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Curriculum, curriculum development, curriculum studies? Problematising theoretical ambiguities in doctoral theses in the education field

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Theoretical ambiguities in curriculum studies result in conceptual mayhem. Accordingly, they hinder the development of the complicated conversation on curriculum as a verb. This article aims to contribute to reconceptualizing curriculum studies as a dynamic social practice that aspires to thinking and acting with intelligences and sensitivity so as to understand oneself and others. It also raises awareness that equating all forms of research on curriculum with curriculum studies dilutes the scope of the conversation. This exploration asks two key questions: What is the nature of doctoral theses in the field of education's theoretical contributions to nuances of curriculum (curriculum, curriculum development, and curriculum studies)? In what ways do these theses perpetuate or even add to current ambiguities in the discipline of curriculum studies? The exploration of these two questions draws on a critical meta-study of 511 theses completed in South African universities (2005–2012) conducted using a three level process. It appears that the main detractions of these theses are that some of them see curriculum studies as a dumping ground and others make no theoretical contribution to the discipline. The article concludes by suggesting ways which would encourage the intellectual advancement of curriculum studies through rigorous disciplinarity.

Keywords: curriculum; curriculum development; curriculum studies; doctoral theses; meta-analysis; meta-synthesis; meta-study

Introduction

Precise definitions of curriculum, curriculum development and the scholarly boundaries of curriculum studies (CS) have yet to be established. Most scholars in the field of education see this as a sign of dynamic vitality. However, those outside the field view the lack of definition as potentially confusing for students who venture into CS and the discourses that abut on it. Most of the confusion arises from the theoretical ambiguities that are deeply embedded in the way that nuances of curriculum¹ are discoursed. In our attempt to contribute to the conversation on these issues, we aim (1) to provide evidence from trends in doctoral theses in the education field² (hereafter theses) to illustrate some of the theoretical ambiguities and (2) to propose alternative ways of responding to the conceptual ambiguities in curriculum studies scholarship.

The following questions were posed to direct this study: What theoretical contributions do theses make to defining the nuances of curriculum, curriculum development and curriculum studies? In what ways do these perpetuate or even add to the ambiguity of curriculum studies scholarship? In the remainder of this article, we will distinguish between these three concepts in order to explore some of the theoretical ambiguities.

Intertwined in this exploration is a detailed discussion of the intellectual conundrum. In the second part, we explain the critical meta-study research design used to direct the process of arriving at alternative perspectives. We conclude with several suggestions for the intellectual advancement of curriculum studies scholarship.

The question of theoretical contributions and intellectual advancements is significant in the wider discourse of the knowledge economy. The growing knowledge economy necessitates that "democratic, ethical, and normative dimensions of science" be acknowledged (Sörlin & Vessuri, 2007:2). These three dimensions require profound engagement with theory by the active knowledge producers in society through the elevation of descriptive issues to a normative level. However, it is unmistakeable that "the knowledge economy is market-driven and performs acording to a market ideology" thus "the democratic deficit needs to be addressed if academic life and culture should survive in the era of fierce global competition" (Sörlin & Vessuri, 2007:2). To engage with the knowledge economy on this level, we argue that it is the theoretical imperative of doctoral contributions and should foster participation in international knowledge economies.

Exploring theoretical ambiguities in curriculum studies It seems that theoretical ambiguities are unavoidable.

For more than a century, curriculum scholars produced new working definitions of curriculum, creating the field's definitional largesse. However, definitions do not come from curriculum scholars alone: every pedagogue, parent, pundit, policy maker and politician has one too. Today's conflicting definitions reflect different vantage points from which curriculum is engaged with as well as different philosophies and foci regarding the relationship between schools and society...the multiplication of curriculum definitions is not an urgent problem to be solved, but rather a state of affairs to be acknowledged as inevitable (Breault & Marshall, 2010:179).

