SCOPING REVIEW PROTOCOL

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Paradigmatic perspectives of research on the self-regulated learning of non-western learners in health professions education: a scoping review protocol

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ABSTRACT

Objective: The objective of this review will be to explore the paradigmatic perspectives of research on self-regulated learning in non-western learners in health professions education.

Introduction: Studies show that there are significant cultural differences in self-regulated learning. However, a predominantly positivistic research paradigm, attempting to fit cross-cultural populations into pre-defined western conceptualizations of self-regulated learning, has led to the disregard of these differences. Viewed from a critical realist paradigm, emerging evidence suggests the need for generalizable, yet culturally sensitive models. Given the relevance of self-regulated learning to success in an increasingly diverse health professions setting, the first step towards achieving this is to gain a systematic understanding of the paradigms of research on self-regulated learning in non-western learners in this context.

Inclusion criteria: Primary research on the self-regulated learning of non-western learners in health professions education will be included. Participants will include learners in the Global South, including learners from Japan and South Korea, based on study setting. Studies on self-regulation and self-directed learning will not be included.

Methods: This review will be conducted in accordance with the JBI methodology for scoping reviews. The following databases will be searched: MEDLINE (Ovid), CINAHL (EBSCOhost), ASSIA, PsycINFO (Ovid), ERIC (EBSCOhost), Web of Science Core Collection, CKNI, Epistemonikos, and LILACS. Gray literature will be searched for in Google Scholar, ProQuest Dissertations and Theses, and DART-Europe. There will be no date or language restrictions. Following independent title and abstract screening by 2 reviewers, data will be extracted into a piloted data extraction tool, which will be iteratively revised as needed. Analyzed data will be presented in graphs and tables, accompanied by a narrative summary.

Details of the review project available at Open Science Framework: https://osf.io/gf2ez

Keywords: culture; etic-emic; Global South; health professions education; self-regulated learning

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Introduction

Self-regulated learning (SRL) is arguably the most important predictor of academic success in health professions education (HPE), not only improving academic and clinical performance,[1] but also workplace-based learning,[2] lifelong learning,[3] and student well-being.[1,4] SRL is an umbrella term concerned with the cognitive, motivational, and emotional factors that mediate successful learning.[5] It can be defined as an iterative, cyclical process whereby learners formulate goals, use strategies, and monitor advancement toward those goals, followed by reflection and the formulation of new goals.[6] Models of SRL provide useful conceptual frameworks that permit the study of

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the differential influence of self-regulatory processes on learning.[5] The output of such studies can inform educators on practical interventions to support SRL across disciplines and stages of learning to improve learning and performance.[6]

There are several models that provide a conceptual representation of SRL, depicting it as cycles of cognitive, affective, and behavioral processes. These are monitored and controlled by feedback-driven loops aimed at achieving learning goals. The key difference between these models is the source of information driving the SRL processes, with the source depending on the educational theory underpinning the model.[7] For example, cognitivist information-processing theorists link SRL solely to the learner's cognitive activity,[8] while the socio-cognitive view[9] adds the role of external environmental factors, such as the guidance of a teacher. The socio-constructivist view, on the other hand, posits that learners' values and beliefs, actively directs the co-construction of SRL behaviors, in tandem with social influences.[7] The 2 former frameworks are aligned with a positivist research paradigm insofar as SRL is considered to be a singular, generalizable reality. In contrast, the interpretivist paradigm adopted by the socio-constructive view considers SRL as socially constructed and context-dependent. However, it is important to note that these models were constructed with data derived predominantly from learners within western contexts.

This is concerning because in cross-cultural studies examining intergroup differences between cultural groups, researchers tend to use a top-down or etic perspective, in that the collected data is compared with a pre-defined "western" notion of SRL.[10] This is problematic because education is complex and highly contextualized, and the conventional use of western conceptual frameworks in comparativist studies in HPE results in a mistaken, one-dimensional assumption of learning as generalizable across populations.[11]

