

MOTIVATION OF STUDENTS IN HIGHER EDUCATION TO TRANSFER LEARNING: A SCOPING REVIEW

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A research dissertation submitted in fulfilment of the requirements of the

Master of Nursing degree at the

School of Nursing of the

University of the Free State


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2021

DECLARATION

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ACKNOWLEDGEMENTS

This dissertation became a reality with the kind support and help of many individuals. I would like to extend my sincere thanks to all of them.

First and foremost, I want to offer this endeavour to our GOD Almighty for the wisdom He bestowed upon me, the strength, peace of mind, and good health in order to finish this research.

I would like to express my gratitude towards my family for their encouragement, which helped me to complete this review, in particular my loving children who served as my inspiration to pursue this undertaking.

I would like to express my special gratitude and thanks to my supervisor and co-researcher, Professor Yvonne Botma, for her support, during a year packed with personal circumstances. Her guidance and, imparting her knowledge and expertise in this study.

I am highly indebted to my co-supervisor and co-researcher, Doctor Champion Nyoni, for his guidance, support, and constantly providing the necessary information regarding this research.

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Abstract

Background

Motivation is a critical factor in students' performance, productivity and transfer of learning. Even when students have the right skills, education, and support from peers and or educators, they would not be able to use knowledge learned in one context to solve a problem in a new context without motivation.

Purpose

The purpose of this scoping review was to describe and summarise the literature on motivation to transfer learning in higher education and to identify the gaps regarding the research topic.

Methodology

Scoping reviews are used to determine the extent, range, and nature of the scientific literature. The nine-step descriptive, analytical method of conducting a scoping review was used, as described by Peters et al. (2020: 413) in the methodology manual of the Joanna Briggs Institute (JBI). The researcher used an organised process with the help of an experienced librarian and two co-researchers to identify articles that included all the words in the title of the research. The studies were independently screened for eligibility by the researcher and co-researchers during three rounds of review (title, abstract and full-text).

Results

The results of this scoping review were presented in a descriptive, diagrammatic and tabular format that aligns with the review question and objective. Of the 84 articles identified, 60 titles, 4 abstracts, and 20 full-text articles were screened for eligibility. The review included 8 studies.

Findings and limitations

Findings – A combination of the various of factors, influencing the motivation to transfer learning is proposed, suggesting further research to build a strong transfer theory in higher

education, including the full spectrum of factors on the transfer of learning model. The review highlighted the development of instruments to assess the same concepts and variables, and test the multidimensionality of the motivation to transfer learning in higher education more completely. Furthermore, the review proposes a concept analysis of motivation to transfer learning be done in higher education as part of health sciences to ensure that educators and researchers are able to characterise and understand what motivate students to transfer learning to improve the quality of education and healthcare delivered.

Limitations – Prior research studies relevant to the scope of this review were limited. This limitation can be considered as a significant opportunity for this review to identify new gaps in the prior literature and to present the need for further development in the area of this review.

Practical implications

The current literature highlights many factors influencing the transfer regime in the context of human resource development, but unfortunately, not much work has been done in higher education, especially in the field of health sciences. To improve the effectiveness of transfer of learning, we advocate that more in-depth qualitative research is required that involves other stakeholders such as students and educators. Further research should also investigate which variables make a difference in the complex process of motivation of students in higher education to transfer learning. A better understanding of the concept of motivation to transfer learning, the variables, and developing a theory, including the spectrum of variables influencing motivation to transfer learning, will assist educators to design more structured and evidence activities that ensure the motivation of students to transfer learning to the workplace, improving the delivery of healthcare.

Value

This scoping review contributes to the dormant higher education transfer literature by proposed a combination of variables that provides a theoretical basis for building a strong theory/model on motivation to transfer learning for higher education.

Keywords Transfer of knowledge or learning, motivation to transfer, student, higher education, human resource development.