This article supports the view that "the multiplication of curriculum definitions is not an urgent problem to be solved" (Breault & Marshall, 2010:179). Our stance is that the multiplication of definitions provides the occasion to ask questions such as: what can CS be. The very fact that we ask questions such as these emphasizes the importance we ascribe to normative engagement in CS. Furthermore, as CS scholars, we welcome critiques and contestations of the nomenclature of curriculum as an inevitable state of affairs. Therefore, the intention of this theoretical exploration in CS is to create discursive spaces of some of the ambiguities that we have experienced in postgraduate supervision and lecturing contexts. Furthermore, we are aware that the discipline of CS presents theoretical ambiguities that contribute not only to conceptual mayhem but also to a collegial divide between those who are and those who are not involved with participating in it. In an attempt to contest hegemonic divides (such as this one), the theoretical ambiguities we examine relate to curriculum, curriculum development and

curriculum studies. We present the theoretical underpinnings of these concepts and offer arguments for (and not concrete definitions of) the scholarship of CS from varying vantage points. In our view, higher education academics, pre-service and inservice teachers could position themselves within and in between these vantage points in CS. Pinar's (2007) theory of disciplinarity underpins this stance and highlights the intellectual conundrum identified by this article.

Intellectual conundrum

CS is not a spectators sport, it requires participation in its intellectual advancement. Pinar (2007) argues for the intellectual advancement of CS through disciplinarity. Such a stance is underpinned by the intellectual labour of reaching understanding through "comprehension, critique, and reconceptualization" of what constitutes the "discipline of disciplinarity" (Pinar, 2007:xii). This is possible when engaging with curriculum discipline-specific historical contexts and current societal conditions in order to advance CS scholarship (Pinar, 2007:xi). In another way, the intellectual dispositions of disciplinarity persist through participating and not just spectating in disciplinary conversations – verticality and horizontality (Pinar, 2007).

Verticality is the "intellectual history of the discipline" through which its disciplinarity resonates (Pinar, 2007:xiii). In effect, the trends and nuances at the core of CS and how these have evolved and are still evolving constitute verticality. One aspect of this is an awareness of and critically engagement with the trends in curriculum schools of thought that have evolved over time: behaviourist, social constructivist and reconceptualist discourses (Apple, 1995; Freire, 1970; Posner, 2012; Tyler, 2013). This level of engagement involves more than mere faddism. Horizontality approaches CS from the periphery instead of the centre. Its focus is analyzing "present circumstances" in conjunction with "the social and political milieus, which influence, and all too often, structure this set" (Pinar, 2007:xiv). Horizontality thus draws on educational ideologies and participation in the global knowledge economy, for example (Apple, 1995), and the impact on CS.

For Pinar (2007) the cultivation of verticality horizontality conversations is key to the intellectual advancement of CS. Without participating in these conversations, Pinar (2007:xv) stresses that "one cannot contribute to the field" nor "can one claim expertise" in its scholarship. Since it is a prerequisite for theses to contribute (methodologically, contextually and theoretically) to the knowledge economy of their field of study, cultivating verticality horizontality conversations is essential.

Theoretical ambiguities: curriculum, curriculum development and curriculum studies Although interrelated, the nuances of curriculum, curriculum development and curriculum studies are not synonymous. These differences are explored in the following sections:

Curriculum: policy artefact

Curriculum as a policy artefact is the term used for policy documents enacted by

authorities such as the Department of Basic Education. These documents represent the official curriculum and illustrate a nation's educational priorities. According to Reed, Gultig and Adendorff (2012:30), to enact curriculum emphasis is placed on:

- School subjects and the knowledge included in them;
- Guidelines for how knowledge might be taught in the classroom;
- Providing the minimum knowledge, skills and values that learners must gain; and
- Articulating what curriculum designers and policy makers regard as important knowledge for learners and society.

From another perspective, the enacted curriculum engages with the elements of curriculum as distinct and isolated components. Graham-Jolly (2012:249) describes this stance as a "narrow" curriculum perspective in which curriculum is viewed as a policy artefact to be "examined" or measured. Terminology used to describe or define curriculum includes: the explicit curriculum, the formal curriculum, the syllabus and the subjects taught (Jacobs, Vakalisa & Gawe, 2011; Wilson, 2005). Within this line of thinking, curriculum is a policy artefact to be implemented at micro (classroom) level. It is equated with the subjects and content that appear in written documents issued on a meso (school) and macro (government) level. Curriculum as a policy artefact rejects the idea that "experiences are part of the curriculum" (Jacobs et al., 2011:32).

