment.

Systems observe and describe themselves through semantics in a factual (what), social (who), and most importantly for our analyses, a temporal dimension (when) (Luhmann, 1995). Time, in a systems theoretical perspective, is thus the interpretation of reality in light of the difference between (present) past and (present) future (Luhmann, 1995, p. 78). This implies that the educational system creates its own time horizon, that is, its own past and future. By observing itself through the form of time, the system can make selections on the basis of prospective, future conditions, either by trying to attain certain situations or to avoid them (Luhmann 1990, p. 4; Hilt, 2016b).

### ***Paradox and deparadoxification strategies in educational reforms***

Based on self- and external observations the educational system produces reflection theories (Luhmann & Schorr, 2000) and more durable forms of meaning (semantics) in the form of 'programmed education' such as curriculum and reforms. However, as decision-making programmes these are constituted by a unity of the observed distinction: the difference between the education system and its environment. Thus, they are inherently paradoxical.

Decision-making programmes depend on the educational system observing its own environment to structurally couple and adjust to it, but as systems are operationally closed, the educational system does not have access to a *real* world—only a world that is constructed by the system itself. The question is then: How can the educational system create forms of meaning relevant to its outside world, aka curriculum, when it does not have access to this world *per se*? Furthermore: How can the educational system make decisions about the intentions to educate and the content of curriculum when the future is fundamentally open and insecure? The educational system is thus faced with *paradoxes and indeterminacies* that must be solved by inner-systemic means (See also Mangez & Vanden Broeck, 2020).

According to Luhmann, systems may use different communicative strategies to postpone, hide, or solve their own paradoxical state, and we will now present four different strategies that are used abductively in our analyses. First, as every observation is a distinction between two sides, constituting a form of meaning, the paradox may result in a standstill. In the case of *crossing*, the system merely crosses back and forth between the indicated side and the outside (Luhmann & Behnke, 1994). It is thus not unfolding the paradox, but merely *oscillating* between its two sides, for instance, between education and non-education (e.g. politics, global forms of meaning). Oscillation entails that the system is unable to select and continue its operations in one or another direction; no new meaning is created.

In the case of *asymmetrisation*, however, the system observes both sides of a distinction (the indicated side and outside), but the indicated side is *lopsided*. The form is asymmetrical, as the indication serves as a preferred side, while the outside serves as the disregarded selections. While this enables the system to move on, it does not really solve the paradox; it merely postpones it. The strategy of *externalization* implies that the system selectively connects to its environment to provide additional meaning and continue its own communication. Curriculum-makers may, for instance,

selectively connect to values or value-laden ideology, history, and traditions, or external 'world situations' such as internationality/globality, in order to solve curricular paradoxes and problems (Luhmann & Schorr, 2000; Schriewer, 1989). Externalization thus operates like floodgates, in which a system opens or closes to its environment according to internal criteria (Luhmann & Schorr, 2000).

The most abstract way of dealing with paradoxes is to dissolve the paradox by *internalization* (re-entry). The distinction system/environment now occurs twice in the system, as the initial operative distinction, and as a self-observing 'representation' of the first distinction (Luhmann & Behnke, 1994). This duplication of the system/environment distinction both changes and maintains the paradox between the positive and negative value by reformulating the paradox as a distinction within the distinction. In Teubner's words: 'the frame reappears in the picture, the boundary becomes part of the territory' (Teubner et al. 1997, p. 156). This highly abstract systemic function of re-entry may thus result in systemic duplications and systemic growth.

## Methodology

Based on the presented theoretical framework we conducted document analyses (Lyngaard, 2010) of policy and curriculum documents. Key policy and curriculum-documents constituting the new Norwegian reform, *Renewal of the Knowledge Promotion Reform* (LK20) are our prime focus. However, to show development in meaning over time, material from the two previous reforms, Reform 1997 and the Knowledge Promotion Reform 2006, as well as research on these curriculum developments, are included. The reading of policy and curriculum documents was structured in four phases, described as followed:

**1st phase:** We read a vast amount of Norwegian policy and curriculum documents, as well as research on policy and curriculum changes, covering the timespan 1988–2020. Some documents were selected for further analyses, some as 'forefront-documents' documenting changes in the latest reform, LK20, others as 'background-documents' illuminating semantical changes up until this reform.

**2nd phase:** A reading of curriculum changes in Norway from 1988 to 2014—up until the preparations of LK20. This period of curriculum change in Norway is already well-documented in policy- and curriculum research. To reconstruct the most significant semantical changes of the period until the last reform, we did extensive reading of central policy- and curriculum documents, in combination with findings of existing research.

**3rd phase:** Analysis of curriculum changes in Norway in the timespan 2014–2020—from the initiation of the latest reform LK20 to its implementation. This is a recent phase in Norwegian curriculum making, less documented by research. We thus performed a document analysis, including Norwegian white papers, official Norwegian reports, as well as documents from transnational policy networks that have been inspirational for the reform (See appendix 1 for overview of documents).