In a literature review of cross-cultural studies on SRL, McInerny and King conclude that by attempting to fit cross-cultural populations into SRL frameworks of western origin, there was a tendency to disregard or downplay the significance of culture-dependent variations in SRL processes or strategies.[12] This should be considered in light of increasing evidence of empirically demonstrated cultural differences in SRL processes, as for example, the use of specific SRL strategies in different cultural groups.[13] Additionally, despite the focus on internal motivation in SRL,[14] evidence suggests that perceived task value by significant others can influence SRL via motivation and affect.[15] Moroever, familial influence/pressure and fear of failure may influence SRL in different ways in non-western, collectivistic cultures.[16] Within HPE, the SRL of Chinese medical students was shown to be significantly influenced by more knowledgeable others.[17] Furthermore, epistemic beliefs, that is students' beliefs about knowledge and knowing, which is possibly a culturally sensitive belief too, can influence choice of SRL strategies and has been incorporated into a SRL model proposed within the HPE context.[18]

Drawing from this discussion, culture—defined as the perceptions, beliefs, and values of a group of people that can dictate behavior[19] along with its inherent "epistemic beliefs"—can be hypothesized to differentially influence SRL.[16] This argument would suggest that researchers should adopt an interpretivist paradigm with an emic perspective (bottom-up approach), using qualitative inquiry to study SRL. However, the results of such studies are not generalizable and have limited practical applicability.[12] Consequently, McInerny and King suggest a better understanding of SRL may be gained by using the combined emic-etic approach.[12] To elaborate, culturally appropriate models generated by emic, theory-generating studies could be used in etic studies to examine similarities across groups, allowing a more universal conceptualization of SRL. It has been suggested that a final emic phase would allow further contextual refinement of the developed model by improving rigor and checking for relavance.[10] Methodology aside, what is important is that the resulting context-specific, comprehensive models of socially constructed SRL,[7] which are both fluid enough to embrace individual variation and general enough to be applicable across learning contexts, could potentially contribute to a better understanding and application of SRL interventions in HPE. This comes at a time when there appears to be a shift in the paradigmatic view of SRL toward a critical realist angle. This perspective proposes the need for a "generally adequate" conceptualization of SRL, which incorporates variable and labile conditions.[20]

With such changes in SRL conceptualization, there is potential for the movement toward a socially constructed model of SRL. However, to embark on

such a venture, it would be beneficial to map the paradigmatic perspectives currently used in empirical research on SRL, especially when studying non-prototypic populations (ie, non-western learners). To this end, the scoping review methodology lends itself well to outlining how researchers have studied the SRL of non-western learners in the context of HPE. The focus on HPE is particularly important because of its unique and distinctive nature when compared with other educational settings. This is because HPE is situated within the intricate complexities of the health care system, which has a considerable and unique reciprocal influence on teaching and learning.[21]

Such attempts to understand SRL are especially important given increasing cultural diversity within educational and work settings in health care in the western world. For example, undergraduate students have been found to favor the UK for medical education due to perceptions of quality and prestige.[22] Additionally, with increasing numbers of migrants seeking employment and postgraduate training in the National Health Service (NHS), the health care workplace has become quite diverse. In fact, statistics show that in 2022, international medical graduates almost exceeded the number of local doctors in the UK workforce (52%), and it is predicted that in 2024, 32% of licensed doctors will be foreign.[23]

While the previously mentioned literature review of McInerny and King[12] is extensive and informative, it is not a formal scoping or systematic review. A preliminary search of MEDLINE (Ovid), CINHAL Ultimate (EBSCOhost), the Cochrane Database of Systematic Reviews, *JBI Evidence Synthesis*, and Open Science Framework did not yield any registrations and current or in-progress scoping or systematic reviews related to this area as at June 2, 2024, especially within the context of HPE. Thus, this study aims to explore the literature on SRL in HPE through a cross-cultural lens to outline the paradigmatic perspectives and methodological approaches in SRL studies conducted on non-western learners in HPE.

Review questions

i) What are the paradigmatic perspectives (ie, etic, emic, or combined) used in studies on the SRL of non-western learners in HPE, examined either separately or in comparison with western learners?
ii) What conceptual frameworks/SRL models, if any, underpin these studies?
iii) What, if any, culture-dependent variations in key SRL processes in non-western learners compared with their western counterparts have been identified, and to what extent have these been reported?

Inclusion criteria

Participants

For the purposes of this review, non-western learners will be considered to be learners participating in studies set in countries that are part of the Global South. The Global North–Global South dichotomy is a politico-economic division with no association to geographical location.[24] The Global South includes countries in Africa, Latin America, the Caribbean, Oceania (except Australia and New Zealand), and Asia (except Israel, Japan, and South Korea). However, both Japan and South Korea are countries whose cultural history has been less influenced by western or European culture, and more by Asian tradition. Therefore, in this review, studies set in these 2 countries will also be included. Despite being connotated with hierarchy and racism,[24] this categorization was deemed appropriate because of its pragmatic and epistemic utility within HPE research for the contextualization and practical application of research findings.[11]

Database searches using the term "non-western" or "Global South" as part of the search string are unlikely to yield relevant papers, as authors may not necessarily include related terms in their paper. Instead, the results will be filtered manually at the time of title and abstract screening for papers in which the participants fit into this criterion.

