

**DIRECTORATE FOR EDUCATION AND SKILLS
EDUCATION POLICY COMMITTEE**

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Education and Skills 2030: Curriculum analysis**Literature review on flexibility and autonomy****8th Informal Working Group (IWG) Meeting****29-31 October 2018****OECD Conference Centre, Paris, France**

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FOR ACTION: Participants are invited to COMMENT before 5 November 2018.

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Abstract

This review summarizes literature on the topic of curriculum flexibility and autonomy. The paper gives a description of curriculum flexibility, autonomy and agency. The results are discussed in terms of the implemented curriculum, the attained curriculum and conditions. The implemented curriculum describes school and teacher curriculum flexibility. The attained curriculum describes school and teacher autonomy in relation to student achievement. Finally, the paper describes under which conditions curriculum flexibility and autonomy contribute to teacher agency/ teacher performance/ teacher well-being and student agency/ student performance/ student well-being.

Introduction

This literature review is part of the Curriculum Analysis for Education2030, which is part of the Future of Education and Skills: the OECD Education2030 project. The major purpose of the OECD Education2030 project is “to develop a common language and shared space within which countries could both individually and collectively, explore issues around the design of instructional systems” (EDU/EDPC (2016)6, p.2).

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A literature review will be conducted on curriculum flexibility and autonomy. The overall research question for the review: “How do different forms (organizational, programmatic, pedagogical) of curriculum flexibility and autonomy (curriculum responsibilities at meso and micro level) in jurisdictions affect the implemented and attained curriculum? ”

This question will be answered by answering four sub questions:

1. What kind of forms does "curriculum flexibility and autonomy" exist at meso (school) and micro level (teacher) – including organizational, programmatic, pedagogical etc.
2. How do these different forms (e.g. organizational, programmatic, pedagogical) of curriculum flexibility and autonomy (curriculum responsibilities at meso and micro level) in jurisdictions affect the implemented curriculum (with a focus on teacher agency and teacher well being)? What evidence or counter-evidence exists whether curriculum flexibility / autonomy risks or undermines the teaching of basics
3. How do different forms (organizational, programmatic, pedagogical) of curriculum flexibility and autonomy (curriculum responsibilities at meso and micro level) in jurisdictions affect the attained curriculum (with a focus on student performance and well being)? What evidence or counter-evidence exists whether curriculum flexibility / autonomy risks or risking academic performance / student well-being?
4. Under which conditions does curriculum flexibility and autonomy contribute to teacher agency/ teacher performance/ teacher well-being and student agency/ student performance/ student well-being?

In section 2 we explain the method we used to find and select the publications we analyzed. This is followed in section 3 by a discussion and definition of the key terms. In section 4 we present the results of our study. In section 5 we present the conclusions of the review. We conclude in section 6 with recommendations for policy and further research.

Method

Search strategy and data set

To find relevant literature for this study we used a two-way approach: 1) a limited systematic review of scientific literature and 2) the snowball method and our network to find relevant descriptive and evaluation studies from a variety of jurisdictions to complement findings from the scientific review.

The following criteria will be used for inclusion of the collected studies in the review:

- Variation of countries based on different curriculum (de-)regulation policies;
- Published after 2005;
- Literature reviews;
- Empirical studies of adequate quality, including quantitative and qualitative studies;
- Publications accessible by the research team;
- The review is limited to primary and secondary education (5-18 years) .

For the limited systematic review we searched in scientific data bases (ERIC, Scopus and Web of Science) for peer reviewed articles in the English language. The following combination of key terms was used: 1) curriculum reform; 2) jurisdiction; 3) autonomy & flexibility and 4) K-12. (see Appendix 1 for the search strategy applied). This resulted in 26 publications, of which eight were included in the review. The other publications were found through the snowball method and our network. This resulted in 33 publications that were included in the dataset for this review. The research describes research from 15 different jurisdictions: Australia, Canada, Cyprus¹, England, Estonia, Finland, Germany,

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Note by Turkey

The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.

Note by all the European Union Member States of the OECD and the European Union

The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Hong Kong, Israel, Korea, the Netherlands, New Zealand, Norway, Scotland, Singapore and Sweden.