**4th phase:** The reconstructed semantics from the previous analytical phases were analysed as a whole, applying systems theory as analytical framework. The analysis of forms as binary schemes, the temporal distinction between past and future, as well as the different deparadoxification-strategies presented in the theoretical section, were used abductively to give meaning to curriculum changes in Norway in the timespan 1988–2020.<sup>1</sup>

## *Oscillation between traditional educational forms and competency-based education*

In this section, we will explore how changing observations of the past and the future have served as legitimizing points of reference for emerging reforms. The Norwegian school system has been characterized by social democratic values and a strong emphasis on equity, participation, and democracy (Arnesen & Lundahl, 2006; Møller & Skedsmo, 2013). Based on the European tradition of *Didaktik*, the essential aim of education has been *Bildung*, understood in terms of growth and autonomy through individual engagement with the subject matter (Willbergh, 2016). Consequently,

curricula have traditionally been based on knowledge, teaching, and content (Sivesind & Karseth, 2019), combined with a strong sense of national integration and reconstructions of Norwegian cultural heritage (Hilt, 2020).

During the 1980s, a gradual shift in educational semantics has been observed by researchers, in which the educational system at a global scale became increasingly oriented towards its economic and political environment (Wiborg, 2013; Hansen 2011; Telhaug et al., 2006). Market-oriented ideas, originally developed in the US and Great Britain, were picked up by the most influential supra-national actors in education, such as the EU, OECD, and the World Bank (Dale, 2005). From the perspective of systems theory, this can be conceptualized as externalizing efforts, in which the system selectively connects to its environment to solve inner-systemic problems and provide additional meaning to continue its own communication.

In Norway, an early trace of such externalizing efforts is to be found in an Official Norwegian Report from 1988 (Ministry of Education, 1988), describing adjustments to a society where the economy is increasingly dependent on the production of human capital. Concomitantly, the concept of *competence* was introduced in Norwegian education policy, and the concept has since, gradually substituted and/or complemented the concept of 'knowledge' (Tolo, 2017). In a systems theory perspective, policy and curriculum makers' externalizing efforts resulted in semantical changes, in which new forms of meaning emerged, and existing forms of meaning changed. Expressed in the language of the theory of distinctions, the form of competence is emerging, constituted by the distinction between competence (indication) and knowledge (outside).

These changes followed a period (1970s and 80s) where Norwegian schools and teachers had enjoyed considerable autonomy due to reforms emphasizing de-centralization, school-based development and community-based curricula (Aasen, 2003; Lauvdal, 1993). As the economic crisis hits Norway along with the rest of the world, growing critique of the welfare state led to a general push towards market-oriented policies (Telhaug et al., 2006). In education, a growing concern regarding the quality of schools and teachers and the ability of education to serve the economy, spurred debates about the governing of education (Aasen, 2003). A set of internal reports and a report from the OECD (1989) questioning the decentralized system and lack of central control, underpin a White Paper issued in 1991 (Ministry of Church and Education, 1993) introducing the principle of management by objectives. Described as a period of neo-liberal and neo conservative turn in educational governance (Telhaug et al., 2006), implementation of these principles, however, is claimed to take yet another decade (Aasen, 2003; Imsen et al., 2017; Imsen & Volckmar, 2014).

Nevertheless, reforms addressing structure as well as substance of education were issued. In 1997 a reform reinstalling central governing of education through a national curriculum evolving around the normative ideal of the unified school, presents very detailed expectations of content and teaching methods (See Ministry of Church and Education, 1996). This reform has been described as a turn towards instrumentalist and elitist values (Hovdenak, 2004), and it was followed by a revision of the Education Act in 1998, changing the definition of education from a common good to an individual right (Imsen et al., 2017). However, the 97-reform is also described as a revitalization of a 'nation building project' where educational content is founded on construction of what should be considered national heritage (Haug, 2003; Hilt 2020; Trippestad, 1999). Thus, in this period, new forms of meaning (competence, life-long learning) and traditional ones (heritage, content, knowledge, *Bildung*) co-existed in the Norwegian curriculum.

Aasen (2003) interprets the policy of the 90s as a defence of the Scandinavian social-democratic model in the context of a cultural crisis resulting from postmodernist, relativist, influence on educational discourse. Economic growth is promoted by combining concerns for the national economy with concerns for the distribution of wealth and securing the social democracy. According to Aasen (2003) social-democratic ideas are now rearticulated as a need to *improve* the educational level of the population, thus combining human capital and management by objectives with a revitalization of social democratic progressivism.

From the perspective of systems theory, we can interpret these developments as efforts at dealing with the paradox and indeterminacy of selecting forms of meaning and educational content on the basis of observation of an uncertain future. In response to the critique from OECD as well as internal actors, Norwegian policymakers combine two seemingly opposing strategies to continue the systems communication. The system temporally observes 'itself' (the system-side), resorting to past events and expectations (*Bildung*, national heritage, knowledge, and teaching), while also observing its environment, externalizing to an anticipated future, to 'world situations' and economic and political 'irritations'.

Accordingly, the evolution of educational structures in Norway was not a straightforward or linear process of replacing *Bildung*, national heritage, and 'input-based education' with competency-based education and 'management by objectives'. The deparadoxification-strategy set in motion in the 90s, is rather one of crossing or oscillation. Based on our reading, Norwegian curriculum-makers resorted to temporal observations of the present past (past events, heritage, 'tradition'), and present future (future societal needs, competency, output-orientation), and crossed back and forth between these two forms of observations.

