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The Eclectic Use of Theory in Educational Research Doctoral Theses

Abstract

A range of different theories may inform educational research. Rather than drawing on well established grand *theories*, more and more educational researchers are drawing on different theories for different research purposes. In this article we review 179 doctoral theses written within the educational sciences in order to examine (1) How frequently is an eclectic use of theory employed within the educational sciences, and how do the candidates combine the different theories? and (2) How do the candidates justify their eclectic use of theory? The theses studied were submitted between 2010 and 2021 to the faculties of education at the two largest universities in Norway, the Norwegian University of Science and Technology (NTNU) and the University of Oslo (UiO). A total of 179 theses were screened to identify words and expressions that could classify them as having an eclectic use of theory. The current analysis provides insights into the frequency of employing an eclectic approach to theory within the field of educational sciences, how educational scientists combine different theories and how they justify their eclectic use of theory. We find that 25 of the theses are eclectic in their theoretical framing, however few candidates corroborate and demonstrate their combination of theories. The lack of demonstration and justification of the integration of theories can be a result of the academic format in a Norwegian article-based PhD and the fact that PhD-candidates often are novices in both the use and discussion of academic theories.

Keywords: eclectic, theory, eclectic use of theory, horizontal addition, doctoral theses

Eklektisk bruk av teori i doktorgradsavhandlinger innen utdanningsforskning

Sammendrag

Utdanningsvitenskapene trekker på en rekke ulike teorier. Snarere enn å ta i bruk såkalte «grand theories», er det stadig vanligere at forskere kombinerer ulike teorier til ulike

formål. I denne artikkelen har vi analysert 179 avhandlinger innenfor utdanningsvitenskap for å undersøke (1) hvor ofte det forekommer eklektisk bruk av teori, og hvordan kandidatene kombinerer ulike teorier, samt (2) hvordan kandidatene begrunner den eklektiske bruken av teori. Avhandlingene vi har undersøkt ble levert i tidsrommet 2010-2021 ved de to største universitetene i Norge, Norges teknisk-naturvitenskapelige universitet (NTNU) og Universitetet i Oslo (UiO) Analysen belyser både hvor vanlig det er å trekke på ulike teorier, hvordan teoriene kombineres og hvordan eklektisk bruk av teori begrunnes. Vi finner at 25 av avhandlingene har eklektisk teoribruk, men at få av kandidatene demonstrerer eller forklarer aktivt hvordan ulike teorier kombineres. I diskusjonen kommer vi inn på mulige forklaringer på hvorfor ikke flere avhandlinger aktivt diskuterer egen kombinasjon av ulike teorier.

Nøkkelord: eklektisk, teori, eklektisk teoribruk, horizontal addition, doktoravhandlinger

1. Introduction

A question that often arises when designing a research project is what theory to draw on. When supervising MA or PhD students, it is something we may ask and re-ask ourselves while conducting analyses of empirical data. While theoretical choices are important, we lack knowledge of how scholars navigate between potential theories in their work. It is argued that the theoretical basis used for educational research is often weakly defined and has an unclear function. There is no *grand theory* in educational research, and many educational scientists therefore adopt and combine theories from different fields to understand, explain or elucidate themes and findings (Klette, 2012; Niss, 2007). Researchers combine the theories that seem most useful for their purposes. Such a use of theories can be described as an eclectic use of theory. The term “eclectic” originates from the Greek word *eklektikós* and means “to be selective”, “to pick out” or “to choose” (Cambridge Dictionary, 2022; Oxford Advanced Learner’s Dictionary, 2019). There are different standpoints, attitudes and views related to an eclectic use of theory. Some will argue that an eclectic use of theory is unscientific, superficial and even naïve:

The negative meaning, which the word still carries, is particularly tied to its use as a principle for scientific theory. According to this, a scientific theory cannot, by definition, be eclectic. Moreover, the tendency is to disqualify the theory. Eclectic becomes here synonymous both with something superficial and with a critique—a reflection-less combination of available theoretical fragments. (Køppe, 2012, pp. 2–3)

Others argue that an eclectic use of theory is appropriate, especially within research that aims to explain practice (Grimen, 2008), and that although theories may belong partly or completely to different theoretical fields, they are not necessarily incompatible (Kvernbekk, 2005; Phillips, 1995; Suppes, 1974).

Always drawing on the same theory without reconsidering whether it really provides the theoretical grounding you need could also be seen as problematic.

In this article, we investigate how PhD candidates within the field of educational research discuss and justify their eclectic use of theory. Doctoral students often have limited prior experience with theory. Furthermore, they are supposed to learn the key concepts of ontology and epistemology; this understanding is particularly important in the eclectic use of theories. A PhD thesis represents a means by which research environments evolve and pass on as well as challenge traditions across scholarly generations. Thus, it can also be seen as representing the broader research environments within which it develops. For these reasons, it is particularly relevant to study how this particular group of researchers navigates their theoretical choices. We were particularly interested in (1) whether and how frequently PhD candidates draw on different theories within their doctoral theses and (2) how they rationalise their use of multiple theories. By answering these questions, we can shed light on how new researchers make and justify their theoretical choices and their awareness of the use of multiple theoretical approaches in the educational sciences. In educational research, the description and justification of the theoretical framework are crucial for providing explanations and predictions. To explore this, we reviewed the theory chapters of 179 doctoral theses written within the educational sciences at the two largest universities in Norway, the Norwegian University of Science and Technology (NTNU) and the University of Oslo (UiO), over the last decade. Our main research questions were as follows:

- How frequently is an eclectic use of theory employed within the educational sciences, and how do the candidates combine the different theories?
- How do the candidates justify their eclectic use of theory?