While it is acknowledged that widespread globalization has led to the increased blurring of cultural boundaries by region, this study will assume that, in general, local and non-western cultural influence in the included countries predominates over western influences on the SRL of its learners.

Concept

Primary research that focuses on any one of the cognitive, motivational, or behavioral processes or strategies of SRL will be included in the review. Although the terms are sometimes used interchangeably, papers that focus on self-directed

learning will be excluded from the review. Self-directed learning is a general description of how learners approach learning independently, while SRL refers to the choice of specific learning strategies within SRL processes targeted at learning goals.[25] Similarly, papers on self-regulation per se will not be included, as the term self-regulation refers to a more general application of the concept.[26] The focus of this review is on the use of self-regulatory processes specifically during the act of learning, namely, SRL.

Context

The review will include studies conducted in the context of HPE. Given the significance of continuous medical education and lifelong learning in HPE, this review will not only include those in training (eg, medical or nursing students), but also those in practice, who are engaged in learning in the workplace (foundation doctors, postgraduate trainees). Thus, HPE will be concerned with the formal or informal education of health professionals, as described by the World Health Organization,[27] including practicing doctors, nurses, midwives, traditional and complementary medicine professionals, paramedics, dentists, pharmacists, environmental and occupational health professionals, dietitians and nutritionists, audiologists and optometrists, as well as those studying toward these roles.

Types of sources

Primary research using quantitative methods (ie, experimental, quasi-experimental, cross-sectional, cohort), qualitative methods (ie, phenomenology, grounded theory, ethnography, case studies), and mixed methods study designs will be included. Data from unpublished doctoral theses will also be included. Opinion pieces, reviews, and metanalyses will not be included due to the nature of the research questions. However, any study that is included in a review that fits the inclusion criteria and has not been identified elsewhere will be included.

Methods

The proposed review will be conducted in accordance with the latest JBI guidelines for scoping reviews[28] and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR).[29]

Search strategy

The search strategy will aim to locate published and unpublished primary studies. An initial limited search of MEDLINE (Ovid) and CINAHL (EBSCOhost) was undertaken to identify index terms, keywords, and synonyms related to the review question framework (population, concept) using "self-regulated learning" OR "self regulat* ADJ3 learn*" OR "SRL" in combination with MeSH terms and keywords related to HPE. The identified terms were included in a full search strategy for MEDLINE (Ovid) (see Appendix I). The search strategy, including all identified keywords and index terms, will be adapted for searches of all other databases. The reference lists of all articles selected for full-text review will be screened for additional papers. The search strategy may be modified and expanded at any time if relevant new terms are identified. No time or language restriction will be used. Articles that are not in English will be included after translation using Google Translate, as papers that fit the criteria may not necessarily be set in countries where English is the first language.

The databases to be searched will include MEDLINE (Ovid), CINAHL (EBSCOhost), ASSIA (ProQuest), PsycINFO (Ovid), ERIC (EBSCOhost), Web of Science Core Collection, CKNI, Epistemonikos, and LILACS. Google Scholar, ProQuest Theses and Dissertations, and DART-Europe will be searched for unpublished studies and gray literature.

Study selection

Following the search, all identified records will be collated and uploaded into EndNote v. 20 (Clarivate Analytics, PA, USA) and deduplicated. Titles and abstracts will then be exported into Covidence (Veritas Health Innovation, Melbourne, Australia). A random selection of 25 titles and abstracts will be screened against the inclusion/exclusion criteria by the whole team as a pilot, with any discrepancies being discussed and resolved. Any necessary modifications made to the inclusion/exclusion criteria will be documented. Once there is 75% or more agreement in the screening process for this subset, the remainder of the screening will be carried out by 2 reviewers independently. The full texts of selected citations will be retrieved and assessed in detail against the inclusion criteria independently by the 2 reviewers, with reasons for exclusion being recorded and reported in the scoping review. Any

disagreements that arise between the reviewers at each stage of the screening process will be resolved through discussion or with a third reviewer The results of the search will be reported in full in the final scoping review and presented in a PRISMA flow diagram.[30]