For example, a thesis that explores curriculum as a technical product might focus on the curriculum content on Human Immunosuppressive Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS) that is included in the enacted Life Orientation curriculum for Grades 10-12. This curriculum content could be used to discuss what learners should know about HIV/AIDS as one aspect of a thesis on child mortality rates among teenage mothers living with HIV/AIDS. Thus a thesis that consults the enacted curriculum does not necessarily involve CS.

Curriculum development: approach

Curriculum development as an approach asks questions such as: What are the elements of curriculum planning? What steps should one follow in planning a curriculum? For Jacobs et al. (2011:33) curriculum development is "a collection of plans about teaching" and "the ability to plan effective curricula is a crucial skill for all teachers". In particular, curriculum development involves "... consulting curriculum statements issued by the government, defining objectives, finding information about topics, deciding on suitable teaching methods and choosing ways in which the learning would be assessed" Jacobs et al. (2011:33).

Schools of thought have approached curriculum development in three different ways. For Tyler (2013), curriculum development is a technical production procedure. It is therefore interested in technical questions that approach curriculum development as objective, scientific and driven by "means-end reasoning" or "rational decision-making" (Tyler, 2013:61). For Stenhouse (2012), however, curriculum development is a process and is socially constructed. Teachers are involved in the process of deve-

loping a curriculum that takes account of contextual factors rather than pre-specifying objectives. In contrast, for Freire (1970) curriculum development involves critical reflection, problem posing and dialogue. One way of developing a curriculum from a critical approach is to use themes addressing social, economical and/or political issues and use these to embrace hegemonic and ideological curriculum questions within a critical interest. These different approaches to curriculum development further accentuate that curriculum development presupposes curriculum change.

For example, a thesis in the discipline Geography has identified the lack of an Environmental Education Framework for Sustainable Living for South African schools. The frameworks used are international and do not always address the environmental context-specific needs of South Africa. In this case, curriculum development could have led to new knowledge. The thesis develops a curriculum that is context specific and draws on local resources to engage with curriculum content, set objectives and recommend assessment that will facilitate sustainable living through Environmental Education. However, CS does not form part of this thesis.

Curriculum studies: inquiry

As an inquiry, CS ceases to be a policy artefact or an approach; it is an inquiry and therefore a "broader" interpretation of curriculum, influenced by "its socio-political context" (Graham-Jolly, 2012:249). CS "becomes a verb, an action, a social practice, a private meaning, and a public hope" (Pinar, 2010:178). CS thus has normative concerns and engages with the ontological questions of curriculum as a discipline. This form of curriculum theorizing can be framed in traditions in curriculum theory: traditionalists, conceptual-empiricists, reconceptualists (Pinar, 2013) and post-reconceptualists. Exploring and theorizing the social, economical and political assumptions underpinning CS place it in a normative curriculum context rather than a descriptive one. Curriculum ideologies (Chisholm, 2005; Reed et al., 2012) and how these disrupt curriculum spaces (Cary, 2007) within and across null, enacted, hidden and formal curricula (Wilson, 2005) are theorized. This form of theorizing accentuates the political motives, ethical dilemmas and social concerns situated at the intersections of teaching-learning, theory, practice and resources.

For Pinar (2007:xx), a series of "scholarly moves" that can support the verticality=horizontality conversations in CS involve:

- A synopsis of curriculum studies, on its own terms as a discipline;
- Analysing curriculum studies concept(s) within pertinent historical disciplinary traditions and present disciplinary circumstances;
- Critiquing the concept(s) on their own terms and from perspectives and proposals already extant within the intellectual history and evident in the present circumstances of the field:
- *Extending* the idea(s) by adding to or revising these concepts (and perhaps drawing upon scholarship outside the field) to do so; and/or

• Replacing the concept(s) with "new" ones that perform their specific labours of understanding in a more satisfactory fashion (with more explanatory force, for instance) than the initial conceptualization.

In conclusion, theoretical ambiguities in terms of CS scholarship are the result of scholarly engagement that does not take into account verticality—horizontality conversations. This creates a situation in which claims are made in terms of CS scholarly contributions that are not necessarily justified or reflected at a theoretical level. To give evidence of this phenomenon, we will now turn to a corpus of theses that contribute to the knowledge economy in the education field and which are partly responsible for its theoretical ambiguities. These theoretical explorations form part of the analytical lens to be used in the empirical part of this article. Meta-study, as overall research design, will be discussed first as the framework of the evidence discussed towards the end of the article.

