SYNTHESIS OF NATIONAL RESEARCH ON SCHOOL CLIMATE IN CZECH REPUBLIC: A SCOPING REVIEW

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Abstract. Educators have been attuned to the importance of school climate for more than 100 years (Cohen, McCabe, Michelli, & Pickeral, 2009). School climate is an ecologically informed idea that recognizes individual, small and large group trends about a range of safety, relationships, teaching & learning and environmental issues that shape student learning and their development. School climate is measurable. Over the last three decades, school climate has become a growing focus for educational practice and policy leaders around the world (Ruiz et al, 2021; Cohen & Espelage, 2020; Thapa et al, 2013). As a result, we suggest that school climate and school-climate informed improvement efforts need to be studied on national levels (Vicente et al, 2021). Berkowitz's recent national-level study on positive school climate and its relationship to socioeconomic status and achievement of Arabic speaking students in Israel (Berkowitz, 2017 & 2020), has proved to be highly relevant bringing solutions to global issues (Bradshaw, et al. 2021). Our scoping review was conducted to advocate for the importance of school climate and for its role to inform national policy. It took place in the Czech Pedagogical Bibliographic Database of the J. A. Komenský Pedagogical Library in June 2020. The reasons for choosing this database were its terminologically unified annotation of bibliographic records using the Czech Pedagogical Thesaurus and its intentional scope to cover pedagogical literature (Email communication, Petišková, May 6th, 2020; Petrovičová, 2012). In the first step, we searched by the keyword "school climate" (in Czech) and identified a total of 383 bibliographic records. Using a programming script created for the purpose of our study by a university librarian, we identified a total of 2550 keyword combinations with the keyword "school climate." The keyword "school climate" was most often associated with the keyword "primary school" (N = 113). The second most frequent combination was "school climate" and "school environment" (N = 103). The third most numerous combination was "school climate" and "interpersonal relationships" (N = 92). The fourth most numerous combination was "school climate" and "teacher-student relationship" (N = 92). School climate is being studied in the Czech Republic on the primary and lower secondary school level, as well as in relational contexts.

Keywords: school climate; scoping review; Czech school climate research.

INTRODUCTION

Educators have been attuned to the importance of school climate for more than 100 years (Cohen, McCabe, Michelli, & Pickeral, 2009). School climate is an ecologically informed idea that recognizes individual, small and large group trends about a range of safety, relationships, teaching & learning and environmental issues that shape student learning and their development. School climate is measurable. Over the last three decades, school climate has become a growing focus for educational practice and policy leaders around the world (Ruiz et al, 2021; Cohen & Espelage, 2020a; Thapa et al, 2013). As a result, we suggest that school climate and school-climate informed improvement efforts need to be studied at national levels (Vicente et al, 2021). Berkowitz's recent national-level study on positive school climate and its relationship to socioeconomic status and achievement of Arabic speaking students in Israel (Berkowitz, 2017 & 2020), has proved to be highly relevant bringing solutions to global issues (Bradshaw, et al. 2021).

According to Arksey & O'Malley (2005) scoping reviews have a different goal compared to systematic reviews. Their aim is to synthesize the literature and subsequently assess the focus of the literature on a particular topic (Tricco et al, 2018). According to our current knowledge no scoping review of school climate research has been conducted on the national level in the Czech Republic. Our scoping review was conducted in the Czech Pedagogical Bibliographic Database of the J. A. Komenský Pedagogical Library in June 2020. The reasons for choosing this database were its terminologically unified annotation of bibliographic records using the Czech Pedagogical Thesaurus (CPT) and its intentional scope to cover pedagogical literature (Petrovičová, 2012; Email communication, Petišková, May 6th, 2020). In the first step, we searched by the keyword "school climate" (in Czech) and identified a total of 383 bibliographic records. Using a script created for the purpose of our study by a university librarian, we identified a total of 2550 keyword combinations with the keyword "school climate." The keyword "school climate" was most often associated with the keyword "primary school" (N = 113). The second most frequent combination was "school climate" and "school environment" (N = 103). The third most numerous combination was "school climate" and "interpersonal relationships" (N = 92). The fourth most numerous combination was "school climate" and "teacher-student relationship" (N = 92). School climate is being studied in the Czech

Republic on the primary and lower secondary school level, as well as in ("elementary school" and "school environment") and in relational contexts ("interpersonal relationships" and "teacher-student relationship").