Conceptual definition of key concepts

The researcher listed conceptual definitions of key concepts in alphabetical order. Conceptual definitions are theoretical descriptions of a variable (Botma, Greef, Mulaudzi & Wright, 2010:272). Concepts for clarification were selected from the title of the study.

Higher Education is an academic environment where students engage in learning, research and community service, leading to the award of an academic qualification, usually at an academic institution. Higher education, also called post-secondary education, third-level or tertiary education, is an optional final stage of formal learning that occurs after completion of secondary education (Alemu, 2018:211). In this study, higher education will refer to an academic environment as part of health sciences, where students engage in learning theory and skills aligned to specific objectives or outcomes, leading to the awarding of an academic qualification.

Knowledge transfer is defined as a process through which knowledge moves between a source and a recipient where knowledge is given and practiced (Hassan, Noor & Hussin, 2017:751). In fact, knowledge can be transferred among people between levels in the hierarchy of the organisation and between units and departments (Hassan et al., 2017:751), and will enhanced the value knowledge possessed besides provide better solutions on business or organisation performance (Hassan et al., 2017:755). In further, knowledge transfer will enables an organisation to make better decisions and compete effectively where knowledge creates competitive advantage. Knowledge transfer is used as an instrument in enhancing organisational performance especially when it is being used to solve problem, making decision, strategizing planning and reviewing performance throughout the organisation (Hassan et al., 2017:755). The successful application of knowledge required for effective transfer within organisation and also the strategic utilisation of the knowledge (Hassan et al., 2017:756). Knowledge transfer being seen as the initial stage in conversed the knowledge but the crucial stage would be the practice of the transferred knowledge into the organisation process including in making decision (Hassan et

al., 2017:756). The majority of research on the concept knowledge transfer is done in human resource development or professional development research, however this review's population was students, context higher education and the concept transfer of learning. Due to the outcome evidence of this scoping review on motivation to transfer learning in higher education is dormant, therefore the two concepts learning transfer and knowledge transfer will be used interchangeable in this review.

Learning is a process through which experience results in a permanent change in knowledge, skills or behaviour, and improves individual and organisational performance (Grossman & Salas, 2011:103; Khan, Mufti & Nazir, 2015:197; Kirwan & Birchall, 2006:257; Woolfolk, 2010:557). For this study, learning is described as a process where students in higher education's behaviour, their knowledge, skill and attitude are changed and aligned to a specific objective or outcome.

Learning transfer is the application of basic scientific knowledge, skills and attitude acquired in one learning context to solve a new problem in another context (Castillo et al., 2018:592-593; Grohmann, Beller & Kauffeld, 2014:85). Transfer of learning and learning transfer will be used interchangeably in this study.

Motivation is the inner force that drives the student to use knowledge, skills and attitude learnt to change behaviour in the workplace to accomplish personal and organisational goals (Grohmann et al., 2014:86; Kirwan & Birchall, 2006:253; Khan et al., 2015:206; Tohidi & Jabbari, 2012:820). The term derived from the Latin word *movere* and the word 'motivate', meaning to move to push or influence (Cinar, Bektas & Aslan, 2011: 690; Oluseye, Amos & Abiola, 2014:198; Tohidi & Jabbari, 2012:820). Therefore, a motivated student is moved to do something, pushed to think and act in a certain way to satisfy his/her needs to achieve the desired task (Cinar et al., 2011:690; Tohidi & Jabbari, 2012:820). For this study, a motivated student is one who is eager to transfer and to utilise skills and knowledge learnt to the workplace

Student is a person who studies at a higher education institution (university or college) leading to the awarding of an academic qualification (Merriam-Webster Dictionary, 2019). In

this study, the concept ‘student’ will be applied as defined by the Merriam-Webster Dictionary (2019).