Based on this reading, one may ask if this strategy of oscillation made it difficult to re-specify the universal intention to educate in a concrete and coherent curriculum programme. Rather than solving the systemic paradox, the system merely pendulates between observations of past and future, thus hiding the indeterminacy of the system. This interpretation is supported by for instance, Jarning (2010), suggesting that Norway slowly adjusted to output-based education, while at the same time continuing a Norwegian tradition of input-based management of education through pre-set regulations such as selection of curricular content and structural conditions. Observed through the perspective of systems theory, the state of Norwegian curriculum making can be interpreted as being at a *standstill*: by crossing back and forth between observations of past and future, the system is unable to select and continue its operations in one or the other direction.

### ***Towards asymmetrisation of new and old curriculum***

In the PISA tests published in 2001, the performance of Norwegian pupils was shown to be mediocre compared to those from other OECD countries. This so-called 'PISA shock' spurred new debates in Norway on educational quality and how to ensure educational outcomes relevant to future society (Hopfenbeck et al., 2013). Observed through the lens of systems theory, one can interpret this as a rupture in the semantic evolution of Norwegian curriculum making, opening up a floodgate of externalizing efforts to the semantics of transnational organizations. Governmental documents from this period (e.g.: Ministry of Education, 2003) show a strong inclination towards competency-based education, moving away from more 'traditional' educational forms, such as content decisions based on selections of what is considered a common national heritage.

These semantic developments culminated in the publication of a new Norwegian reform in 2006, the Knowledge Promotion Reform (K06), considered the first outcome-based curriculum in Norwegian history. Rather than referring to past decisions, 'tradition', heritage, or subject content, the reform focuses on learning, learning outcomes, and measurable competence goals (Ministry of Education, 2003, section 4.2). The forms of meaning that were given prominence in this curriculum reform, were basic skills (*ferdigheter*) and learning outcomes, while knowledge and content more or less disappeared and became 'blind spots' of the curriculum (See Ministry of Education, 2003). Quality and output in schools were supposed to be governed through 'management by objectives' at individual as well as systems level (Ministry of Education, 2008)

Observed through the optics of systems theory, Norway was faced with the indeterminacy of an uncertain future in the wake of the 'PISA shock'. The system thus observed itself in the temporal dimension to achieve future success and avoid new failures. We cannot continue with 'business as usual', but at the same time, we do not know what the future will bring. The deparadoxification strategy in this period, is one of *asymmetrisation*. The system observes both sides of a distinction, i.e.

new outcome-based education and old content-based curriculum, but as different from the strategy of crossing, the indicated side becomes *lopsided*. The form is asymmetrical, as the indication (new outcome-based education) serves as a preferred side, while the outside serves as the disregarded selections (old content-based curriculum).

Still, semantical developments related to a strictly future-oriented, out-put based curriculum is not yet *fully* realized in the Norwegian curriculum of 2006. As the core curriculum from 1993 (L93) was kept in an unrevised version and thus was still in effect in the 2006 reform, different rationales and intentions were expressed in different documents. Due to this unrevised core curriculum (Ministry of Church and Education, 1993), traditional forms of general *Bildung*, normative integration, and cultural heritage had at least symbolic value and effect.

### **Externalization to competences for the twenty-first century**

In this section, we will focus on the result of our systems theoretical analyses of policy and curriculum initiating documents leading up to the new reform, Renewal of the Knowledge Promotion Reform (2020), displaying the forms of meaning and deparadoxification strategies that are in force in this period. In the aftermath of the previous reform (K06), evaluations displayed that learning outcomes were insufficient, and that the curriculum lacked coherence, with too many goals, unclear progression, and a core curriculum that was not up to date with the latest educational developments (Ministry of Education, 2016, pp. 6–7). These evaluations legitimized the need for curriculum revisions, opening up a new floodgate of externalizing efforts, thus leading up to the recent reform in Norway.

The process was initiated in 2013 by a White Paper (Ministry of Education, 2013) calling attention to two problems in the educational systems environment: a) increased diversity in pupils' needs and abilities and b) uncertain demands of future society and work life. Policymakers were thus reflecting on how to ensure the inclusion of pupils (the social dimension) and secure outcomes based on the anticipation of an uncertain future (temporal dimension). The White Paper in question suggested the appointment of an expert committee to reassess which competences and skills are needed in future society.

Following this, the so-called Ludvigsen-Committee was appointed by the Norwegian government in June 2013 to report on what pupils will need to learn in school from a perspective of 20–30 years (Ministry of Education, 2015, p. 8). Their work resulted in an interim report (Ministry of Education 2014), presenting historical developments in school subjects over time, as well as a heavily debated Official Norwegian Report (Ministry of Education, 2015. Hereafter NOU, 2015:8), proposing major changes in Norwegian curriculum. The reports published by the Ludvigsen-Committee have been shown to be clearly inspired by transnational policy-initiating networks promoting competencies for the twenty-first century (Hilt et al., 2019), such as OECD's DeSeCo-project<sup>2</sup> and the European policy network *Key Competence Network* (KeyCoNet). In the following, we will illuminate proposed changes in the Norwegian curriculum in light of semantical developments promoted by these policy actors.