Our main research question is: What is the state of school climate literature in the Czech Republic? From the very beginning, choosing the right keyword and choosing the database with which we intended to conduct the synthesis, were crucial. In the case of the school climate, the terminological ambiguity is relatively well known (Cumming et al, 2017, p. 17). However, it should be noted that it is not the only research field where it is necessary to pay attention to the clarification of terminological concepts. It is also marked by attempts to unify terminological ambiguities. An attempt to achieve terminological agreement in the school climate research was undertaken by the National School Climate Center (NSCC) (Thapa, Cohen, & Guffey, 2013). Based on extensive discourse and involvement of a large number of experts in the US, the NSCC provided a definition of school climate in 2007: "[School climate] is the quality and character of school life, contributing to a child's development, learning and school outcomes. The school climate is based on the daily experiences of school life; reflects the norms, goals, values, interpersonal relationships and organizational structures that contribute to the daily life of the school"(NSCC, 2007, p. 2).

METHODOLOGY

Database

Taking into account the relevance of a database before searching, is beginning to be a new quality trend (Brunton & Stansfield, 2012). We chose the Pedagogical Bibliographic Database, which is accessible via the online catalog of the J. A. Komenský Pedagogical Library in Prague. The creators of the Pedagogical Bibliographic Database recommend using the database for thematic searches and for orientation in the professional literature in the field of education and related disciplines (Petrovičová, 2012; Email communication, Petišková, May 6th, 2020). The Pedagogical Bibliographic Database contains annotated bibliographic records and uses CPT when searching for a specific topic. The advantage of the integration of CPT into a bibliographic database consisting of bibliographic records is a clear classification of similar terms, which increases the terminological clarity and consequently more accurate search results. CPT is regularly adjusted to be in line with developments in the field of education. (Czech pedagogical thesaurus, n.d.).

Tricci et al (2018) created a protocol specifically to increase the quality of scoping reviews, that is methodologically based on the studies of Arksey & O'Malley (2005) and Levac et al (2010). According to them, scoping reviews have a different goal compared to systematic reviews. Their aim is to synthesize the literature and subsequently assess the focus of the literature on a particular topic (Tricco et al, 2018). Since our main research question asks what is the focus of the Czech professional literature dealing with the school climate, the scoping review as a synthesis method was very relevant for us.

Methodologically, in our scoping review, we rely on the methodological approach of Grant and Booth. In their main study, they describe 14 types of systematic reviews and refer to scoping review as "the first step that is needed before a content and qualitative analysis [in terms of systematic review] is performed" (Grant & Booth, 2009, p. 101). Similarly, the methodology of Grant and Booth is implemented in the scoping review of the English and German scientific literature on refugee child research over the past 20 years (Pritchard et al, 2019). Chrastina (2020) presents a terminological review of the term „scoping review" which is often referred to as a prelude to a review study and defined as an initial assessment of the current situation in a given area.

Scoping review does not evaluate the identified records qualitatively in terms of the content of the found records (Grant & Booth, 2009, p. 101) as the systematic review does, it is rather a description of the scope of representations (Grant & Booth, 2009), that is a key in our case. In our opinion, they sufficiently represent the records found in the Pedagogical Bibliographic Database because they are made by experts based on the analysis of the entire content of the record, not just an abstract. Therefore, we consider the keywords in our listings to be content-relevant and relevant.

It should be noted that the aim of our scoping review was not to capture the overall state of Czech professional literature but to identify professional literature that is terminologically consistent in terms of bibliographic records in the Pedagogical Bibliographic Database. By the state of the literature, we mean the interconnection of keywords in each record found with each record from our total file (representing 395 bibliographic records). The Pedagogical Bibliographic Database annotates records using the Czech Pedagogical Thesaurus. Therefore, we point out that any comparison that we provide in the conclusion is

a comparison of the records found in one specific database, that we believe is sufficiently terminologically consistent. We believe that comparing bibliographic records is more reliable if they are annotated based on a common terminological strategy.

The term "school climate" was chosen for the scoping review due to its inclusion in the systematic form of the Czech Pedagogical Thesaurus (Baránková, Dušek & Haškovec, 1994).

In the systematic form (the so-called "semantic tree"), the term "school climate" is assigned 683 records (Czech Pedagogical Thesaurus, n.d.). The fact that the term "school climate" is included in the thesaurus in practice means that it often appeared in the keywords of publications. Keywords in the Pedagogical Bibliographic Database are created by content analysis of the records. Terms that are often mentioned as keywords in publications in the database are moved to the hierarchical position of the thesaurus (Email communication, Petišková, May 6th, 2020). The use of the thesaurus as a basis for terminological clarity in databases is also common, for example, at the United Nations. It serves as a categorization tool, is multidisciplinary and is regularly updated in the Dag Hammarskjöld Library of the United Nations Department of Public Information (About the UNBIS Thesaurus., n.d.).