Critical meta-study design

There has been an increasing trend towards meta-designs (meta-analysis, meta-sociology, meta-ethnography, meta-synthesis, meta-studies) in social sciences since the 1970s. In the health sciences meta-designs have been widely used to incorporate the wide array of knowledge developed through research and thus strengthen the validity and reliability needed for trustworthy, practical application (Paterson, Thorne, Canam & Jillings, 2001; Pope, Mays & Popay, 2007). The rise of the knowledge economy too has created a need for research to be synthesised and packaged in less relativist ways and so that more trustworthy generalisations can be made (Pope et al., 2007). The criticism that researchers constantly reinvent the wheel when conducting research instead of capitalizing on existing research has further underlined the need for meta-designs (Paterson et al., 2001). More recently, education research has also acknowledged the value of meta-designs (see, for example, the studies reported on in the *Review of Educational Research*, 2012, Volume 82, Numbers 1, 3 & 4). Our research employed a meta-study design.

Paterson et al. (2001:1) define a meta-study as "a research approach involving analysis of the theory, methods, and findings of qualitative research and the synthesis of these insights into new ways of thinking about phenomena". The literature makes it clear that meta-studies are dynamic and iterative and therefore require tailored methods and approaches based on the review questions posed (Pope et al., 2007). In this sense, each meta-study will differ from the next. Important starting points for designing and conducting a meta-study include questions such as (Paterson et al., 2001; Pope et al., 2007):

- What is the purpose of the meta-study? Is it to contribute to knowledge development in the field, or for policy decision-making processes? Is it to synthesise findings, or to determine trends in a particular cluster of studies?
- What needs to be analysed and synthesised through the meta-study, and why? Is

it the theories, methods and/or findings? What is anticipated through the metastudy?

The purpose of our meta-study is to contribute to knowledge development by identifying trends in the theoretical aspects of theses pertaining to nuances of curriculum. We were therefore not interested in aggregating the actual findings in the theses or in comparing the findings (Pope et al., 2007). In this sense we were not concerned with integrating findings, i.e. integrative synthesis, but on interpreting the recommendations, conclusions and theoretical contributions of these theses within the context of our review question and intellectual conundrum (Pope et al., 2007). Our paramount concern was to offer alternative ways of responding to the theoretical ambiguities in the field.

Meta-study designs have strong interpretative undertones: they seek to make meaning of a collection of works and are oriented towards understanding and interpreting (Jansen, 2007). Our intentions, however, exceed what interpretivism can offer. Our pursuit of alternative theoretical perspectives required unravelling the discourses on nuances of curriculum that are reflected in theses in order to illustrate the power of hegemonic, out-dated conceptions. We were also concerned to present alternative perspectives that can advance the discipline and create opportunities for deep transformation and innovation to become possible. In this sense, we see meta-study as an explorative gateway to unite theory and data so that new theoretical perspectives can emerge from the intersection. The ideals of regenerating and uniting are, to our knowledge, better framed within a critical theory perspective (Jansen, 2007; Cresswell, 2009). Consequently, we opted for a critical meta-study design.

Drawing on the groundwork laid by Paterson et al. (2001) and Pope et al. (2007), we have developed our own process of conducting meta-studies. Figure 1 schematically represents this process.

Level 1: Design and organisation

Our critical meta-study began with formulating the review questions. These questions, posed in the introduction, were exploratory to enable us to take account of all the complicated dimensions of the problem. We then developed working procedures to establish initial inclusion and exclusion criteria so that a sample could be identified and the corpus of documents (theses) could be selected. This is extremely important for the reliability and trustworthiness of inferences made toward the end of a meta-study (Pope et al., 2007). As already mentioned, we decided to focus on these particular theses because of their contribution to the knowledge economy of nuances of curriculum and education in general. Sabinet, an open access library and research source with electronic information of theses (http://www.sabinet.co.za/), was used as sample frame to retrieve information about all the theses delivered at South African universities between 2005 and 2012. Information on 848 completed theses was available. From this population (N = 848), a simple random sample of all the theses that were uploaded in PDF format ($n^{\circ} = 511$) was included. This gave us an initial sample size of 60%.