NOU 2015:8 (p. 9) expresses a clearly future-oriented vision: Society is changing at a more rapid pace than ever before, making it pertinent to promote suitable competences for the future. Faced with a risky and undecidable future, the committee expresses externalizing efforts by turning to the semantics of the twenty-first-century skills movement to deal with future indeterminacy. When comparing NOU 2015:8 with documents from OECD (2018) and KeyCoNet (2014, 2018), they are strikingly similar in meaning. All documents promote competences and skills suitable for societal needs in the twenty-first century, and question whether the contents of national curricula adequately prepare pupils for life in and after school—so called 'real-world' situations.

The documents thus present an observation of the future as fundamentally uncertain, and questions whether it is possible to know what kind of knowledge that will be of relevance in the future. The solution in all three documents is described as a major curriculum change in order to

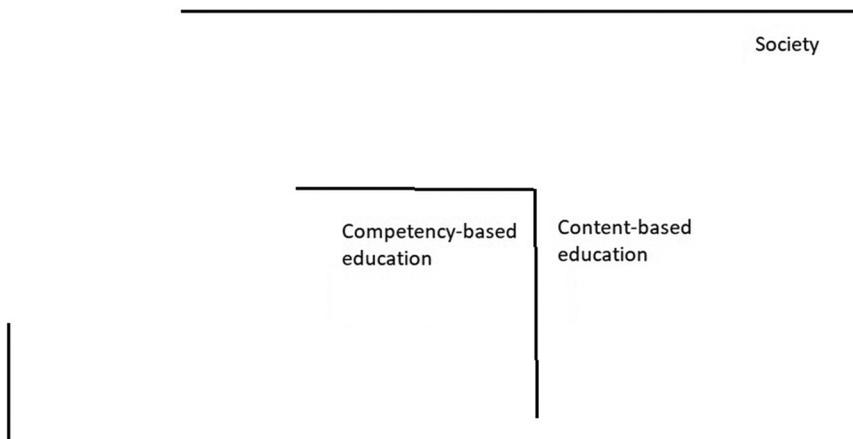
prepare students for a society that is completely different from societies of the past. Competence-oriented curriculum designs seem to be the only solution to an unpredictable future, stating that national curricula are out of touch with present societal needs and thus are ripe for major modernization. For example, KeyCoNet (2018, p. 6) expresses the advantages of a competence-oriented curriculum:

Competence-oriented education is regarded as advantageous in a time when the knowledge base of our societies is developing at an immense speed and when the skills required need to be transferred to and developed in many different societal contexts, including those unforeseen in the future.

These future-oriented observations, describing accelerated change and unanticipated needs, result in observations and descriptions of present-day education as being out of step with societal needs, pertinently described as the problem of *curriculum overload* (OECD, 2018, p. 6; KeyCoNet, 2014, pp. 6, NOU 2015:8, 43). National curricula are considered generally *overburdened* with content, which is an obstacle to acquiring the skills necessary for leading a successful life or creating 'future-ready students' who exercise agency in their own education and throughout life (OECD, 2018, p. 5).

Accordingly, all three sources express strong scepticism towards *content-based curriculum designs* that are strongly associated with risks of being out-dated and insufficiently preparing students for the future (e.g. KeyCoNet, 2014, p. 6, 2018, pp. 6–8). This example from KeyCoNet (2014, p. 5) illustrates this tendency: 'The key competence framework, with its emphasis on the application of knowledge in real world situations represents a significant departure from "traditional" content-based approaches (...)' From the perspective of Luhmann's theory of distinctions, the form of meaning in force, can be illustrated like in Figure 2.

Our reading suggests that competency-based education is positioned as normatively superior to content-based education, though subject content is reinstalled as one of four *competence areas* suggesting a revitalization of disciplinary knowledge *within* the competence-based approach (NOU 2015:8). Our document-analysis of the three policy-sources indicates that the deparadoxification strategy in force is a strong asymmetrisation between modern competency-based education (i.e. twenty-first-century skills) and traditional content-based educational approaches. Policymakers observe education through the temporal dimension, finding the past and presence imbued with risks of being irrelevant and the future as uncertain, but promising. Given this temporal observation of the past, present and future states of society and education, a clearer prioritization, considering



**Figure 2.** The asymmetrical form of competency-based education as a difference between competency-based education (positive value) and content-based education (negative value).

the *relevance* of knowledge promoted through the school system, comes to the forefront of curriculum-making in these documents.

The strategy of asymmetrisation implies that the indication (new outcome-based education) serves as a preferred side, while the outside serves as the disregarded selections (old content-based curriculum). The system thus observes itself in the temporal dimension and finds little or less of importance in the past. Traditional curricula based on content-decisions are associated with risk and, as the outside of the form of competency-based education, disregarded as a valid communicative selection in the process of curriculum making. Our reading thus suggests that Norway, faced with uncertainty and rapid changes in society, as well as a seemingly inadequate curricula, externalizes to the semantics of twenty-first-century skills, thus pushing the system forward and legitimizing a need for new reform. While asymmetrisation enables the system to move on, it does not solve the paradox and the problem of relevance. As will become clear in the next section—it merely postpones it.