1.1. The Role of Theory

Theories have many roles and functions in research. They may contain a set of principles to be used when situations are observed or analysed, they can describe or explain a particular phenomenon and they can predict various events. Thus, theories provide structured guidelines for those aspects, or parts, of the world that can be observed, studied and analysed, and they can explain or illustrate how and why something works as it does (Johnson & Christensen, 2019, p. 7).

There are various ways to classify theories, and it is quite common to categorise them as grand, middle-range and substantial theories. Grand theories (Mills, 2000) refer to an abstract theorising of social reality, consist of comprehensive ideas and are constructed to cover all aspects of social life. Critical theory, Sigmund Freud's psychoanalytic theory and Jean Piaget's cognitive theory are all examples of grand theories. Middle-range theories, however, do not refer to a specific theory but are more an approach to theory construction. Hence,

when using middle-range theories, we combine or integrate both theory and empirical data (Boudon, 1991; Merton & Merton, 1968). While Piaget claimed that his theory is universal and applies to everyone, Merton underscored that society is complex and cannot be studied as one entity.

Køppe (2012) extended this three-range classification of theory to four layers. In layer 1 the methods are decisive. All research methods used in scientific contexts, whether qualitative or quantitative, have built-in assumptions of a more theoretical nature. Combining theories in layer 1 is relatively uncontroversial and is often described as a mixed-methods approach. In layer 2 we find what Køppe labelled as “data-defining and hypothesis-creating”. In this layer we combine what many normally perceive as comprehensive and specific theories, like developmental psychology, social anthropology and cognitive theories. Layer 3, referred to as *schools of thought*, are multidisciplinary and cut across scientific disciplines. Examples of theory in layer 3 are psychoanalysis, systems theory and Marxism, which all emerged within a specific scientific discipline but have since gained a wider application across disciplines. In layer 4 we find the ideological beliefs of the world—that is the underlying ontological assumptions. Combining theories in layer 4 is more problematic and some interpret this combination as the lack of a moral standpoint.

There are many reasons for combining different theories. Within the humanities and social sciences, theories describe a phenomenon based on selected parameters and rarely characterise it in all its complexities (Kvernbekk, 2005, 2007). The concepts and phenomena studied are often complex, often vague and difficult to demarcate clearly (Blikstad-Balas, 2017). Therefore, the practice of using more than one theoretical perspective is fairly common and acceptable within disciplines. Different theoretical perspectives can suggest different but reasonable explanations for the same phenomenon (Anfara Jr. & Mertz, 2014).

1.2 The Eclectic Use of Theory

A researcher with an eclectic approach to theory does not commit to one fairly permanent theory, but chooses among several different theories—often in order to study a phenomenon from different perspectives. Some scientists claim that combining multiple theories may be particularly appropriate for studying complex phenomena, such as teaching (Schwab, 2013). Educational research is often linked to formal education courses, but educational processes also take place in a wide range of other fields. Many different stakeholders, including pupils, teachers, parents, politicians, society, school communities, educational institutions, and the various interactions among them, contribute to the complex educational landscape. The diversity of study objects and processes can explain the eclectic use of theory in educational research (Geelan, 2006). Theories such as cognitive constructivism (Piaget, 1980) and social constructivism (Vygotsky & Cole, 1978), general pedagogical theories on teaching and learning (didactics), sociological theories (Bourdieu & Johnson, 1993), theories of self-regulated

learning (Zimmerman, 2000) and anthropological theories (Lave & Wenger, 1991) are often used in combination.

Grimen (2008) however, claimed that the main reason for an eclectic use of theory is that the profession's knowledge base is primarily practically founded, and "practical syntheses" arise between different theoretical and practical insights (Grimen, 2008). Cobb (2007) argued along the same lines, using the term "theorizing as bricolage" (p. 28) to describe the integration of theories for understanding classroom teaching and learning. Kvernbekk also argued for a pluralistic attitude to pedagogical theory (2005, pp. 181–182), but not because pedagogical theories are necessarily practice-oriented forms of theory. A multi-theoretical approach is reasonable when it comes to capturing a more nuanced image of a phenomenon, she claimed. This view is also displayed in Tellings' article "Eclecticism and integration in educational theories: A metatheoretical analysis" (2001).

Tellings (2001, 2012) has presented four different ways of integrating or combining educational theories: reduction, synthesis, vertical addition and horizontal addition. The first way to integrate theories is through reduction. Reduction means that a theory is redefined, incorporated or becomes part of another theory. The second way to integrate theories is through synthesis. Synthesis means that the theories are converted into new theories. Here, the core elements of the theories are recognisable, but the new theory also contains new elements. The integration of theory leads to a whole new insight because the theories influence each other. New ideas emerge when the two theories meet. The result of this integration is something new in the sense that new elements, which were not significant in the original theories, become central elements. Vertical addition is the third way to integrate theories. With vertical addition, theories or elements of theories are placed vertically above each other. The underlying idea is that each of the different theories describes one stage or one phase of development. Thus, each of the theories describes one step in holistic development—that is, a development that is described from the beginning to the end. This form of integration is particularly fertile when the goal is to describe the development of humans. According to Tellings (2001, 2012) horizontal addition is particularly fruitful in educational research. When using horizontal addition, various theories that cover either different fields or different aspects within a specific field are integrated. Together the integrated theories can provide a more complete picture of the different situations.