List of abbreviations

ARCS Model	Attention, relevance, confidence, satisfaction model
FIT	Feedback intervention theory
HRD	Human resource development/department
JBI	Joanna Briggs Institute
LTSI	Learning Transfer System Inventory
MTIWL	Motivation to improve work through learning
NES	Nursing Education Stakeholders Group
SCLT	Social Cognitive Learning Theory
SDL	Self-directed learning
SDLO	Self-directed learning orientation
SDT	Self-determination theory

CHAPTER 1: OVERVIEW OF THE REVIEW

1.1 Introduction and background

Motivation is a critical factor in students' performance, productivity, and transfer of learning (Celestin & Yufen, 2018:14; Chang & Chiang, 2013:16). Even when students have the right skills, clear work objectives, and a supportive work environment, they would not be able to transfer learning without motivation (Raza & Shah, 2017:2). Ekundayo and Babalola (2018:33) elaborate that motivation is a major factor that affects a student's performance as motivated students tend to perform better than those who are poorly motivated. Within the context of health sciences, there is a significant relationship between motivation and performance (Afful-Broni & Nanyele, 2012:315; Ekundayo & Babalola, 2018:33). If individuals are highly motivated, they will perform better, thus improving the quality of healthcare delivered (Ma, Bai, Bai, Ma, Yang & Li, 2018:19.)

Motivation is an influential factor in the transfer of learning (Celestin & Yufen, 2018:3). Transfer of learning is key in maintaining a competitive advantage in today's rapidly changing organisational environments (Celestin & Yufen, 2018:1). Where organisational success attained through increasing productivity and performance, decreasing employee turnover, and a positive effect on employee morale, often depends on the motivation with which employees can learn and apply new information (Celestin & Yufen, 2018:1; Kontoghiorghes, 2002:114; Waiyaki, 2017:3). Poorly motivated employees, including students, are expensive for an organisation in terms of decreased productivity and performance, excessive staff turnover, increased expenses, and a negative effect on the morale of colleagues (Waiyaki, 2017:4).

Osabiya (2015:63) defines motivation as the process of developing commitment, energy, determination, and action to carry out individual behaviour. Understanding what motivates a student to learn and transfer learning should be considered during educational programme development (Griffin, MacKewn, Moser & Van Vuuren, 2013:53).

Intrinsic and extrinsic motivation are considered as two main types of motivation (Taylor & Hamdy, 2013:1562). Intrinsic motivation is individually driven by an internal willingness to

continuously engage in the learning process and enjoying tasks (Fischer, Malycha & Schafmann, 2019:2; Zlate & Cucui, 2015:472). Intrinsically motivated students are likely to attribute their educational outcomes to factors under their control and believe they can reach sought-after goals. They are interested in becoming proficient at a topic, rather than just using repetitive learning to achieve good grades, contrary to extrinsically motivated students (Adamma, Ekwutosim & Unamba, 2018:56; 2020:204; Tohidi & Jabbari, 2012:821).

Extrinsically motivated students are driven by external factors and consequently engage in learning activities because of rewards associated with such learning activities (Filimonov, 2017:online; Rzayeva, 2020:204; Tohidi & Jabbari, 2012:821). Common extrinsic motivators are rewards like money, praise, honorary titles, grades, coercion or avoidance of punishment. Filimonov (2017:online) suggests that external factors catalyse students' participation in various learning activities often aimed at improving outcomes associated with the external environment. Social psychological research specifies that extrinsic rewards could lead to over-justification and decreased intrinsic motivation (Filimonov, 2017:online; Tohidi & Jabbari, 2012:821; Zlate & Cucui, 2015:472-473).

Research has shown that intrinsic motivation within individuals differs from person to person (Legault, 2016:2; Miao, Rhee & Jun, 2020:14). While one can only rely on intrinsic motivation for some activities, motivation must be promoted extrinsically for other activities to achieve the desired learning outcomes (Filimonov, 2017:online). Learning is a complicated process, and intrinsic and extrinsic motivation are the solid pillars of this process (Gopalan et al., 2020:554). Hence, students have to be highly motivated to face challenges, understand processes, and transfer learning in real circumstances.