### **Hybridification of ‘new’ and ‘old’ curriculum**

We will now turn to the governmental reform documents and the measures that finally became selected, uncovering the forms of meaning and paradoxification strategies that are displayed in the official curriculum. According to Baek et al. (2018), the new Norwegian reform LK20 is designed as a two-pronged effort, targeting the two distinct but interrelated policy domains of curriculum and quality monitoring. We will focus on the curriculum part, as it is introduced in White Paper 282,015/2016 (Ministry of Education, 2016, hereafter WP28), and the new core curriculum (Ministry of Education, 2017).

WP28 was published after the public hearing<sup>3</sup> of NOU 2015:8 and is structured in the following sequence: 1) policy suggestions from NOU 2015:8, 2) comments from the hearing, 3) the government’s opinion. The document can thus be understood as a second-order observation of the policy-initiating process, in which decisions are made as differences between past and future events in the system. One of the main purposes of LK20 is to renew school subjects so as to enable more *in-depth learning*. This decision is legitimized by a temporal observation: National subject curricula have previously been characterized by *crowded curricula* (WP28, p. 7). If we are to prepare ourselves for an unknown future, stronger prioritization and cuts in the curricula will have to be made.

In agreement with KeyCoNet (2014, p. 5) and OECD (2018, p. 6), as well as the policy initiating NOU 2015: 8, the Norwegian government now argues for a broader concept of competences that include social and emotional aspects of pupils’ learning, calling for a higher prioritization of knowledge, skills, attitudes, and values. Furthermore, WP28 underscores the need for a new curriculum to better prepare students for ‘life outside of school’ by emphasizing transversal skills (p. 14). Social and emotional skills, such as curiosity, resilience, self-regulation, collaboration, and creativity, are considered of great importance for education, work, citizenship, health, and life coping in general (p. 14).

At first glance, the reform documents show the same tendency towards asymmetrisation as we observed in the policy-initiating process: ‘new curriculum’ promoting in-depth learning and social and emotional competences is privileged, while the ‘old curricula’, construed as over-crowded and promoting surface learning, is disregarded. WP28 is thus externalizing to the semantics of twenty-first-century skills, now making these ideas and concepts an official part of Norwegian curriculum. There are, however, also important differences, showing how the Norwegian government selectively connected to educational forms from the policy-initiating process.

In alignment with initiatives from OECD and KeyCoNet, NOU 2015:8 called attention to new assessment methods designed to *measure* pupils’ social and emotional skills. NOU 2015:8 stated firmly: ‘If these aspects [social and emotional skills] of pupils’ learning are to be given priority in the day-to-day school, they must be part of the subjects’ objectives’ (p. 80). This rather unconventional suggestion in the Norwegian context, in which social and emotional learning is traditionally seen as part of the (non-instrumental) broader mandate of schooling, spurred heavy debates about

assessment in school. In the public hearing, measuring social and emotional skills was seen as challenging to Norwegian educational traditions.

The Norwegian government thus took a rather moderate stance on the issue, stating that social and emotional competences are not to be incorporated in the subjects' learning outcomes, and they are not to be assessed. Schools may guide and train pupils' social and emotional competences, as they are preconditions for learning, but it is the pupils' knowledge and competences in the subjects that are to be assessed (WP28, p. 23). As different from the policy initiating sources, WP28 relates social and emotional skills to the pedagogical intentions (self-reference) rather than the pedagogical outcome (other-reference). The government externalizes to transnational policy-actors promoting social and emotional learning, but selectively connects to these observations in order to reconcile conflicts in the system.<sup>4</sup>

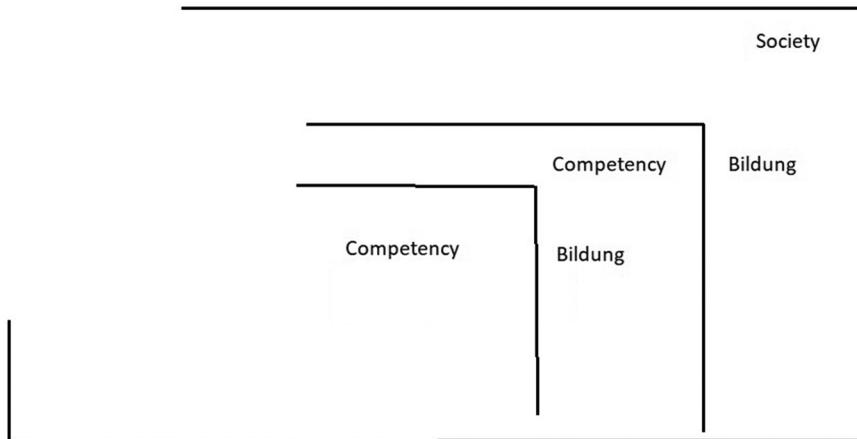
As Baraldi and Corsi (2016) point out, reforms make visible differences of interest that otherwise would be only latent and left to discussions in organizational interactions. When reforms produce controversial and sometimes contradictory self-descriptions, resistance and conflicts are made visible and dealt with in communication. This way, the systems' self-descriptions are more realistic, increasing the decision-making potential of reforms by making it possible for organizations and persons with *different* viewpoints to accept and follow up on the initiatives.