The distribution in type of publication and year of publication are presented in Tables 1 and 2. The following jurisdictions are included in the study:

Table 1. Type of publications

Type of publication	Number
Position paper	2
Review study	0
Report/ Conference paper	6
Book chapter	4
Peer-reviewed scientific articles	21

Table 2. Year of publication

Year of publication	Number
>= 2015	22
2011-2014	8
= '<' 2010	3

Analysis

The studies were summarized using a template, which consists of background information (author(s), date of publication, title); purpose/research questions guiding the study; context of the study (including regulation policies when appropriate); type of study and main conclusions about curriculum flexibility and autonomy in relation to the implemented and attained curriculum. The summaries will be used to synthesize the findings of the studies. When necessary we will go back to the original publication.

Curriculum flexibility and autonomy: Towards a conceptual framework (RQ1)

- What kind of forms does "curriculum flexibility and autonomy" exist at meso (school) and micro level (teacher) – including organizational, programmatic, pedagogical etc.

Curriculum flexibility

A curriculum is a plan for learning (Taba, 1962), which is usually formulated at several levels: the macro, meso and micro level. The nature of the specifications of the curriculum at the national or state level, constraints the freedom for schools and teachers to formulate curriculum at the school and classroom level. Usually the curriculum provides specifications about curriculum elements: the why, what, how, when and where of student learning (van den Akker, 2003). The curriculum rationale (why) is the linking pin between all other elements. Curriculum flexibility refers to a curriculum that is adaptable to the needs and capabilities of students. A curriculum can be flexible with respect to the what, how, when and where of learning (Tucker & Morris, 2011). These different forms of flexibility can require actions from the organization, the curriculum, and pedagogy. Tucker and Morris (2011) position a flexible curriculum at any point between the two opposites of a continuum, with complete flexibility at the one end and completely fixed on the other end. This implies that there are degrees in flexibility. These different forms of flexibility are summarized in Table 3.

Table 3. Different forms of curriculum flexibility (adapted from Jonker, Marz & Voogt, submitted).

Assumptions (Tucker & Morris, 2011; Willems, 2005)	Flexibility (Tucker & Morris, 2011)		Curriculum elements (Van den Akker, 2010)
Programmatic responsiveness	What	Content	aims & objectives content assessment
Pedagogical responsiveness	How	Pedagogies	learning activities materials/resources grouping teacher roles
Organizational responsiveness	Where	Location	learning environment
	When	Time	time

Curriculum flexibility at the school (meso) and teacher (micro) level is constrained by the extent of input (attainment, goals standards) and the output (national exams, standardized tests and the inspectorate) regulation at the macro level.

Autonomy

Autonomy is usually associated with freedom from external control or influence (Oxford dictionary - <https://en.oxforddictionaries.com/definition/autonomy>). Autonomy thus refers to the domain of influence on which someone has decision-making authority and the associated responsibilities. Autonomy in the context of education often refers to the meso and micro level. At the meso level autonomy can be granted to overarching school boards or school districts as well as to individual schools. At the micro level it is usually associated with teacher autonomy. Most publications in this review refer to school and teacher autonomy. School autonomy may relate to decision-making authority of schools about curriculum and assessment, resources and student policies (Suggett, 2015) (31). School autonomy is also discussed as a vehicle in offering choice to the users of the school, the students and their parents (Lubienski, 2009 (30), which may result in competition between schools. Teacher autonomy relates to decision-making granted to teachers. Erss (2018) (05) mentions three characteristics of teacher autonomy: self-directedness, capacity for autonomous action and freedom from control. Autonomous action may relate to decision-making about scheduling, selecting, and executing instructional, curriculum, organizational and pedagogical activities related to the classroom and, as a collective, to the school organization (Wermke et al. 2018) (08). In the practice of education autonomy is often shared between the macro, meso and micro level and involve different educational stakeholders, in particular the government, school management and teachers.