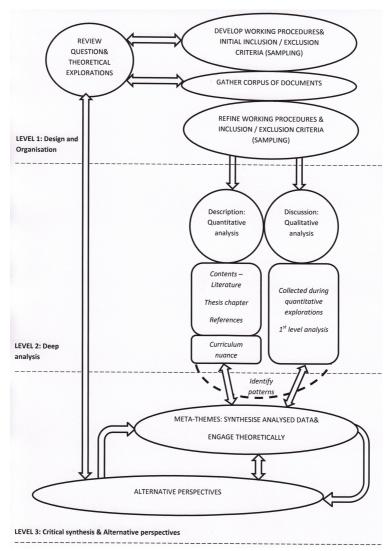


Figure 1 A schematic representation of the meta-study process

Level 2: Deep analysis

We started the descriptive quantitative analysis by further refining the inclusion and exclusion criteria. DEd theses were excluded since a theoretical contribution to the education field is not a requirement, unlike for a Doctorate in Philosophy (PhD), according to the Council for Higher Education (www.che.ac.za). A total number of 174 (n^1) DEd theses were eliminated and a final sample of 337 (n = 40%) remained, which is adequate to ensure external validity since it is representative and allows for generalisation based on the research aims (Fox, Hunn & Mathers, 2009:5, 37; Bless, Higson-Smith & Sithole, 2013:174). In addition, the methods used for the data analysis were consistent in all cases. Although we could have used a smaller sample, we opted for the biggest possible sample size because we wanted to increase the accuracy of our results (Maree & Pietersen, 2007) and to ensure data saturation (Pope et al., 2007). Table 1 provides more detail on the sample.

Table 1 A break-down of the population and sample downloaded from Sabinet

	Population	Sample downloaded	Eliminated	Nuances of curriculum	No nuances of curriculum	Final % of sample used
2005	153	95	32	42	20	41%
2006	122	80	30	24	26	40%
2007	152	95	31	32	32	42%
2008	126	73	18	27	28	44%
2009	85	56	23	8	25	39%
2010	141	79	27	20	31	37%
2011	43	16	1	5	10	35%
2012	29	17	12	1	4	17%
Totals	N = 848	$n^{\rm o} = 511$	$n^1 = 174$	$n^2 = 159$	$n^3 = 176$	n = 40%

The final sample used (n = 40%) was further classified into two sub-groups based on two main variables of interest to our study. These were the theses that clearly included elements of nuances discussed in our literature survey ($n^2 = 159$) and those that did not have any of the nuances in the title and/or research questions ($n^3 = 176$). In this sense, our sample could be described as relatively homogeneous even though the topics, approaches and contexts of these theses might be seen as extremely heterogeneous (Maree & Pietersen, 2007). A more homogeneous sample enhances the reliability of inferences made (Maree & Pietersen, 2007).

For both of the sub-groups, the contents pages were analysed to determine whether nuances of curriculum were addressed in the scholarly literature review of the theses. We did an in-depth analysis of the chapters (where theoretical contributions were discussed) and also looked at the reference lists to determine the authorities in the discipline of curriculum that theses had drawn on. During this hand sorting process, we inserted information on an Excel spreadsheet to get a quantitative overview of the contributions. We also qualitatively gathered information from the theses which we inserted as comments on the spreadsheet. In this phase we were interested in determining

the curriculum nuance that each thesis referred to. Table 2 and Table 3 illustrate the main findings for each sub-group.

Table 2 Trends in theses claiming expertise in research question and/or title⁴

	Nuances of curriculum addressed in research question and/or title	$n^2 = 159$
i.	Scholarly review and references indicate engagement with nuance(s) of curriculum, but this is not reflected in the theoretical part of the study	15
ii.	Nuance(s) of curriculum reflected in research question and/or title to the scholarly review, references and theoretical contributions	118
iii.	Scholarly review and theoretical contribution indicate engagement with nuance(s) of curriculum, but this is not reflected in the reference list	5
iv.	Nuance(s) of curriculum mentioned in the scholarly review, but omitted from the reference list and theoretical contributions	4
v.	A theoretical contribution is made but this is not framed in the scholarly review and reference list	8
vi.	The claim to contribute to nuance(s) of curriculum in the research question and/or title, is not reflected in the study	5
vii.	Theoretical contribution made and reference list supports nuance(s) of curriculum, but a scholarly review not done	4