Perhaps a bit surprisingly, the Norwegian government brings the concept of *Bildung* into the curriculum equation. WP28 emphasizes familiarity with, and inauguration in, the Norwegian cultural heritage and explicitly states the importance of *Bildung* in the sense that pupils are to get knowledge of and eventually feel obliged to follow foundational norms and values of Norwegian society (WP28, p. 21). As an educational form, *Bildung* adheres to the *Didaktik* tradition that has held strong prominence in curriculum-making in Norway.<sup>5</sup> However, in the process leading up to the reform, *Bildung* was more or less a blind spot.

At first glance, the new reform may be understood as an attempt at balancing competence-based education with *Bildung*, in alignment with traditional semantics in the Norwegian educational context: 'The educational system [kindergarten and school] must give children and young people the *Bildung* and education they need in order to master the future' (WP28, p. 5),<sup>6</sup> and in the core curriculum (p. 8): 'The purpose of schooling is both education and *Bildung* [*danning*]'. Although the reform documents recognize the continuity with 'management by objectives' from the previous reform, they also reflect on the need for a common cultural framework based on ancestry and common values, as well as the need to provide teachers with guidance when selecting content. Seemingly, at this point, LK20 does not create the same asymmetrical binary between new and old curriculum.

The question is, then, is LK20, similar to the reforms of 2006 and 1997, merely oscillating between educational traditions and external observations—between 'new' and 'old curriculum'? We will argue that we are rather dealing with a creative deparadoxifying strategy, a way of walking *between* the impasse of past and future in the system. Looking more closely at the government's solutions, 'new' outcome-based education still has a structural primacy. As stated in WP28 (p. 44): 'Curricula are not to be overcrowded by content-descriptions . . . . A significantly stronger definition of concrete content in the curriculum is problematic'. Despite symbolic intentions at preserving the notion of *Bildung*, LK20 is reluctant to select and define a curriculum content that might have 'Bildung potentiality'. Rather, the balance between content and competence-orientation is to be ensured by indicating what kind of content, in terms of knowledge and skills, pupils are to acquire in order to reach *competence goals*. This is in agreement with how Luhmann (2006b, pp. 212–213) described the semantic shift from *Bildung* towards 'outcome-based curriculum': 'The selection criteria no longer refer to the 'inner value' of the educational content, but to what degree the content enables pupils to practice their 'abilities to learn'.

*Bildung* is now not defined in traditional terms as pupils' self-realization in the encounter with a pedagogical content of value, but more as a kind of life-mastery in which pupils are to use their skills, values, and attitudes to deal with an uncertain and risky future (see, e.g. WP28, p. 21; Ministry of



**Figure 3.** Re-entry of the distinction between competency and *Bildung*.

Education, 2017, p. 8). *Bildung* is thus considered dependent on the development of competence and becomes oriented towards adaptability rather than autonomy. The paradoxical unity of the difference between *Bildung as the pedagogical intention* and competence as *pedagogical outcome* seems to be temporally relocated: While competences are primarily about the pupils' learning outcomes in subjects, measured by annual benchmarks, *Bildung* is a kind of long-term output of education—oriented towards 'life itself', building explicitly on competences, but adding time. Consequently, *Bildung* is now understood as 'lifelong learning' (see, e.g. WP28, p. 21)—re-entering the difference between intention and outcome. The pupils are to develop knowledge, skills, and attitudes in order to participate in work life and communities—and to master their lives *indefinitely*.

Accordingly, *Bildung* does not have the same meaning in LK20 as in previous reforms but becomes 'competence-*Bildung*'. The system moves beyond oscillation and asymmetrisation of old and new forms of education. Rather, 'old' forms of education become relevant on the premise of future-orientation and 'new curriculum'. The educational system thus *internalizes* the distinction between *Bildung* and competence to solve the paradox of identity and difference—it re-enters the distinction on the inside of the system, resulting in systemic *morphogenesis*, illustrated by the theory of distinctions in Figure 3.

The new reform in Norway, LK20, is thus trying to harmonize 'new curriculum' suggestions with existing forms of meaning in the system, creating a sense of unity in difference. Faced with systemic 'irritations' and the paradox of an uncertain future, the system no longer merely pendulates between (present) past and (present) future. Rather, the distinction between 'new curriculum' (output, competence, learning) and 'old curriculum' (*Bildung*, teaching, content) is re-entered at the inside of the system, creating a new, hybrid form of education in Norway, a form we can call 'new-old curriculum' promoting 'competence-*Bildung*'. *Bildung* in the new Norwegian curriculum reform thus holds a quite different meaning than the notion of *Bildung* we know from the Didaktik-tradition.