Agency

Both autonomy and agency refer to empowerment. Yet, the research literature makes a clear distinction between the two concepts. While autonomy emphasizes freedom from control, agency is related to the taking of initiatives to transform current practice (Engeström, 2005). Biesta and Tedder (2007) argue that agency implies that “actors always act by means of their environment rather than simply in their environment [so that] the achievement of agency will always result from the interplay of individual efforts, available resources and contextual and structural factors as they come together in particular and, in a sense, always unique situations” (p. 137). Thus agency is not so much an individual has, but something that an individual can do. It is informed by past experience, future-oriented and enacted in (the limitations and potential of) current practice (Priestley et al., 2105) (01).

Other terms relevant for this review are curriculum, curriculum innovation, education system and curriculum (de-)regulation. These will be briefly explained below.

Curriculum (based on OECD glossary): Curriculum is a political, policy and technical agreement among the various institutions and stakeholders, from both inside and outside the education system, on why, what, how, when and where to educate and learn. In this review we refer to the curriculum at the level of: national/state (jurisdiction), school/district and classroom level. We limit ourselves to the curriculum for K-12 (ages 5 - 18). The curriculum is a key agent of the educational policy that contributes to the realization of the type of society pursued. It entails a series of planned teaching and learning experiences. A curriculum should have quality (that is rigor, focus and coherence) and be relevant for learners. A curriculum can have different manifestations: the intended, implemented and attained curriculum.

Curriculum innovation (or reform or renewal) (based on OECD glossary): Minor or major modifications of the curriculum to improve or adapt it to new circumstances or priorities. Curriculum innovation can be small changes that brings new approaches and solutions; and large scale, system-wide reform that entirely reshapes the existing curriculum.

Education system: The education system describes how education in a jurisdiction is organized. It refers to the way students go through the system and the way the curriculum, assessment and accountability system are regulated.

Curriculum (de-)regulation: Curriculum regulation refers to governing education through *directives at input* (e.g. attainment goals, standards) and *output level* (e.g. national exams, standardized tests, inspectorate), leading to limited room for curriculum decision making at the school level. Curriculum deregulation reflects governing education by staying away from control at the input and output level and giving room for curriculum decision making at school level (Kuipers, Nieveen & Berkvens, 2013).

Results

General overview of the results

Table 4. Curriculum flexibility and autonomy in the implemented curriculum (check)

	Teacher autonomy	School autonomy
programmatic	15	14
pedagogical	10	4
organizational	3	6

Table 5. Curriculum flexibility and autonomy in the attained curriculum: effects on students (check)

	Effects on students
programmatic	5
pedagogical	1
organizational	4

Curriculum flexibility and autonomy: The implemented curriculum (RQ2)

How do these different forms (e.g. organizational, programmatic, pedagogical) of curriculum flexibility and autonomy (curriculum responsibilities at meso and micro level) in jurisdictions affect the implemented curriculum (with a focus on teacher agency and teacher well being)? What evidence or counter-evidence exists whether curriculum flexibility / autonomy risks or undermines the teaching of basics.

Several studies in our dataset however provide a nuanced view on the relationship between curriculum flexibility and how schools and teachers use the autonomy granted to them and the context of the educational system in which school and teacher autonomy is situated.

Curriculum flexibility and school autonomy

School autonomy and pedagogical and curriculum innovation

Greany and Waterhouse (2016)(17) studied the relation between school autonomy, school leadership and curriculum innovation over a period of 40 years in England. They found no correlation between increased autonomy and the level of curriculum innovation. In particular their study showed that that extensive accountability, in terms of high stakes testing and a rigorous school inspection system, constraints the autonomy of most schools in England. Only school leaders that have capacity, confidence and are willing to take risks use their autonomy to develop innovative curricula. Greany and Waterhouse (2016)