According to Klette (2012), combinations of different theories, as described, can be either productive, when the theories have different perspectives on the same phenomenon, or unproductive, when the theories deal with different phenomena. Klette (2012) also claimed that some educational research suffers from a weak connection between the use of theory and empirical data, in addition to having a weak description and explanation of their eclectic use of theory. In this article we did not examine Klette's first objection, but we addressed her

second objection by investigating the degree to which the sample of doctoral theses describes and explains their use of eclectic theory.

2. Methods

The main approach in the current research design was to analyse how a sample of doctoral students in the field of education describes how they integrate different theories. Document analysis of PhD theses is a particularly efficient way of gathering data about theory use because PhD candidates in Norway are expected to actively discuss their theoretical choices; their use of theory is also something on which they can be evaluated by a PhD committee. Further, doctoral theses have been digitalised for many years and are usually easy to access. As we accounted for in the following, our overall research design entailed a strategic sample of theses from the two largest universities in Norway, which were systematically coded on theory use, particularly the use of multiple theories within the same PhD and the justification for such choices.

2.1. The Doctoral Theses Included in the Sample

In 2020, 1,634 doctoral theses were submitted to Norwegian educational institutions (NIFU, 2021). Norwegian doctoral theses can either take the form of monographs or be a collection of articles. If a thesis is written in the form of a monograph there are usually one or more chapters on theory use. If it is written as a collection of scientific articles, usually three or four, the theory can be mentioned in each article and then the so-called extended abstract (*kappe* in Norwegian), which is approximately 70 pages long, should have a chapter on theory, discussing the theoretical choices within and across the articles. Consequently, we analysed only the *kappe* and not the included articles. Additionally, we examined how the PhD candidates described and framed their own approaches to using multiple theories; we did not examine what they actually had done across different articles. In the *kappe* the candidates must frame their research by displaying cohesiveness by linking research questions, theory, methods, findings and conclusions and by showing how the articles contribute to answering their research questions. We therefore presumed that if the candidates stated that they used multiple theories, that's what they did. Furthermore, we were not familiar enough with all the relevant theories and prior research in each dissertation to assess the use of theory normatively.

A total of 228 doctoral theses in pedagogy or educational science were submitted to the Norwegian University of Science and Technology (NTNU) and the University of Oslo (UiO) during the period from 2010 to 2021. The reason for this specific time period is that in 2010 article-based theses had become more common than monographs and 77 % of the submitted theses were article-based. Furthermore, while most article-based theses are written in English, monographs are mostly written in Norwegian (Krumsvik et al., 2016).

We chose to sample from these two institutions as they are the largest ones, ensuring significant variation in the works. Relatively few doctoral theses in the field of education were submitted during the same period to other Norwegian universities and university colleges. Forty-nine of the 228 theses submitted to NTNU or UiO were either not available online or had restricted access¹ and were therefore not included in the data material. We analysed the 179 theses that are available digitally on the NTNU's NTNU Open Data database and on UiO's DUO database.

Table 1. An Overview of the Theses Submitted to the Faculty of Social and Educational Sciences, NTNU

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Department of Education and Lifelong Learning	3	4	4	4	5	5	7	3	6	1	3	2	47
Department of Teacher Education	1	1	3	1	3	2	2	2	1		2	1	19
Total	4	5	7	5	8	7	9	5	7	1	5	3	66

Table 2. An Overview of the Theses Submitted to the Faculty of Educational Sciences, UiO

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Department of Educational Science	3	1	3	2	3	3	9	4	6	10	4	6	54
Department of Special Needs Education	0	2	0	2	1	1	4	3	3	2	2	1	21
Department of Teacher Education and School	0	1	0	6	4	5	5	4	6	1	3	3	38
Total	3	4	3	10	8	9	18	11	15	13	9	10	113

¹ There are various reasons for the restricted access to the doctoral theses. For article-based theses, the articles included do not always have permission from the publishing journal to be published elsewhere. For monographs, the candidates can have an agreement with a publisher to publish the thesis as a book. However, there was no reason to assume that the unpublished theses differed much from those that were published online regarding theory use.

2.2 The Analytical Processes

We have analysed all of the theses in the sample together. First, both the introduction and the theory sections of the 179 theses were screened to identify words and expressions that could classify them as having an eclectic use of theory. Under slightly different headings all the theses, regardless of format, contained a chapter or subchapter entitled “Theoretical Position” or simply “Theory”.

Twenty-five of the 179 theses were classified as having an eclectic use of theory and these were then analysed with the content analysis approach (Hsieh & Shannon, 2005), searching for words and phrases like “eclectic”, “bricolage”, “combining theories”, “theoretical approaches” and “integrating theories”. In this process of exploring the actual theoretical background of the theses, we treated the documents as we would have treated a respondent or informant who provided a researcher with relevant information (O’Leary, 2021). When analysing, quotes from the theses were used as illustrations of how they combined theories, as seen in Table 4.

In each text we looked for answers to the following questions:

- How frequently is an eclectic use of theory employed within the educational sciences, and how do the candidates combine the different theories?
- How do the candidates justify their eclectic use of theory?

Then, we highlighted the answers in the theses. Using this approach, we identified both those theses where the candidates *explicitly* stated that they had an eclectic theoretical approach, using words and phrases such as “eclectic”, “bricolage” and “theoretical triangle” and those theses where the candidates used a combination of theories but did not explicitly describe their theoretical position as eclectic. Finally, we analysed the “justifications” for theoretical choices, using Tellings’s (2001, 2012) four forms of integration described above and summarised in Table 3.