For comparison, the term "classroom climate" has 591 records in the systematic form of the Czech Pedagogical Thesaurus. However, our goal was to use a term that is more comprehensive and has more records in the Czech Pedagogical Thesaurus when searching.

To compare the number of records found in the Pedagogical Bibliographic Database from May 6th 2020, we replicated the search on June 6th 2020. We performed the search according to the same criteria on the same day in the Portal of Electronic Resources of Charles University. A total of 395 Czech language were found in the Pedagogical Bibliographic Database (search term "school climate", years of publications 1991-2020). A total of 249 Czech records were found in the Portal of Electronic Resources of Charles University (search term "climate of the school, years of publications 1991-2020). The final number of records found was thus 86 records higher in the Pedagogical Bibliographic Database than in the Portal of Electronic Resources of Charles University, which can be explained by the broader focus of the Pedagogical Bibliographic Database (Email Communication, Hoftich, June 3rd 2020). Petrovičová, the co-author of bibliographies of professional pedagogical literature in the Pedagogical Bibliographic Database, describes the purpose of the Pedagogical Bibliographic Database as "capturing the development of professional article literature in the field of pedagogy and related fields as widely as possible" (Petrovičová, 2012).

For further comparison, we performed a search in Google Scholar (GS). A review study conducted by Thapa et al (2012) pointed out, that while their search in 2009 led to the identification of 8,180,000 records, in 2012 the number of records was 19,400,000 (Thapa et al, 2012, p. 2-3). The authors explain the large difference in the results by the growing interest in school climate research. In our search in GS we found 2940 records on May 6th 2020 (search term: "school climate", N = 2,940, publication period: 1991-2020). The difference in the number of records found in the Pedagogical Bibliographic Database and GS was 2,492 records. We conclude that searching in GS is not suitable for scoping reviews. The reason is a large number of duplicate records, which can be caused by the fact that the search in GS takes place throughout the whole text of the article (Email communication, Coppola, June 6th 2020). We replicated the search in GS on June 6th 2020, which led to the identification of only 48 records. We can therefore note that the Czech Pedagogical Bibliographic Database provided us with much more relevant results.

Procedure

We searched for records in the online catalog of the J. A. Comenius Pedagogical Library in two steps.

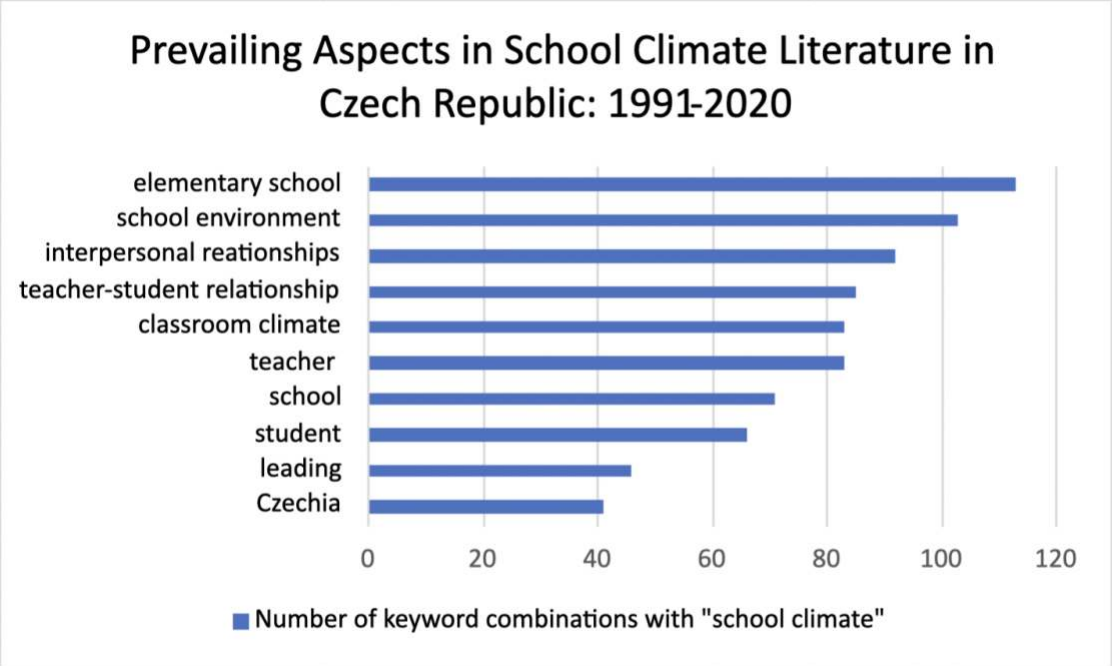
First step: In the expert search field, we used the term "school climate". We have selected the search to be conducted among keywords. In the next step, we limited the selection to Czech. The search was performed according to the following Boolean search string: keywords = "school climate" AND language = cze.