propose two distinguish between two types of autonomy: (1) structural autonomy refers to the formal delegation of decision making power to schools with respect to resources, curriculum and pedagogy, and (2) professional autonomy, referring to the capacity, confidence and trust granted to school leaders to use the decision-making power granted to them in an effective way. School autonomy to realize curriculum reform in Hong Kong is also addressed by Ko, Cheng and Lee (2016) (19). They also found that school leaders that provide a positive collaborative school climate and encourage continuous teacher professional development support the implementation of curriculum reform in practice. They emphasize the relationship between school autonomy and the professional autonomy granted to teachers. Caldwell (2016) (18) in a study in Australia mentions the importance of distributed school leadership in this respect, but also observes that schools are not always good in utilizing their autonomy is an effective way. Also Newton and Da Costa (2016) (23) showed that the relationship between school autonomy, when understood as school principal autonomy, is not enough to understand the implementation of 21st century learning in Canada (Alberta). In particular the autonomy granted to teachers was considered essential. The importance of professional autonomy of the school leader is also emphasized in studies in the Netherlands (Onderwijsraad, 2014) (11) and Finland (Saarivita & Kumpalinen, 2016) (22). These findings indicate that school autonomy as such does not contribute to the implementation of innovative pedagogy and curriculum, but that professional leadership exerted by school leaders towards teachers and teaching matters. Also Lubienski (2009) (30) did not find a relationship between school autonomy and the implementation of innovative curriculum and pedagogical implementation. He argues that parents prefer schools that with traditional curricula and proven pedagogical practices, instead of schools that focus on realizing innovations.

School autonomy and government steering

Kuiper (2017) (02A) mentions several curriculum related factors that hamper schools in the Netherlands to use the autonomy granted to them. In particular schools (and teachers) feel unsure due to different kinds of standards that either lack specificity or are very specified (input regulation). In addition schools (and teacher) experience pressure from the monitoring and assessment system, which is not always aligned with the expected standards. The degree of input and output regulation impacts the autonomy regarding the curriculum granted to schools (and teachers). Similarly, Greany and Waterhouse (2016) (17) found how the accountability system (output regulation) negatively affects the uptake of curriculum innovation in English schools. Countries not only differ in this respect, but the degree of regulation often changes over time (Kuiper, van den Akker, Hooghoff & Letschert (2006) (10); Nieveen & Kuiper, 2012 (12)). In the Netherlands the call for school and teacher autonomy is also the result of the negative effects of large scale curriculum reforms in the 1990s of the previous century (Kuiper, Nieveen & Berkvens, 2013 (38)). This change over time also implies that autonomy granted to schools and teachers varies and is not only a matter of competency, but also of a context that gives room to autonomy (Priestley et al., 2015) (01).

A study in Israel showed that government policies with respect to school autonomy and implementation of 21st century curriculum practices were not well aligned (Nir, Boglar, Inbar & Zohar (2016) (20)). On the one hand school autonomy was encouraged, but the mechanisms for the implementation of 21st century curriculum practices consisted of external monitoring and high stakes testing, disregarding the autonomy of schools completely. This is somewhat similar to the policy in Singapore where schools are autonomous in the enactment of co-designed lesson plans aimed at teaching inquiry-based

learning and in the pace of the diffusion of the innovation, but are hold accountable for their results with respect to student learning (Toh, Hung, Chua, He and Jamaludin (2016)(21). This differs from the situation in the Netherlands, where there is concern about schools and teachers not using their autonomy, therefore the Educational Council (Onderwijsraad, 2014 (11)) emphasized the importance of limiting government steering.

Curriculum flexibility and teacher autonomy

In the previous section we already emphasized the important connection between school autonomy and teacher autonomy. In this section we focus on teacher autonomy as such, teachers' perceptions on the autonomy granted to them, the context and culture in which teacher autonomy is situated and how this affects their agency and well-being.