Table 3. Four Forms of Integration (Tellings, 2001, 2012)

Description
Reduction
<ul style="list-style-type: none"> • Two theories become one theory. • Both theories partly overlap in the area to be studied.
Synthesis
<ul style="list-style-type: none"> • These theories are converted into a new theory. • The core elements of the theories are recognisable, but the new theory also contains new elements.
Vertical Addition
<ul style="list-style-type: none"> • Theories, or elements of theories, are placed vertically over each other. • Each of the different theories describes one stage or one phase of development.
Horizontal Addition
<ul style="list-style-type: none"> • Various theories are integrated, covering either different fields or different aspects within a specific field. • The point is that together, the theories can give a more complete picture of the different situations.

3. Results

Of 179 doctoral theses, 25 could be characterised as having an eclectic theoretical approach (see Table 4).

Table 4: This sub-sample is the basis of all further analyses. This table provides an alphabetical overview of candidates, themes of dissertations, forms of integration, concepts used and justifications.

Name	Theme of Dissertation	Theories Used	Form of Integration	Concepts Used to Describe Eclecticism	Justification: Why and What the Use of Theories Contributes To
1. Afdal	Policy making, curricula content and novice teachers' knowledge relations	Political science Sociology	Horizontal addition	Two different, but somehow related, theoretical perspectives are integrated (p. 7)	'The construction of knowledge for the teaching profession is a wide-ranging phenomenon that can be investigated with many possible approaches' (Afdal, 2012, 3).
2. Andersen	Leadership for inclusive education in multicultural upper secondary schools	Inclusive leadership Transformative leadership Multicultural education approach	Horizontal addition	The study involves two main theoretical approaches (p. 38)	'First, I combine inclusive leadership (Ryan, 2003c, 2006) and transformative leadership (Shields, 2010). Second, I have chosen a multicultural education approach (Banks, 1993; Banks & Banks, 2001). The approaches draw upon the same epistemological point of departure, i.e. critical theory' (Andersen, 2017, 38).
3. Babaci-Wilhite	A case study of curriculum reform in Zanzibar	Dependency theory and the world-systems analysis Theories on imperialism Implementation of curriculum reforms Theoretical perspectives on learning and the culture-enabling role of education	Vertical addition	I have drawn theoretical inspiration from dependency theory and the world-systems analysis (p. 21)	'I have drawn theoretical inspiration from dependency theory and the world-systems analysis which is multidisciplinary, macro-scale approaches to social analysis and social change developed, among others, by scholars such as Andre Gunder Frank (1966) and Immanuel Wallerstein (1974). I have also drawn on Johan Galtung's (1971) related theory of imperialism, as well as other proponents of this line of thinking, including Alamin Mazrui (1997) and Yash Tandon (2008). Another important theoretical line of inquiry draws on the theory of implementation of curriculum reforms developed by John M. Rogan and Diane J. Grayson (2003), as well as the work of several scholars who have studied the implementation of educational reforms in various African countries ...' (Babaci-Wilhite, 2012, 21).
4. Ballangrud	Competence development as a means of management in upper secondary school	Political science Organisational theory Didactics Sociology of knowledge	Horizontal addition Vertical addition	I have used different theoretical approaches (p. 2012)	'It is difficult to find a theoretical approach that frames this whole complicated phenomenon' (Ballangrud. 2012, 24, authors' translation). 'To describe teachers' knowledge and learning, I have

					used different theoretical approaches' (Ballangrud, 2012, 25, authors' translation).
5. Bueie	Students' understanding and use of teacher comments	Cognitive and sociocultural theories of writing	Horizontal addition	Combine perspectives from cognitive and socio-cultural theories (p. 18)	Bueie argues that in order to understand the writing process, it is important to use different perspectives on learning. '... Combines perspectives from cognitive and sociocultural theories of writing, with an emphasis on the sociocultural' (Bueie, 2017, 18, authors' translation).
6. Dong	Rural students in the higher education system in China	Bourdieu's theory of field Galtung's theory of structural violence Lindner's theory of humiliation	Vertical addition	... need to integrate the different theories (26)	'This study involves several topics, and out of necessity, applies different theories. These theories contribute to a comprehensive study...' (Dong, 2015, 26).
7. Eriksen	Assessment practices	Cognitive theory Social situational learning theory	Horizontal addition	Multiple perspectives Complexity (p. 5)	'I chose to include several perspectives to maintain the complexity and to seek to provide a nuanced picture of the phenomenon' (Eriksen, 2017, 5, authors' translation).
8. Ersfjord	An ethnographic study of children in long-term rehabilitation of obesity	Childhood research Critical sociology <i>Perspectives on discourse analysis</i>	Horizontal addition	A more broadly theoretical approach	'I have combined social research of childhood with the critical sociological framework biopedagogy - which is the other major theoretical framework I use in this dissertation. I also describe how I have been inspired by discourse analysis' (Ersfjord, p.17, authors' translation).
9. Ertsås	Teachers' development of practice knowledge	Analytical philosophy Wittgenstein's language philosophy Pragmatism Cognitive psychology Hermeneutic tradition	Horizontal addition	Theorists belonging to different traditions (p. 65) Theoretical perspectives that address various aspects (p. 17)	'To elucidate key trends in the empirical material, I have chosen theoretical perspectives that address various aspects of the concept of knowledge and how knowledge is developed' (Ertsås, 2011, 17, authors' translation). 'An expanded concept of theory in this context means that I also use the term <i>theory</i> in a weak sense. Here I have taken inspiration from Tone Kvembekk (2005), where she uses the concept of theory in a weak sense of thoughts, ideas, prejudices and knowledge one has, which is close to what many would call experience-based perceptions and personal and practical knowledge' (Ertsås, 2011, 17, authors' translation).
10. Gillespie	Teacher collaboration	Organisational theory Organisational psychology Developmental psychology Learning theoretical perspectives	Horizontal addition	An eclectic approach (p. 11)	Gillespie justifies her eclectic theoretical approach by saying that she studied parts of teachers' practical work. The understanding of her findings would be deficient and lacking nuanced without an eclectic theoretical approach. 'Several different learning-theoretical positions appear in the work on this data material. Hence the need to elucidate several theoretical approaches in this thesis' (Gillespie, 2016, 11, authors' translation).