Table 3 Trends in theses not claiming expertise through research question and/or title⁵

	No nuances of curriculum addressed in research question and/or title	$n^3 = 176$
i.	Explore in scholarly review only	36
ii.	Claim expertise in scholarly review and theoretical contributions,	25
	backed by a reference list, but not prioritised in the research question and/or title	
iii.	Claim expertise in scholarly review and theoretical contributions, without a supporting reference list, but not prioritised in the research question and/or title	9
iv.	Theoretical contribution made without any support from the scholarly review and/or reference list	22
v.	Nothing claimed or done in terms of nuance(s) of curriculum	84

Levels 1 and 2 of the critical meta-study encompassed the quantitative description and qualitative discussion and began to highlight trends and emerging themes that might contribute to theoretical ambiguities in CS. These trends and themes served as critical points for data synthesis and theoretical engagement so that alternative perspectives could emerge.

Level 3: Critical synthesis and alternative perspectives: Meta-themes At level 3, patterns were identified. Meta-themes emerged from these that enabled us to synthesise and engage theoretically with the analysed data. Four key meta-themes that emerged are now alluded to: dumping ground, dominance of curriculum and curriculum development, (in)coherence in theses, and the state of CS.

Dumping ground

Frequently the conclusions, recommendations and theoretical contributions in theses made claims about CS without justifying these and/or without referring to appropriate sources in the scholarly overview. The assumption is that any social problem can be addressed in it. As a result, these theses use CS as a dumping ground for complex issues in society on the assumption that any social problem can be addressed in the curriculum. The result is that social problems are often dealt with in a reductionist fashion; they are divorced from their context and stripped of the dynamics that perpetuate such problems. Attention is given to the symptoms rather than the roots of complex social issues in the curriculum. A diagnostic approach would be more helpful in that it creates opportunities to explore the complex intersections of these issues. Such a diagnostic approach could be facilitated by a study that cultivates verticality=horizontality conversations in CS.

Dominance of curriculum and curriculum development

The most dominant nuances in the theoretical contributions of the theses were curriculum and curriculum development. As far as nuances related to curriculum are concerned, theoretical contributions of a "narrow" curriculum perspective (Graham-Jolly, 2012:249) are reflected in 'curriculum as context' and 'curriculum as syllabus' discourses. Curriculum as context relates to the field of the theses (such as, Science National Curriculum Statements) or current curriculum approaches (such as, Outcomes-Based Education). On the other hand, the notion of curriculum as syllabus becomes evident when the contents and knowledge of school subjects are referred to, critiqued and/or revised. Therefore the contribution to the field of study is limited to examining or measuring curriculum as a policy artefact.

With regard to nuances related to curriculum development, most theses made a theoretical contribution either by approaching curriculum development as technical in a similar way to Tyler (2013) or as socially constructed and contextual, as understood by Stenhouse (2012) for example. Few theses contributed to critical curriculum development from a Freirean (1970) or similar critical perspectives. These theoretical contributions stemmed from the empirical findings of the theses that highlighted the necessity of adopting another approach to planning, designing or implementing curriculum content, objectives, assessment, teaching-learning strategies and/or resources. However, what is problematic is that theoretical contributions to curriculum and curriculum development are only descriptive accounts and do not reach the level of normative curriculum theorizing or initiate profound change.

(In)coherence in theses

By including nuances of curriculum in the research question, title, scholarly review, reference list and/or theoretical contribution, the these create the expectation that they

will engage with these nuance(s). From a meta-analysis stance, the question we posed is: Has the thesis carried out what it promised?

Claiming expertise in nuances of curriculum without contributing to them does not enhance their intellectuality (cf. Pinar, 2007). Furthermore it can lead to incoherencies such as:

- Addressing nuances of curriculum in the abstract, keywords, research question and/or title of the thesis but not in the scholarly review or the theoretical contributions:
- Skewed understandings resulting from misquoting literature on nuances of curriculum:
- Consulting nuances of curriculum in the scholarly review and reference list but not making theoretical contributions; and
- Contributing to nuances of curriculum theoretically by engaging with them in the scholarly review but not including them in the abstract, keywords, research question and/or title of the thesis.