Factors impacting teachers' perceptions on their autonomy

Several studies in our data set studied how teachers from different countries differ in their perception of the autonomy granted to them. Erss (2018 (05) and Erss, Kalmus and Autio (2016) (06) report about the views of Finnish, Estonian and German (Bavaria) on the autonomy granted to them. Wermke, Rick and Salokangas (2018)(08) compared the perceptions of Swedish and German teachers and Paradis, Lutovac, Jokikokko and Kaasili (2018) (09) studied Canadian (Quebec) and Finnish teachers. These studies differ in their specific research questions and their theoretical framework, but a general picture emerges. A general finding from all studies is that teachers' sense of autonomy depends on the historical, cultural and historical context of the education system. The teachers in the countries that were studied feel and enjoy the pedagogical autonomy granted to them, but they differ in their perception of the curricular autonomy they have. Within the context of the national core curriculum Finnish teachers experience curricular autonomy to some degree, they endorse the curriculum and don't feel that it is too prescriptive. They feel that their professionalism is trusted by society and that they are granted autonomy over their teaching and pedagogy. The importance of the trust experienced by Finnish teachers, is also mentioned by Halinen and Holappa (2013) (37). They accept that there are issues that are beyond their control. Finnish teachers showed satisfaction and well-being. German teachers feel limited in their curricular autonomy. They accept that and expect more guidelines and specification about what is expected from them (input regulation). They experience little output regulation. Collective decision-making at the school level is at the heart of decision-making in German schools. There is much control at the school level, but with little formal consequences. German teachers perceive control from parents. The Estonian teachers perceive their curriculum as too idealistic and not well resourced. They expect more curriculum guidelines and specifications and feel not so autonomous, because they are hold accountable for their student achievements (output regulation). Also Swedish teachers feel restricted in their autonomy. They mention pressure and control when it comes to student achievement issues (also due to low results in PISA), not only from within the education system, but also from parents, media and the research community. This situation is also explained by the marketization of the Swedish school system in which students and parents are seen as customers. Finally, Canadian teachers feel that their curricular autonomy is decreasing and expressed concerns about this. An important reason is the increasing level of output regulation in terms of accountability and monitoring, which negatively affects their well-being. Newton and Da Costa (2016) (23) emphasize in their study about autonomy and 21st century learning in Canada the importance for teachers to have autonomy to be able to experiment with innovation and practice 21st century learning in their classes. To conclude, teachers that are not satisfied with the autonomy granted to them

feel that they are not taken serious as a professional, which negatively affects their motivation and commitment (Paradis et al., 2018). But, while a decrease in job-related stress of teacher autonomy has been reported, only a slight association with job satisfaction was found (Sinnema, 2015) (34).

Other studies report the constraints teachers perceive when they reflect on their autonomy, such as overregulation and bureaucracy (Onderwijsraad, 2016). Teachers in the Netherlands feel that they lack control over their work. They experience that their craftsmanship is not taken serious and they feel executors instead of designers of education (Onderwijsraad, 2016). However, teachers in the Netherlands also do not use the autonomy granted to them, because of unclear standards to which they have to comply (Kuiper, 2017 (02A)). Instead they create their own clarity by using textbooks as a self-imposed form of prescription. Sinnema (2015) (34), in the context of New Zealand, points to the complexity of the curriculum design task when it is completely left to teachers and the risk of cognitive overload. She mentions that teachers might lack the capacity to design the curriculum or do not welcome the extra burden of the responsibilities coming with autonomy. In the context of Hong Kong autonomy is granted to teachers, but at the same time contested because of the centralized system of monitoring student achievement. In this context teacher autonomy is vulnerable (Ko et al., 2016 (19)). In Korea teachers were granted autonomy but the substance of the curriculum did not change, thus they felt that they had limited room to exercise their autonomy (Hong & Youngs (2016) (35).

Exercising agency

Teacher agency depends on the interplay between teacher's prior experiences, capacity and ambitions with the possibilities offered in the innovative curriculum (Priestley, Biesta, Philippou & Robinson (2015) (01). They studied teacher agency in the context of curriculum reforms in Scotland and Cyprus. They found that context matters to achieve agency. Teachers may not use their prior experiences, capacity and ambitions if they perceive the innovation context as too difficult or too risky. Teachers may also use their agency to resist change. The importance of context and culture in relation to achieving teacher agency is also illustrated in a study in Singapore, where teachers teach 'critical thinking' as a mere technical skill, following the curriculum and examination requirements, but realize at the same time that this way of teaching is very limited in developing relevant critical thinking skills for life (Lim, 2014) (24). According to Priestley et al. (2015) teacher autonomy does not simply result in teacher agency. Priestley, Edwards, Millar & Priestley (2012) (32) suggest that educational policy making in the context of curriculum reform needs to take teachers' engagement into account. The complex relationship between teacher agency and curriculum reform also becomes clear in a study from Ramberg (2014) (29). He studied the relationship between the 2006 national curriculum reform in Norway (KP06) and their teaching practice. Ramberg (2014) found that it was not the reform as such that changed teachers' teaching practice, but their general orientation towards however influenced by teacher collaboration and the way school leadership was enacted.

