

The Use and Misuse of Systematic Reviews in Danish Educational Research and Practice

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Why Use and Misuse...

- In Denmark, and internationally, we have witnessed a substantial increase in the production and use of systematic reviews
- One reason for this increase, in Denmark, is OECD's review on educational research and development in 2004 – one central conclusion was that Danish educational research was non-accumulative
- The initiation of The Danish Clearinghouse for Educational Research was a consequence hereof

Why Use and Misuse...

- Systematic reviews have had an ample impact on educational policy-making (the reform of the public school system, teacher training etc.)
- Hattie's (2009) *Visible Learning, Teacher Competences and students' Learning* (Nordenbo, Soegaard Larsen, Tiftikçi, Wendt & Østergaard, 2008), and *Evidence on Inclusion* (Dyssegaard and Soegaard Larsen, 2013 are reviews that have had an impact
- However, I question the real impact of these and other traditional systematic reviews on **educational practice** in Denmark

The Problem With Traditional Systematic Reviews, and Why They Fail to Inform Educational Practice

- Evidence-based practice (in this case practice informed by systematic reviews) is being criticized for undermining professional authority and autonomy (e.g. debate between Hammersley and Hargreaves in the 90's, Biesta's (2007) "Why what works, won't work")
- My focus – or critique – is the evident theory to practice gap, or why systematic reviews seem to fail in informing practice, or assisting the professional in making intelligent decisions based on accumulated (research)knowledge (Biesta, 2011)

Steps Toward a Critical Realist Critique

- A review of 275 systematic reviews (Larsen, 2010) shows that 82% of the reviews have **effect** as the only subject of investigation – interventions are investigated and assessed for their positive and negative effects
- Only 9% of the systematic reviews were constituted of more multi-causal questions with a focus on generative mechanisms and structures
- These results align very well with Clegg's (2005) critique of the traditional systematic reviews (the meta-analysis and the narrative synthesis)

Steps Toward a Critical Realist Critique

- The traditional systematic reviews entail both sociopolitical and epistemological problems
- Traditional – and highly used – systematic reviews are rooted in a “flat” ontology, where there is no interest in generating knowledge concerning the mechanisms and structures, which produce data on the empirical level
- Intervention – context, structures, mechanisms - outcome

Steps Toward a Critical Realist Critique

- The critical realist critique points out that the majority of the traditional systematic reviews are rooted in a bio-medical paradigm where RCT is the “Gold-standard.
- A reductionist approach based on mono-causality and the idea of empirical regularities, which can not be applied to the social world - education
- Critical realism acknowledges the notion of reality as stratified, and structures and mechanisms at deeper levels can generate phenomena on the empirical level
- More importantly; a critical realist systematic review is not just investigating what works or does not work – it investigates *what works, for whom does it work, why does it work, and under which conditions does it work?*

Steps Toward a Critical Realist Critique

- One could argue that some traditional systematic reviews (narrative synthesis) have aspirations to explore knowledge on how and why interventions work or do not work
- My argument is that they fail in doing this due to the fact that the majority of traditional reviews are still rooted in a reductionist, bio-medical paradigm, and lack a context-sensitivity

Summing up the Critique

- Traditional systematic reviews lack an explanatory focus rooted in the idea of a deeper ontology and the mechanisms of change
- Traditional systematic reviews rely on a bio-medical hierarchy of evidence with a single methodical focus – rather than acknowledging mixed-methods inquiry
- Traditional systematic reviews entail a inadequate specification of context-mechanism-outcome hypothesis

A CR Systematic Review on Inclusive In-Class Support

- The protocol of a CR systematic review differs from the protocol of more traditional review forms – two key aspects are: the use of middle-range theories and Context-Mechanism-Outcome configurations (CMO)
- Middle-range theories offers assumptions on what happens in the process from income to outcome – sets of logics on how and why interventions work
- CMOs are explanatory components in the hypothesis on how and why interventions work

A CR Systematic Review on Inclusive In-Class Support

- The review question: What correlations are there between the use of in-class support in the general education and the students' possibilities of participation, learning outcome, and the subjective experience of being included?



A CR Systematic Review on Inclusive In-Class Support - protocol

1. Identifying the review question
2. Searching for primary studies (search for program theories, search for primary studies)
3. Quality appraisal (assessment of relevance and rigour)
4. Extracting the data
5. Synthesis (refining middle-range theories and identifying recurrent patterns of contexts, mechanisms and outcomes (demi-regularities))

The reviewed literature

- 2677 references identified in 13 databases
- 236 duplets excluded
- Reference screening
- 2441 excluded due to in- and exclusion criteria
- 47 references full text screened
- 23 references excluded
- 24 references quality appraised
- 1 reference excluded
- 23 included references

Identified Middle-Range Theories

Trained support staff

Educated and so-called sensitive support staff facilitates student participation in learning processes and social interactions. When the support person is trained in relation to the purpose he or she takes a wider pedagogical role.

Untrained support staff has negative effects on social inclusion and learning outcome

Identified Middle-Range Theories

Collaborative teaching

Collaborative teaching, which is based on cooperation between the support person(s) and the teacher and is characterized by joint planning, teaching and evaluation and constructive communication, has positive effects on students' inclusion.

Identified Middle-Range Theories

Student engagement

Presence of in-class support increases the engagement (learning/social) for students with special educational needs

Identified Middle-Range Theories

Dependency and marginalization

A close one-to-one relationship between the student and the support person entails a marginalizing effect in relation to the student's participation in school communities and has negative effects on students' learning outcome

Identified Middle-Range Theories

Time on task

In-class support provides students with SEN more time on task

The Synthesis and knowledge sharing

- A CR systematic begins with a set of theories and ends with more refined and contextualized theories
- The question is if the results from a CR systematic review has potentials to transcend the theory to practice gap – to inform practice in a meaningful and context-sensitive manner
- The professional will have research knowledge on how, why, for whom and under which circumstances an intervention like in-class support works

Knowledge Mobilization

- Mobilization of knowledge concerns making what we know from research useful and meaningful so it can create the intended value
- A significant aspect of a CR systematic review is the continuous collaboration between the practitioner and the researcher
- This must start with the professional's participation in the problem identification – on what subject do we need to gain research knowledge?

Knowledge Mobilization

- We must establish networks between the educational researchers and educational practitioners in order to gain a deeper understanding of the actual problems in practice and the need for research knowledge, and to establish ways of sharing and discussing this knowledge (The example of Essunga)

Thank you!

References

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Conference questions

- What infrastructures (physical or organisational structures, processes, regulations, etc) are in place across Europe to help facilitate better use of research in education?
- At what level - local, regional, national or European – does this infrastructure occur?
- What are the most important gaps in institutional capacity and infrastructure?
- How might these gaps be addressed?