Theses that are coherent deliver what is promised in the abstract, keywords, research question and/or title of the thesis. The 'face' of the thesis must therefore clearly state the foci.

State of curriculum studies: 2005-2012

A major concern is that only 10% of the theses in the area of CS completed between 2005 and 2012 contribute to advancing CS theoretically. This finding underscores the intellectual conundrum posed by this article.

Of these 10%, most theses engage with CS through critiquing its concepts and extending them through interdisciplinary perspectives (Pinar, 2007). Although these are substantial theoretical contributions, for the cultivation of verticality=horizontality conversations attention needs to be given to areas that are under researched, namely, "synopsis", "analyzing" and "replacing" of CS concepts (Pinar, 2007:xxx). Research needs to be done on the current state of CS as a discipline and novel CS concepts must be introduced to advance the discipline (Pinar, 2007). Not doing so will be a major hindrance to the intellectual advancement of CS, and create concerns for its scholarship.

Intellectual advancement of CS scholarship

In what follows we will offer some suggestions that might assist doctoral students in the education field to deal with nuances related to curriculum in their research more rigorously to avoid theoretical ambiguities and to contribute to international knowledge economies. These suggestions might also help to raise the level of intellectual inquiry in CS scholarship, or any research endeavour involving nuances of curriculum and contribute to the internationalisation of the field.

Firstly, we propose that anyone exploring nuances of curriculum in their theses should explicitly state the nature of the contribution they have made in terms of these nuances. Those who lay claim to CS scholarship have the larger responsibility of contributing to CS as a complicated conversation. A good way to determine one's

contribution is to ask: Has the thesis carried out what it promised, especially in the research questions, aims and title?

Secondly, depending on the answer to this question, the next step is a critical analysis of *the extent to which verticality*=horizontality conversations are cultivated. This helps one to avoid criticisms of reductionism and the reification of CS that perpetuate theoretical ambiguities.

Thirdly, our critical meta-study revealed that for the most part curriculum is approached from a narrow perspective and curriculum development from a technical approach. The reason for this is that too many theses approach nuances of curriculum from a descriptive level. To overcome this problem, and to steer clear of further conceptual mayhem, all theses should approach nuances of curriculum at a normative level.

Fourthly, the theses we examined often conclude with a very vague idea of the actual theoretical contribution of the study. In most instances the contributions are merely included in the recommendations. We argue that this is not rigorous enough and that doctoral candidates need to define their contributions. It is worth noting that we found that *theses in which theoretical contributions were schematically depicted* were often more rigorous. This may be because the candidate had to be able to clearly illustrate the conceptual building blocks they had used to arrive at new contributions.

Fifthly, candidates currently pursuing a study exclusively aiming to contribute to CS scholarship might consider focusing on one or more of the following elements: a synopsis of CS through for example a meta-design approach; CS in present South African and international circumstances especially drawing on trans-disciplinary approaches; and replacing current concepts by reading them in proximity to other concepts.

In conclusion, we would like to accentuate that CS is not a spectator sport; it requires participation in its complicated conversations that transcends the borders of the national knowledge economy. We thus urge CS scholars to take ownership of the intellectual advancement of CS, prevent stagnation and contest conceptual mayhem and theoretical ambiguity. This will not only lead to participation in knowledge economies, but more importantly shaping these economies in terms of its democratic, ethical and normative dimensions

Notes

- 1 We use the collective name 'nuances of curriculum' to refer to curriculum, curriculum development and curriculum studies.
- We use 'doctoral thesis in the education field' to include the theses delivered in programmes outside education, but that address matters of education directly and are classified on the Sabinet system under the field of education. Education is used in the broader sense to include primary, secondary and tertiary forms of education.
- 3 The reverse reaction chemical symbol portrays the reciprocal relation between the vertical and horizontal conversation.
- 4 From this sub-group, 33% referred to curriculum as a policy artefact, 57% addressed curriculum development approaches, and 10% engaged with curriculum studies as inquiry.
- 5 From this sub-group, 38% referred to curriculum development approaches and 62% to curriculum as artefact.

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