Curriculum flexibility and autonomy: The attained curriculum (RQ 3)

How do different forms (organizational, programmatic, pedagogical) of curriculum flexibility and autonomy (curriculum responsibilities at meso and micro level) in jurisdictions affect the attained curriculum (with a focus on student performance and well being)? What evidence or counter-evidence exists whether curriculum flexibility / autonomy risks or risking academic performance / student well-being.

In this section we discuss how schools (and teacher) autonomy affects the attained curriculum. Several studies in our data set suggest a positive relation between school/teacher autonomy and student learning. At the same time these studies show nuances in the interpretation of this relationship.

School autonomy and student achievement

Results from the PISA 2015 study show a positive association between school autonomy (and to some extent teacher autonomy) and students' science scores (OECD, 2016) (14), in particular when schools have a say over the curriculum. The same study found that students obtained lower scores in science when the main responsibility over the curriculum is situated at the national level. However, when the socio-economic profile of students is taken into account no correlation between autonomy and student achievement was found. In fact steering of the curriculum at the national level resulted in more equitable science scores. This finding may be explained by the distribution of autonomy: across OECD countries socio-economically disadvantaged schools and rural schools are granted less autonomy than advantaged and urban schools.

The relation between school autonomy and student achievement scores also depend on the readiness of schools to use their autonomy and to the extent to which they are held accountable

for student outcomes. The PISA 2015 study found a stronger positive association between school autonomy and student achievement in countries that have a monitoring system in place that follow students' achievement on a regular basis (OECD, 2016). Reflecting on the large differences in quality between schools, the Dutch inspectorate (in Kuiper, 2017 (02A)) suggested that the autonomy granted to schools in the Netherlands can have a reverse effect: "If schools do not monitor their students well and do not set ambitious goals for themselves, they will not get the most out of their students." (p.19). Also Sinnema (2016) (35), Caldwell (2016) (18) and Ko et al. (2016) (19) refer to several studies that found a positive relationship between school autonomy and student achievement if there is a balance between autonomy and accountability. Caldwell (2016), however reported little evidence between school autonomy and student achievement in so called 21st century skills.

Teacher autonomy and student achievement

Ko et al. (2016) (19) in their study in Hong Kong found that the success of innovation aiming at realizing student-centered pedagogical practices may not lie in school autonomy as such, but also to the extent autonomy is granted to teachers. After all it is the change in teachers' practices that are needed to enact curricula that assume such pedagogies. According to Ko et al. (2016) literature shows stronger teacher effects than school effects of autonomy on student learning. In a study in Singapore teachers instrumentally implemented critical thinking in the curriculum, because of detailed syllabi and assessment practices. As a result weaker students were not motivated and showed resistance, because they did not recognize themselves in the approach to teaching (Lim, 2014) (24). Paradis et al. (2018) (09) report about studies that show that teachers' dissatisfaction with their perceived autonomy affects not only their motivation and commitment, but also their teaching. In particular they mention adapting their teaching to different students.

School and teacher autonomy and student achievement: a complex relationship

The studies in our dataset did not find a direct relationship between school and teacher autonomy and student outcomes (Ko et al., 2016 (19). Suggett 2015) suggests that school

and teacher autonomy is interacting with other elements in order to improve school and student performance. In particular the nature and level of autonomy, the accountability context in which the school operates and the readiness of school principals and teachers to enact the autonomy granted to them (Caldwell, 2016 (18); Ko et al., 2016; OECD, 2016 (14); Suggett, 2015 (31)).