Data extraction

Using the Covidence software, data will be extracted from selected papers by 2 independent reviewers into the data extraction tool developed by the reviewers. The data extracted will include specific details about the paper (eg, authors, year, study setting), participants (eg, role, gender, level of study), study characteristics (eg, methodology, design, perspective), SRL framework/model if used, reported findings relevant to SRL processes (eg, confirmation of model used, variations detected and reported or not), and explanation for variation, if provided. The draft data extraction tool (see Appendix II) will be piloted by the reviewers on 25% of the retrieved papers to test for feasibility and check for completeness, accuracy, and consistency between reviewers. Any modifications will be recorded and reported. In the absence of major discrepancies, the 2 reviewers will independently extract data from the remaining papers. Any disagreements in data extraction that arise between the reviewers will be resolved through discussion with a third reviewer. The final data extraction tool will be published in the review report.

Data analysis and presentation

General study and population characteristics and the data relevant to the first 2 review questions will be analyzed quantitively by descriptive statistics using the data analysis tool of Microsoft Excel. Frequencies of the descriptive data (study and population characteristics) that will be summarized as images and graphs include the geographical distribution of the study setting (world heat map); methodology (waffle chart); and role, gender, and level of study of the participants (tree graph). The rest of the study characteristics will be summarized in a table accompanied by a narrative explanation of the rationale behind the allocation to the etic, emic, or mixed perspectives. Frequency of the various SRL models used in studies with an etic component and the percentage of papers reporting differences in SRL processes will be demonstrated graphically. An inductive approach will be used to qualitatively analyze the differences in SRL processes or strategies identified, together with the explanations for these differences, which will be presented as a narrative summary.

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Author contributions

The idea for this scoping review protocol was developed by FY and NC. All authors contributed to the conceptualization of the protocol. FY wrote the initial manuscript, while all authors reviewed and made suggestions to improve the draft. FY, NC, and KF developed the search strategies. All authors critically reviewed and edited the final draft and read and approved the final manuscript.

Statement of author positionality

The experience of being non-western learners who have studied in both western and non-western contexts may influence how the reviewers, FY and FRI, look at the data. While this may provide some useful insights, any excessive influence threatening the unbiased and objective presentation of results will be counterbalanced by the other authors, who are western educators with extensive experience working with non-western learners.

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Appendix I: Search strategy

MEDLINE (Ovid)

Search conducted on July 14, 2024

Search	Query	Records retrieved
#1	"self-regulat* learn*".mp.	1011
#2	(self-regulat* adj5 learn*).mp.	1472
#3	"SRL".mp.	2334
#4	1 or 2 or 3	3554
#5	exp Education, Professional/	338,674
#6	("health professions education" or "HPE").mp.	3482
#7	((medical or doctor* or physician* or resident* or nurse* or postgraduate* or graduate* or midwives or midwife* or paramedic* or dental or dentist* or physiotherap* or "occupational health*" or pharmac* or dietician* or nutritionist* or audiologist* or "speech therap*" or optometr* or "traditional medicine" or "complimentary health" or "complimentary health medicine") adj2 (learn* or student* or train* or education or practitioner* or candidate* or pre-registration or pre-licen* or post-registration)).mp.	392,095
#8	5 or 6 or 7	518,453
#9	4 and 8	514

Appendix II: Data extraction instrument

General paper characteristics	
Title	
Source of evidence (peer-reviewed article/non-peer-reviewed article/ dissertation)	
Author(s)	
Year published	
Year study conducted	
Study setting/country	
Population characteristics	
Role of participants (medical student/nursing student/residents, etc.)	
Stage of study (undergraduate/postgraduate/continuous medical education)	
Sample size	
Age	
Gender distribution	
Study characteristics	
Methodology (quantitative, qualitative, mixed)	
Design	
Paradigmatic perspective – etic/emic/etic-emic	
Paradigm perspective – explicit/inferred	
SRL framework/model used (if any)	
Name of framework or model (if available)	
Author	
Theoretical basis (behaviorist, socio-cognitive, socio-constructive)	
Findings	
If etic:	
• conform to/deviate from model used	
• nature of deviation(s)	
If emic:	
• key findings	
If combination:	
• key findings	

Discussion/conclusion	
Acknowledge/downplay deviation	
Attempt to explain deviation (yes/no)	
Basis of explanation	
Notes	