11. Gudmundsdottir	The digital divide in South African classrooms	The transformative paradigm Critical theory perspectives Information and communication technology for development/education	Horizontal addition	Theory synthesising (p. 29)	'Furthermore, building on the interdisciplinary traditions of comparative and international education, one can argue that the study uses a synthesis of various approaches in order to reach a comprehensive understanding of the phenomena. The study is based on empirical data, and as such, the theoretical framework provides insight and a framework for analysis of the appearance of the digital divide in a certain cultural and educational setting. However, it is not the intention to test theoretical assumptions or to contribute to the development of the theoretical approach as such' (Gudmundsdottir, 2011, 29).
12. Hognestad	Educational leaders' knowledge management as practice in kindergarten	Knowledge management Practice theory	Horizontal addition	Different theoretical lenses (p. 44)	'Through this journey in the theoretical landscape, certain properties of knowledge management such as practice have been elucidated, while others are set in the background' (Hognestad, 2016, 19, authors' translation).
13. Håberg	Didactic work in kindergarten	Sociologically rooted theories on professional theory Psychological theories about relations	Horizontal addition	Composition of several theories at different levels about the individual, institution and society (p. 10)	'Because didactic work is a complex phenomenon to investigate, the use of theories at various levels provides a more holistic picture of the phenomenon Kvernbekk (2005) argues that by using only one theory, one can simplify and reduce phenomena and thus misrepresent them' (Håberg, 2014, 10, authors' translation).
14. Luoto	Patterns of instructional quality in lower secondary mathematics classrooms in Helsinki and Oslo	Process-product, cognitive, constructivist and sociocultural theories of learning and teaching.	Horizontal addition	Eclectic theoretical approach (p. 17)	'As I study instructional quality in mathematics classrooms and theories of instruction seldom originate from one single theory of learning, but combine different theories, I will take what Tellings (2001) has described as an eclectic theoretical approach.' (Luoto, 2020, p. 17). The four traditions relevant for this thesis are the <i>process-product</i> , <i>cognitive</i> , <i>constructivist</i> , and <i>sociocultural</i> traditions and their theoretical perspectives of learning and teaching' (Luoto, 2020, p. 17).
15. Lyså	Discipline as relational practice in Chinese kindergartens	Bourdieu's concepts of field, habitus and capital Theoretical contributions on the individual and individualisation in China	Horizontal addition	Combine theoretical approaches (p. 55)	'I have tried to combine theoretical approaches from different regional, temporal, historical, and disciplinarian backgrounds. What combines these approaches is an anthropological interest in human relations and relationships, an interest in everyday practice and how such practices have contextual meaning' (Lyså, 2018, 55). Lyså finds common features of the theories, which implicitly means that this makes the combination possible.
16. Magnusson		Sociocultural and Cognitive theories	Horizontal addition	Both socio-cultural and	'I present the theories based on what is considered to be three

				cognitive perspectives (p. 6)	key elements in reading comprehension: the reader, the text and the context, seen from both socio-cultural and cognitive perspectives' (Magnusson, 2021, p. 6, authors' translation). 'Both socio-cultural and cognitive theories about reading contribute perspectives to the topic of the dissertation' (Magnusson, 2021, p. 6, authors' translation).
17. Myhre	The relationship between principals and teachers in three Norwegian primary schools	Giddens Habermas Organisational theories	Vertical addition	The third theoretical foundation (p. 37)	'The theoretical framework of this project has been selected with a view to safeguarding both an actor and a structural perspective. Anthony Giddens and Jürgen Habermas are both so-called synthetic theorists, that is, they want to solve the dualism problem in sociology' (Myhre, 2010, 37).
18. Myklebust	Oracy in the multilingual classroom	Sociocultural theory Cognitive theory	Horizontal addition	Pluralistic starting point for theorisation (p. 32)	Professional research has a long tradition of pluralism. Myklebust supports her arguments by referring to Grimen (2009), who claims that the heterogeneity of theory use comes from the fact that professional practitioners use knowledge from various sciences, and Kvernbekk (2005), who argues that in order to capture a nuanced picture of the phenomenon being studied, a multi-theoretical approach is appropriate. Myklebust also refers to Piaget's and Vygotsk's Constructivist Theories (2018, p. 33)
19. Sandvik	A study of writing and assessment in the teaching of German in elementary school	Sociocultural learning theory Assessment theories	Horizontal addition	Several theories (p. 21)	'By drawing on several theories from different disciplines, the pedagogical practice can be clarified. This also enables a deeper understanding' (Sandvik, 2011, 21, authors' translation).
20. Sjøhelle	An intervention study of Norwegian nynorsk	Cognitive constructivism Social constructivism	Horizontal addition	Both of these directions (p. 40)	'Cognitive and social constructivism are often regarded as two theories that go in different directions (Rasmussen, 2004), but it is also argued that it is possible to look at them as complementary, illuminating both individual and social learning processes' (Sjøhelle, 2017, 40, authors' translation).
21. Svanes	Individual guidance in primary school	German tradition of didactics Vygotsky's socio-cultural theory	Horizontal addition	Eclectic (p. 28)	'... To be eclectic ... in order to elucidate complex phenomena such as classroom teaching. Furthermore, it may be an adequate approach to addressing the challenge that all theories have their strengths and weaknesses (Schwab, 2013). Cobb (2007) uses the notion of theoretical 'bricolage' and argues that different theoretical approaches should be combined and made relevant to classroom teaching' (Svanes, 2016, 28, authors' translation).