### **The semantical evolution of curriculum**

The global tendency of emphasizing skills and output regulation has entailed a transformation of foundational concepts in curricula worldwide, from teaching, knowledge, and *Bildung* to learning outcomes, competences, and lifelong learning. This relates to Hopmann (2003) observations of a shift from process-control to product-control in state curriculum making, and the related conceptualization of western states ways of dealing with welfare problems as a move towards

'management by expectations' (Hopmann, 2008). If we were to interpret these shifts in curriculum making *spatially*, nation states with their local contingencies would be seen as increasingly adapting to the (teleological) processes of global standardization, fuelled by the powers of transnational organizations. In this picture, the emergence of outcome-based education, as illuminated in our analysis of Norwegian curriculum reforms, would seem both evident and unavoidable, supported by large-scale measurement systems such as PISA.

This paper, however, has explored a different analytical perspective to illuminate the semantical evolution of outcome-based education, calling attention to the way educational forms and reforms come about in and through the observation and construction of temporality. We have illuminated the evolution of curriculum in Norwegian education from 1988 to 2020 by utilizing concepts from the late Luhmann's highly temporal 'theory of distinctions', focusing on the forms of meaning and deparadoxification strategies that national policy makers use when dealing with future uncertainty.

In the late 1980s and 1990s, Norwegian policymakers turn to *externalizing* efforts observing the political and economic environment. Semantics inspired by human resource management are introduced and neoliberal ideas about governing gains support in the face of increasing critique of the expenditure and quality of education. This is in line with research showing how observations from international actors provoke systemic externalizations often conceptualized as international 'policy borrowing' (e.g. Steiner-Khamsi & Waldow, 2012).

Nevertheless, the evolution of 'new curriculum' in Norway was by far a straightforward process. The 1990s reforms externalized not only to observations from the environment (e.g. policy-borrowing) to deal with future uncertainty, but also to observations of the national past, reconstructing semantical forms of *Bildung* and national heritage. The oscillation between future competency needs and past traditions thus made Norwegian curriculum quite contradictory in content, making it difficult to re-specify the educational intention. Furthermore, the 'PISA shock' of 2001 prompted a floodgate of externalization, moving towards a clearer tendency of asymmetrisation, in which 'old curriculum' was called into question, while 'new curriculum', focusing on skills and learning outcomes, was seen as increasingly more incontrovertible.

The strategy of asymmetrisation was further strengthened in the policy-initiating process leading up to the most recent educational reform in Norway, LK20. 'Old curriculum', emphasizing educational inputs and selected content, was now associated with the risk of being outdated—unsuitable for anticipating the uncertain demands of the future. 'New curriculum', however, emphasizing social and emotional skills, transversal competences and learning in 'real-time-situation', was considered timely. Although this strong asymmetrisation of 'new curriculum' made it possible to hide the paradoxical impasse of Norwegian education, the reform process leading up to LK20 emerged in more complex directions.

The reform documents of LK20 selectively connect to policy initiatives from OECD and KeyCoNet, mediated by the policy-initiating Norwegian Official Report NOU 2015:8. Still, the reform documents proved to be selective in terms of *which* forms to introduce, and clearly *modifies* their semantic meaning. This is especially evident in the way the reform chooses to dissolve the paradox of past/future. Rather than merely oscillating between 'old' and 'new' curriculum, or leaning in favour of 'new curriculum', the reform creates a new, hybrid form of education: 'new-old curriculum'. *Bildung* is now re-conceptualized as life-long learning, a process resting on competences, with the purpose of mastering 'life itself'. The distinction between competence-based education and *Bildung* is thus re-entered into the system, creating a new educational form of meaning: 'competence-Bildung'. This new understanding of *Bildung* appears to play an important role in mediating between the time horizons of the (present) past and the (present) future in the documents of the LK20 reform.

Luhmann's (2006b) and Luhmann and Schorr (2000) historical-semantic investigations identify important shifts in educational meaning as modern society evolves from segmentary to stratificatory and functional differentiation. Previously, *Bildung*<sup>7</sup> ensured the autonomy of the educational system by an idealized relationship between a canonized body of academic knowledge, representing 'the world', and individual self-cultivation. Self-cultivation was indispensably related to educational

content and school education. The semantics of *Bildung* thus emphasized the autonomy of education, leaving little room for external societal demands (Luhmann & Schorr, 2000, pp. 88–94).

However, as Luhmann (1998, p. 4) states: ‘The semantic apparatus of old Europe is no longer taken for granted as the common foundation of education’. The emergence of mass schooling gradually undermined the canonical certainties of schooling, and the *ability to learn* has gradually replaced *Bildung* as the primary educational form (‘contingency formulae’). This implied a semantic shift in which the autonomy of education no longer depended on a given body of educational content, and *selection* of educational content came to the forefront of education. Education is no longer striving to ensure continuity between past and present by selecting heritage and normative integration patterns. Rather, education, as any other functional system of modern society, becomes increasingly oriented towards the future by constructing cognitive expectations of educational outcomes and goals.

Luhmann’s (1971, p. 26) observation that there is a structural primacy of future-oriented, cognitive expectation patterns in modern society is articulated in his organizational studies (2000, p. 261) as a difference between conditional and purposive programmes. While conditional programmes are past-present oriented, regulating communications through internal references to decisions of the past (rules, contents, etc.), purposive programmes are future-oriented, regulating communication by constructing cognitive expectations of future outcomes and goals (Luhmann, 2000, p. 266; Sivesind et al., 2016). Despite the co-existence of (seemingly) normative expectation patterns, such as *Bildung*, cultural heritage, and collective values, LK20 is clearly dominated by cognitive expectations, focusing on future outcomes and goals. As a reform programme, LK20 can thus be characterized as a purposive programme, setting out to regulate communication by constructing cognitive expectations of future outcomes and goals (Luhmann, 2000, p. 266).