Suggett, 2015 (31) also points to the intrinsic value many (school leaders, teachers, policy) attach to the decision-making responsibilities of schools and teachers. A study of Fairbrother and Kennedy (2011) (25) illustrates this position. They investigated the expected effect of the implementation of civic education as a compulsory subject in Hong Kong and found a relatively small positive effect on student learning outcomes. Yet, Fairbrother and Kennedy (2011) argue that the effect is too small to support the compulsory introduction of civic education at the expense of the autonomy of schools. The main reasons to support their argument is that school autonomy is an important value of schooling in Hong Kong and that teachers in Hong Kong find it important to teach civic education (Fairbrother & Kennedy, 2011) (25). Laet and Thomas (2018) (04) argue that school-based curriculum making is important for preparing young people for current society, also because a local curriculum will provide students with concrete opportunities to contribute to society. Yet, they acknowledge that school-based curriculum making requires capacity building for teachers as well as the development of a culture that supports teachers as curriculum makers. Yet, Sinnema (2015) (34) also mentions the risk of school-based curriculum making from a student perspective. After all, national standards guarantee the provision to students of education as a shared responsibility of society and as such contributes to equity.

Conditions (RQ4)

Under which conditions does curriculum flexibility and autonomy contribute to teacher agency/ teacher performance/ teacher well-being and student agency/ student performance/ student well-being?

To be elaborated

Conclusion

To be elaborated

Recommendations for policy and further research

To be elaborated

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Appendix 1

Databases

ERIC	5 results (August 6, 2018)
Web of Science	13 results (August 6, 2018)
Scopus	9 results (August 6, 2018)
Total	27 results
Total, deduplicated	26 results

ERIC

Ovid

#1 curriculum reforms

(curriculum ADJ2 (renewal OR innovat* OR reform* OR change)).ti,ab.

Results: 4454

#2 State

National curriculum/ OR state standards/ OR (national OR state OR region* OR provinc* OR countr* OR federal*).ti,ab.

Results: 334569

#3 K12

elementary secondary education/ OR grade 1/ OR grade 2/ OR grade 3/ OR grade 4/ OR grade 5/ OR grade 6/ OR grade 7/ OR grade 8/ OR grade 9/ OR grade 10/ OR grade 11/ OR grade 12/ OR elementary education/ OR elementary schools/ OR primary education/ OR public schools/ OR middle schools/ OR junior high schools/ OR secondary education/ OR secondary schools/ OR high schools/ OR (elementary education OR elementary school* OR primary education OR primary school* OR K-12* OR K12 OR 1st-grade* OR first-grade* OR grade 1 OR grade one OR 2nd-grade* OR second-grade* OR grade 2 OR grade two OR 3rd-grade* OR third-grade* OR grade 3 OR grade three OR 4th-grade* OR fourth-grade* OR grade 4 OR grade four OR 5th-grade* OR fifth-grade* OR grade 5 OR grade five OR 6th-grade* OR sixth-grade* OR grade 6 OR grade six OR intermediate general OR secondary education OR secondary school* OR 7th-grade* OR seventh-grade* OR grade 7 OR grade seven OR 8th-grade* OR eight-grade* OR grade 8 OR grade eight OR 9th-grade* OR ninth-grade* OR grade 9 OR grade nine OR 10th-grade* OR tenth-grade* OR grade 10 OR grade ten OR 11th-grade* OR eleventh-grade* OR grade 11 OR grade eleven OR 12th-grade* OR twelfth-grade* OR grade 12 OR grade twelve OR junior high* OR highschool* OR preuniversity OR pre-university).ti,ab.

Results: 528886

#4 autonomy & flexibility

(autonomy/OR flexib*/OR deregul*/OR personali*/ OR local curriculum/ OR school-based curriculum/ OR school based curriculum/ OR teacher agency). ti,ab.

Results: 1280

1 AND 2 AND 3 and 4 19 results

Limit to peer review 5 results

Limit to 2000-.. 5 results

Web of Science**#1 curriculum reforms**

TS=("curriculum" NEAR/1 ("renewal" OR "innovat*" OR "reform*" OR "change"))

Results: 1409 (LIMITED TO ARTICLES AND ENGLISH LANGUAGE)

#2 State

TS=("national" OR "state" OR "region*" OR "provinc*" OR "countr*" OR "federal*")

Results: 72417 (LIMITED TO ARTICLES AND ENGLISH LANGUAGE)