22. Svennungsen	Making meaningful career choices	Frankl's perspective on finding meaning May's perspective of constructing meaning	Horizontal addition	Integrating theories (p. 96)	<p>'I will use May, Maslow, Rogers and Sartre to discuss Frankl's perspective. The reason for choosing these authors as 'discussion partners' is because they communicated their view of Frankl's theory through a debate in the <i>Journal of Humanistic Psychology</i> in 1966 and 1978, and because Frankl criticised May, Maslow, Rogers and Sartre in his writings' (Svennungsen, 2011, 17).</p> <p>'The integration of the above-mentioned theories shows two important things; firstly, the importance of integrating theories from general social science with career theories, so that one opens up the knowledge channel and has a wider perspective' (Svennungsen, 2011, 96).</p>
23. Uthus	Specialist educators' perception of their role in a school for all students	Theory of social roles Various social psychological theories Social cognitive theory Theory of expectations and values Theory of dissonant environment Cognitive theory Horizontal addition	Horizontal addition	Theories that can provide background understanding (p. 5)	<p>'... Theories that can provide a background understanding in order to analyse the experiences of special needs educators' (Uthus, 2014, 5, authors' translation).</p> <p>Uthus describes how the different theories can be used in order to understand different sides of the special needs educators' role.</p>
24. Veelo	Innovation in upper secondary schools	Organisational theory German 'Theorie der Schule' Innovation theory	Horizontal addition	I will look into both theories (p. 5)	<p>'There is a great variety of views on what theory applies to schools internationally, nationally and over time. In the German-speaking countries, the term 'Theorie der Schule' has been practised since the 1920s, but there is no clear consensus on its definition. In Norway, a theory that is specially tailored to schools has not been developed; over the last 30 years, the Norwegian literature and research has increasingly adopted the perspective of organisational learning in schools. Per Dalin has significantly contributed to schools being seen as organisations, and consequently, they are generally analysed using organisational theory. I will look into both theories and select elements to use consistently in the analysis of the four case schools, irrespective of their nationality. Finally, I will focus on innovation theory' (Veelo, 2016, 5).</p>
25. Waade	Sign language in music Sound-painting as an improvisatory-compositional tool	Different/many theories	Horizontal addition	Use a 'range' of different theories (p. 23)	<p>'When you work with many different theories and see a case/situation from different angles, you will also have to give up going in depth in all areas (Waade, 2016, 24, authors' translation).</p>

3.1. Ways of Using Eclecticism

As described in Table 4, the 25 theses in our sample have an eclectic approach. Three of the candidates, Svanes (2017), Gillespie (2016) and Luoto (2021), specifically used the word “eclectic” to describe their use of theories. The other candidates used words and phrases like “combining several theories”, “bricolage”, “applying different theories”, “integration of theory”, “broad theoretical approach”, “a synthesis of various approaches” and “different theoretical lenses” (see Table 4, “Concepts used to describe eclecticism”).

Horizontal Approach

As mentioned earlier, educational research often deals with complex and multifaceted phenomena, such as teaching and learning (Blikstad-Balas, 2017; Kvernbekk, 2005, 2007). Consequently, researchers may choose a multi-theoretical approach to such complex phenomena. Our analysis shows that almost all the candidates in the subsample, 21 out of the 25, used what Tellings (2001, 2012) labelled “a horizontal addition” to combine theories to describe, understand or analyse the study object. Horizontal addition is thus by far the most common way of combining theories. In a horizontal addition, the different theories illuminate a phenomenon or process from different angles or in different ways. Several of the candidates who used horizontal addition combined, for example, cognitive and social cognitive theories to study a specific phenomenon. Myklebust (2018), for instance, used Piaget’s psychological constructivism and Vygotsky’s social constructivism theories to analyse learning within oral practices. Eriksen (2018) used horizontal addition when he positioned his research within cognitive theory and social situational learning theory and Bueie (2017) combined different constructionist learning theories in her research on assessment practices. This way of combining two previously “opposing” perspectives may be seen as a move towards consensus, in which the two theoretical paradigms complement rather than compete with each other. According to Cobb (2007), our individual interpretations and actions (cognitive perspective) and our collective activities (sociocultural perspective) cannot be seen as separate entities but as different positions between two alternative ways of understanding. Combining cognitive and social constructivism is thus considered unproblematic because they can explain a phenomenon in more detail and, more completely, when used together (Sfard, 1998).

Vertical Approach

We have identified four theses in which the candidates’ use of theory can be labelled vertical integration (Babaci-Wilhite, 2012; Ballangrud, 2012; Dong, 2015; Myhre, 2010). Vertical integration implies that different theories are adopted to describe different layers, elements, stages or phases of development that are included in the study. Dong (2015), for example, studied the relationship

between the state, society and university in China. The focus of the study was on rural students in the higher educational system. Bourdieu's theory of field, Galtung's theory of structural violence and Lindner's theory of humiliation were used. Dong used a vertical addition, in which the different theories describe different parts of reality. This implies that the different theories describe the different stages or layers of the higher educational system in China.