The paper shows that LK20 does not revitalize *Bildung* in a traditional sense. When *Bildung* is understood as ‘lifelong learning’, it is no longer bound to educational content and school education but becomes an adaptable form. *Bildung* in LK20 is thus different from *Bildung* of the past. The combination ‘competence-Bildung’ moves the system out of the standstill of oscillation, making it possible to respecify the universal intention to educate in content by aiming at practicing the ability to learn. The paradox is no longer postponed by asymmetrisation (‘new curriculum, not traditional’) but simultaneously kept in place and changed into the modality of ‘traditional, but as new curriculum’.

## Concluding points

In this paper, we have observed how historically changing observations of the past and the future in Norwegian education have fuelled and legitimized the emergence of educational reform in the timespan 1988–2000. Rather than understanding the emergence of ‘new curriculum’ in Norway as a teleological process of increasingly more globalization and ‘neo-liberal’ standardization, we have suggested an understanding of educational evolution as efforts at dealing with time and an uncertain future. By engaging with concepts from the late Luhmann, such as observation, distinction, form, re-entry, paradox, and de-paradoxification, the highly temporal and selective characteristics of curriculum change become evident.

While *Bildung* and content-oriented programmes were oriented towards the past by reproducing educational content of value to society, ‘new curriculum’ is oriented towards preparing students for their future participation in society and work life. The education system is now programmed to produce skills and competences that make it easier for human beings to participate in and be addressed by the different communication systems of society. Luhmann’s perspective on educational change, for instance, through his concept of future-oriented, purposive programmes, may thus provide an important (temporal) alternative to the more common understandings of ‘neo-liberal governance’ and ‘cognitive capitalism’.

Our findings indicate that the global evolution of 'new curriculum' is not a linear process of increasingly more homogenization but develops in surprising directions. The combination of externalization efforts to the 'outside' (e.g. policy-borrowing) and to the historical past (e.g. as 'retrotopia') results in the emergence of new, creative educational forms, enabling the system to continue its own autopoiesis. Norwegian education is thus not understood as a space of local contingency, at risk of losing its essential flavours in the encounter with the hegemonic forces of 'new curriculum'. Rather, Norwegian education is constantly being constructed and reconstructed within the horizon of the 'world' and as a difference between past and future events. As Luhmann (1998, p. 5) pertinently states: 'Life is less and less determined by local environments'.

As Vanden Broeck (2019) points out, the anticipation of an uncertain future provides the educational present with an inexhaustible reservoir of possibilities. Within the horizon of an uncertain future, there are no boundaries to what competences and themes education can include. Increasingly more output measures in terms of social and emotional skills are incorporated into the education system's self-descriptions—structural changes that contribute to the growth of the educational system. In conclusion, while *Bildung* as self-cultivation in the encounter with an incontestable canon implies autonomy and the risk of under-integration of education with society, 'new curriculum', emphasizing *learning*, implies adaptability and dependencies of outcomes and other-references. More research is needed to illuminate the consequences of this constant other-orientation and growth of educational communication, uncovering whether outcome-based education poses a risk of over-adaptability of education to the outside world.

## Notes

1. In this paper, our focus has not been to analyse curriculum changes chronologically, but to show similarities as well as divergence in meaning between recent Norwegian policy and curriculum documents and documents from the networks that have been explicitly inspirational to the reform. Therefore OECD (2018) and KeyCoNet (2018) are included in the analyses, despite the fact that they were published after the Official Norwegian Report NOU 2015:8. The relevance of analysing documents from these networks were established by reading the Norwegian interim report NOU 2014:7 (see section 8.3), where OECD and KeyCoNet are emphasized as international programmes that have been inspirational to the reform."
2. Education 2030 builds on the well-known DeSeCo project (Definition and Selection of Competencies).
3. In Norway, relevant governmental agencies, organizations, unions, institutions, and associations are given the opportunity to state their opinions about policy-suggestions in so-called public hearing.
4. Social and emotional competences are considered preconditions for learning, but not as primary objectives of schooling. As aptly stated in WP28: 'It is an important principle that schools shall not formulate individual goals for the pupils' personality, attitudes and preferences' (24). The difference in the status of social and emotional competences is also expressed by a much thinner definition of competence promoted by WP28 (28) as compared to the other documents.
5. It is however important to emphasize that, although the curriculum documents use the term *Bildung*, they do not use it in the same way as in the Didaktik-tradition.
6. The Norwegian formulation is '*utdanning og danning*'.
7. *Bildung* and learning to learn are called 'contingency-formulae' in Luhmann's (2006b) theory. Such formulae deal with communicative indeterminacy and ensure the unity of the system, but change in accordance with the idea-evolution of society and systems. Luhmann seems to use both the term 'contingency-formulae' and 'educational form', and although the previous may be more precise, we use the latter to avoid too many abstract concepts.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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