#3 K12

TS=("elementary education" OR "elementary school*" OR "primary education" OR "primary school*" OR "K-12*" OR "K12" OR "1st-grade*" OR "first-grade*" OR "grade 1" OR "grade one" OR "2nd-grade*" OR "second-grade*" OR "grade 2" OR "grade two" OR "3rd-grade*" OR "third-grade*" OR "grade 3" OR "grade three" OR "4th-grade*" OR "fourth-grade*" OR "grade 4" OR "grade four" OR "5th-grade*" OR "fifth-grade*" OR "grade 5" OR "grade five" OR "6th-grade*" OR "sixth-grade*" OR "grade 6" OR "grade six" OR "intermediate general" OR "secondary education" OR "secondary school*" OR "7th-grade*" OR "seventh-grade*" OR "grade 7" OR "grade seven" OR "8th-grade*" OR "eight-grade*" OR "grade 8" OR "grade eight" OR "9th-grade*" OR "ninth-grade*" OR "grade 9" OR "grade nine" OR "10th-grade*" OR "tenth-grade*" OR "grade 10" OR "grade ten" OR "11th-grade*" OR "eleventh-grade*" OR "grade 11" OR "grade eleven" OR "12th-grade*" OR "twelfth-grade*" OR "grade 12" OR "grade twelve" OR "junior high*" OR "highschool*" OR "preuniversity" OR "pre-university" OR "child*" OR "adolesc*" OR "boy*" OR "girl*" OR "youth")

Results: 538090

#4 autonomy & flexibility

TS=("autonomy"/OR "flexib*"/OR "deregul*"/OR "personali*"/ OR "local curriculum"/
OR "school-based curriculum"/ OR "school based curriculum"/ OR "teacher agency")

Results: 170750 (LIMITED TO ARTICLES AND ENGLISH LANGUAGE)

1 AND 2 AND 3 AND 4 14 results

Limit to 2000-.. 13 results

Scopus**#1 curriculum reforms**

TITLE-ABS-KEY({curriculum} W/1 ({renewal} OR innovat* OR reform* OR
{change}))

Results: 5689 (LIMITED TO ARTICLES AND ENGLISH LANGUAGE)

#2 State

TITLE-ABS-KEY({national} OR {state} OR region* OR provinc* OR countr* OR
federal*)

Results: 6633341 (LIMITED TO ARTICLES AND ENGLISH LANGUAGE))

#3 K12

TITLE-ABS-KEY({elementary education} OR "elementary school*" OR {primary
education} OR "primary school*" OR "K-12*" OR {K12} OR "1st-grade*" OR "first-
grade*" OR {grade 1} OR {grade one} OR "2nd-grade*" OR "second-grade*" OR {grade
2} OR {grade two} OR "3rd-grade*" OR "third-grade*" OR {grade 3} OR {grade three}
OR "4th-grade*" OR "fourth-grade*" OR {grade 4} OR {grade four} OR "5th-grade*" OR
"fifth-grade*" OR {grade 5} OR {grade five} OR "6th-grade*" OR "sixth-grade*" OR
{grade 6} OR {grade six} OR {intermediate general} OR {secondary education} OR
"secondary school*" OR "7th-grade*" OR "seventh-grade*" OR {grade 7} OR {grade
seven} OR "8th-grade*" OR "eight-grade*" OR {grade 8} OR {grade eight} OR "9th-
grade*" OR "ninth-grade*" OR {grade 9} OR {grade nine} OR "10th-grade*" OR "tenth-
grade*" OR {grade 10} OR {grade ten} OR "11th-grade*" OR "eleventh-grade*" OR
{grade 11} OR {grade eleven} OR "12th-grade*" OR "twelfth-grade*" OR {grade 12} OR
{grade twelve} OR "junior high*" OR "highschool*" OR {preuniversity} OR {pre-
university}))

Results 199007 (LIMITED TO ARTICLES AND ENGLISH LANGUAGE)

#4 autonomy & flexibility

TITLE-ABS-KEY (autonomy/OR flexib*/OR deregul*/OR personali*/ OR local curriculum/ OR school-based curriculum/ OR school based curriculum/ OR teacher agency)

Results: 175 (LIMITED TO ARTICLES AND ENGLISH LANGUAGE)

(limited to journal and English language)

1 AND 2 AND 3 AND 4 0 results

1 and 4: 16 (limit to journal and English language 10

Limit to 20001990-.. 9 results