Although Tellings (2001, 2012) operated with clear distinctions between the four forms of integrating or combining theories in educational research, these forms are not mutually exclusive and do not always appear in a pure form in practice. It can be said of some of the candidates in our material that they used both horizontal and vertical additions. Ballangrud wrote, "The community level, the county level and the school level are included to illustrate how competence development is shaped. Political science theory, organisational theory and educational theory are used to understand changes in competence development" (Ballangrud, 2012, pp. 68, authors' translation). Ballangrud used horizontal integration of pedagogical theory related to knowledge development in her analyses of competence development and vertical addition of organisational theory and political science to analyse and understand the processes that take place at different decision levels in the school system.

Reduction

We did not identify any candidates using what Tellings calls "reduction". None of the candidates redefined or reformulated a theory in relation to another theory (Tellings, 2001, 2012). This would perhaps be difficult to achieve within the scope of a doctoral thesis, as it would require a very extensive knowledge of existing theory, the ability to identify theoretical overlap and the boldness to reformulate and reduce existing theory.

Synthesis

Some candidates, however, came quite close to using what Tellings calls "synthesis". They combined core elements from different theories to describe a phenomenon. The result of this integration was something new in the sense that new elements, which were not significant in the original theories, became central. Guðmundsdóttir stated in her thesis, "One can argue that the study uses a *synthesis* of various approaches in order to reach a comprehensive understanding" (Guðmundsdóttir, 2010, pp. 29, authors' italicisation). Veelo (2016), who studied innovation in upper secondary schools, can be said to have elements of synthesis where she integrated theories into a "new theory". Veelo (2016, p. 5) claimed that we lack theories suitable for analysing schools as a system. Hence, she used the perspective of organisational learning in schools and organisational theory and synthesised elements from both theories in her analysis.

3.2. Reasons for Choosing an Eclectic Theoretical Position

The candidates used different arguments to justify their eclectic approach. We identified three main justifications for choosing an eclectic approach: (1) the complexity of the phenomena being studied, (2) the study of practice requiring more than one theory and (3) the tradition of educational science opening itself up to multiple theories.

The Complexity of Phenomena

In eight of the theses, the candidates argued that, in order to grasp the phenomenon in its entirety or complexity, it is necessary to elucidate it through several theoretical angles or different theories. Many of the candidates described the phenomena they studied as complex, which is why it was appropriate to use a multi-theoretical approach in the study. Examples of this include Ballangrud (2012, pp. 24, authors' translation), who wrote that "it is difficult to find a theoretical approach that frames this whole complicated phenomenon", in this case teachers' competence development, or Håberg (2015, pp. 10, authors' translation), who observed a need for multiple theories "because didactic work is a complex phenomenon to investigate".

Some candidates studied phenomena that consisted of several processes or parts and argued that one theory was not appropriate or sufficient to understand or analyse all segments or components. Therefore, different theories were applied either to different processes or to different parts of the study. For example, Uthus (2013) studied the role of special needs teachers and wrote that different theories can help in understanding different aspects of the professional role. She used several theories, including motivation theories, learning theories and the theory of cognitive dissonance.

Several of those who justified their eclectic theory use with the complexity of the phenomena they studied also brought up the explanation that, *in order to go into depth*, it was necessary to elucidate the phenomenon with several theories. This argument was evident, for example, in Sandvik's dissertation: "This [using several theories] also enables a deeper understanding" (Sandvik, 2011, pp. 28, authors' translation). However, others have not endorsed this argument. In both Waade's and Gillespie's theses, they actually argued the opposite and labelled multiple theories as a hindrance to going more deeply into a phenomenon: "When you work with many different theories and analyse a phenomenon from different angles, you will thus have to give up going into depth" (Waade, 2016, pp. 24, authors' translation), and "One can argue that this broad approach is at the expense of in-depth investigation" (Gillespie, 2016, pp. 12, authors' translation).

The Study of Practice

The second justification for using a pluralistic theoretical stand identified in the theses was that the study involved practice. Nine of the theses had this justification. Practice takes place in a context, and different factors impact the

practice: "... if I am to gain an understanding of how informants experience this part of the professional practice, my understanding will be deficient and lacking in nuance if I do not also explore and report according to the framework of the professional practice" (Ertsås, 2011, pp. 49, authors' translation). Ertsås referred to Kvernbekk when she argued for using a broad, theory-based backdrop in her study of practice (2011, pp. 17, authors' translation): "Kvernbekk (2005) ... uses the concept of theory in a weak sense when it is about one's thoughts, ideas, prejudices and knowledge, and which is close to what many would call experience-based perceptions and personal and practical knowledge". Myklebust (2018, pp. 31, authors' translation) also argued for using a multi-theoretical approach because she studied practice: "The heterogeneity of theory use comes from the fact that professional practitioners use knowledge from various sciences". Svanes' argument with reference to Schwab (2013) supports the notion that, in studies of practice, it is appropriate to use different theories to gain an understanding of what is happening: "Different theoretical approaches should be combined and made relevant to classroom teaching" (Svanes, 2017, pp. 28, authors' translation).