Second step: A specialist from the Charles University Faculty of Education library identified the keywords assigned to each record in the records found and extracted those that occurred with the keyword "school climate". The script created by the specialist compared the keyword "school climate" with each keyword of each entry in our file. The result was the number of combinations of individual keywords (Appendix 2 - Search results for the keyword ´klima školy´). We believe that by the number of keyword pairs from the total set of records, one of which is always the "school climate", we can describe the overall scope and focus of the records, as methodologically described by Grant and Booth (2009).

RESULTS

Based on our scoping review, that we conducted on May 6th 2020 to find out what is the focus of Czech school climate literature (search string: keywords = "school climate" AND language = cze), we found 395 bibliographic records for the period 1991-2020. The time limitation does not necessarily mean a limitation of the number of results from the search, because, as Průcha generally states, more intensive development of school climate research is recorded only after 1990 (Průcha, 2009, p. 293). The reason was the effort to stick to our original intention, which was to design this study as a scoping review in order to find out the overall state of the school climate literature using the Czech Pedagogical Bibliographic Database.

Within the records (N = 395), we identified a total of 2550 keyword pairs with the keyword "school climate". They revealed the prevailing aspects in school climate literature in the Czech Republic. The most numerous pair was the pair of keywords "school climate" and "primary school" (N = 113). The second most numerous pair was "school climate" and "school environment" (N = 103). The third most numerous pair found was "school climate" and "interpersonal relationships" (N = 92). In general, it can be noted that the results of the Czech Pedagogical Bibliographic Database search do not indicate the focus intensity of Czech school climate literature, but the fact that the Czech literature dealing with school climate is most common in the elementary school-context.



The "school environment" and the "primary school" reflect the holistic focus of the school climate. For comparison, while the keyword "primary school" appeared in the Czech professional literature in combination with the keyword "school climate" 113 times, "secondary school" occurred in combination with the keyword "school climate" 19 times.

CONCLUSION

The results of our scoping review point to the holistic and relational focus of the Czech school climate literature. They reveal the fact that the Czech professional literature located in the Pedagogical Bibliographic Database touches on two aspects of the school climate: Physical environment: the keyword "school environment" had the first most numerous representation (N = 118); Relationships: the keyword "interpersonal relationships" had the third-largest representation (N = 115).

As mentioned above, although the global terminological clarification of school climate is still unstable, leading school climate researchers agree on the areas that school climate should cover: security (physical and socio-emotional), relationships, academic performance, and the physical environment (Cummins et al, 2017, p. 18; Cohen et al, 2009). These areas are called dimensions or domains by researchers. Cummins suggests: "Probably the best way to agree on a working definition of school climate is to look at the school

climate dimensions suggested by the literature" (Cummins et al, 2017, p.18). According to him, the dimensional view is "a solid framework for creating holistic and reliable questionnaires that schools can use to measure climate and plan their development" (Cummins et al, 2017, p. 18; NSCC, 2009).

The holistic aspect is relatively typical in the school climate. This is most likely influenced by the fact that the increase in a systematic approach to school climate research is associated with the development of organizational environment research three decades ago (Anderson, 1982; Purkey & Smith, 1983; Kreft, 1993, in Thapa et al, 2012, p. 2). The relational focus in school climate research is considered by some researchers to be an important dimension of school climate (Cohen et al., 2009; Petrie, 2014; Zullig et al., 2010; Zullig et al., 2011). Empirical studies are increasingly emerging abroad, highlighting the importance of the relationship between teachers and students (Petrie 2014, in Cummins et al, 2017, p. 19;) and their conditional connection with early school leaving (Krane et al, 2016, p. 3, 9).

The relational aspect is equally considered by some school climate researchers to be an important aspect of immigrant students´ research (Email Communication, Cohen, September 3rd, 2020; Cohen et al, 2009). The fact that the third most numerous keyword pair was "school climate" and "interpersonal relationships", can pave the way for the future importance of school climate literature for monitoring and understanding the antecedents of immigrant students´ education. The reason is that the teacher-student relationship is considered to be an important factor for students academic outcomes (Daily et al, 2019; Krane et al, 2016, p. 18; Berkowitz et al, 2015; Sabol & Pianta, 2012, p. 219; Petrie, 2014, p. 26; Zullig et al., 2011; Zullig et al., 2010; Cohen et al., 2009), especially for immigrant students (Suarez-Orozco, 2009, p. 717).

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