Traditions within the Field of Education

The third explanation for why the candidates used an eclectic theoretical point of view is related to customs or traditions within the field. Nine of the theses used this justification, and it was particularly evident in those theses that combined sociocultural theory and cognitive theory, such as Sjøhelle: "Cognitive and social constructivism are often regarded as two theories that go in different directions (Rasmussen, 2004), but it is also argued that it is possible to look at them as complementary, illuminating both individual and social learning processes" (Sjøhelle, 2016, pp. 40, authors' translation). Bueie also argued that combining these two theories was important when trying to understand the students' writing process: "Although writing development occurs within the individual, development processes are initiated in a social interaction" (2017, pp. 18, authors' translation), and claimed that this was uncontroversial within her field.

Our analysis also showed that few of the candidates were particularly concerned about the challenges related to their eclectic use of the theory or the limitations that this choice can entail. Few of them made any comment on the consequences of eclectic theories beyond stating that they applied different theories. However, some clarified and explained that the theories they combined have a common epistemological base—that is, they combine different theories—which one may say belongs to a common paradigm (i.e., critical theory or constructivist paradigm). In this way, they faced possible criticism of the ignorance with which eclecticism has been met. As mentioned, two of the candidates also discussed whether the eclectic theoretical stand was taken at the expense of profoundness or depth. The candidates argued that the disadvantage was balanced either by the study being more nuanced or by the fact that several

aspects of the phenomenon were emphasised and contextualised by taking an eclectic theoretical stand. These findings raise questions about learning in doctoral education. The use of several theories implies that doctoral students, in general, are exposed to many theories and that they attempt to adapt them to their own educational needs. However, effectively justifying the rationale for doing so may necessitate a more profound comprehension of the philosophy of science.

4. Discussion

From the data presented here, it is difficult to state definitively that the eclectic use of theory is a very common practice within the educational sciences. The most common choice is to stick to one theory or one theoretical framework throughout the thesis, something we think is an interesting finding in itself. The use of theory can be related to or influenced by methodological designs, but this justification is not prominent in the theses. Our study shows that those who draw on multiple theories within their PhD theses do this mainly by the use of horizontal addition (Tellings, 2001), sometimes without any explicit consideration of possible contrasts inherent in the theories. Some of the candidates who combined theories emphasised that the theories they used had a common epistemological base, but few candidates discussed potential conflicts in their horizontal additions of theories.

A potential explanation for this choice is that horizontal addition is the easiest as it does not require an active synthesis of theories or even a comparison of theories. When researchers choose to add new theoretical perspectives in a horizontal way, the choice of the first theory is not challenged or revisited to the same degree as it would need to be with other kinds of integration (Tellings, 2012). For PhD candidates, particularly those writing article-based theses, this opens up the possibility of choosing new theoretical framings for each article and each research question, something that is understandable in a situation where different journals, editors, reviewers and even co-authors may have preferences for some theories over others. That being said, we also believe that the horizontal addition of theories deserves to be critically discussed.

A key finding was that in the majority of the theses we defined as eclectic, the candidates substantiated their combination of theories only to a small extent. One reason for this may be that the eclectic use of theory is widely accepted and is a common practice within classroom research (Klette, 2012), as some of the candidates also pointed out. Another reason is that those who write article-based theses face great challenges when it comes to the number of words allowed, both within each of their scientific articles and within the extended abstract. At the University of Oslo, the extended abstract for PhDs in education is now supposed to be fewer than 80 pages. For candidates employing multiple theories, we can

only assume that this is a potential explanation for why they do not go more deeply into potential problems or further elaborate on their justifications.

According to Tellings (2001, 2012) and Cobb (2007), combining theories can be beneficial in studying educational practices. Candidates who justified their use of multiple theories from a practical or classroom research perspective aligned with Tellings and Cobb's viewpoint that studying practical phenomena requires an eclectic approach (Dong, 2015; Eriksen, 2018; Gillespie, 2016; Myklebust, 2018; Svanes, 2017). The fields of educational science and pragmatics are closely intertwined. Our findings suggest that the pragmatic argument of using suitable tools to achieve a goal often leads to an eclectic selection. This is easily understandable in general, especially within a PhD project with a strict deadline. The main contribution of the study is that it sheds light on how common it is within the field of educational research to combine different theories and how such theoretical eclecticism is justified. It also sheds light on that PhD candidates tend to refrain from discussing multiple theories within the same dissertation. An eclectic use of theory within one research project can provide a more complete picture of situations and fields, provided that the scientists have a meta-theoretical awareness of the integrated theories and that the choice of theories, analysis and interpretation process are thoroughly and clearly described. While many candidates in our study stated that they used multiple theories and even argued why this was necessary, very few theses actually contained a discussion of *how* the integrated theories challenged or contradicted each other or even a discussion of the actual *added value* of combining theories. A pressing question arising from our analysis is whether researchers doing their PhDs can be expected to have this kind of meta-theoretical awareness at such an early stage in their academic careers. Furthermore, we also raise the question of format for those writing article-based theses: Do they have enough room to assess their own theoretical choices in a critical way? As things currently stand, we suggest that they seldom do, either in article format or in the extended abstract.

Conclusion

A pressing question arising from our analysis is whether researchers doing their PhDs can be expected to have a strong meta-theoretical awareness at such an early stage in their academic careers. Further, we raise the question of format for those writing article-based theses: do they have enough room to really assess their own theoretical choices in a critical way? As things currently stand, we suggest that they seldom do, neither in the academic articles, nor in the extended abstract.

Limitations

We would like to emphasise that the focus of our analysis was on the candidates' own justification of employing multiple theoretical standpoints. We have purposefully refrained from assessing normatively whether the use of multiple

theories was sound, as this would require an in-depth knowledge of all the educational sub-fields from which the theses stem.

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