Various motivation related theories explain the intricate relationship between students and motivation to learn, which include *self-determination theory* (SDT), *expectancy theory*, *attention, relevance, confidence and satisfaction model* (ARCS), and *social cognitive learning theory* (SCLT) (Gopalen et al., 2017:1893-1895; Taylor & Hamdy, 2013:1562-1563). A brief summary of these motivational related theories follows.

According to the SDT, the student has the skills and the ability to apply learning, driven by intrinsic and extrinsic motivation (Gopalen et al., 2020:555). The expectancy theory proposes that an individual will behave or act in a certain way as they are motivated to choose a

specific behaviour over others based on their expectations of the result associated with the selected behaviour (Emilia, Mortan & Lazàr, 2013:183; Gopalen et al., 2020:555-556). Taylor and Hamdy (2013:1562) argue that a low expectation of success will result in reduced motivation.

The ARCS model is a systematic way of determining and dealing with learning motivation (Gopalen et al., 2017:1894; Taylor & Hamdy, 2013:1563). The model's main strength is that students can be motivated directly by using attractive, satisfying, and stimulating learning material (Gopalen et al., 2017:1894). These elements have been described as the seductive elements of learning design, and are prominent in e-learning to motivate student learning in asynchronous settings. The ARCS model has a direct implication on the designing of training and learning material to motivate students (Li & Keller, 2018:54).

The SCLT is a theory that emphasises learning from the social environment. The theory states that when people observe a role model performing a behaviour and the consequences of that behaviour, they remember the sequence of events and use this information to guide their subsequent behaviours (Harinie, Sudiro, Rahayu & Fatchan, 2017:2). The SCLT has underpinned the design of various apprenticeship based educational programmes where students were placed in real-world settings, understudying professionals in practice. Placement in a real-world setting driven by apprenticeship type of learning is aligned with external motivation. Therefore, organisations and educational programme developers should be aware of and carefully consider motivational theories to support motivation and learning transfer.

In organisational contexts such as healthcare facilities, transfer of learning is generally regarded as the paramount concern of training efforts as it often suggests and validates that learning has occurred and that the learning programme has achieved its goal (Foley & Kaiser, 2013:6-7; (Ma et al., 2018:19). Still, transfer of learning has proven to be a daunting challenge as it does not always occur when an individual engages in adult education (Botma, Van Rensburg, Coetzee & Heyns, 2013:1; Subedi, 2004:591). Kirwin and Birchall (2006:266) mention that only about 10-20% of training interventions would apply in the workplace. Failure to transfer learning occurs for several reasons, and these may be grouped as factors, within the students as individual learner's motivation, design of learning sessions, perceived

relevance of the training and workplace climate, such as social support (Botma et al., 2013:2; Hajian, 2019:103). Hung (2013:27) found that researchers focused on transfer of learning since the early 1900s. He defines the concept of learning transfer as "applying previously learned knowledge with various degrees of adaptation or modification of that knowledge in completing a task or solving problems". According to Taguma (2018:online), transfer of learning is the influence of prior learning experiences on current and future learning experiences. Perkins and Salomon (1988) developed one of the most commonly referenced theories of learning transfer. Their approach indicates that learning transfer falls into the categories of either near transfer or far transfer.

Near transfer involves learning that is more automatic and comfortable for the student (Sala et al., 2019:2). This form of transfer often takes place within familiar contexts. Far transfer demands that the student engages in more in-depth and complex cognitive processes. Therefore, the information and content may be more challenging to transfer from one setting to another (Salsa et al., 2019:3). Chen (2020:306) also describes transfer in terms of positive and negative, they indicate that positive transfer takes place when "prior learning from one environment supports performance outcomes within another environment" and that negative transfer occurs when "prior learning inhibits performance".

Learning transfer and training transfer are often considered synonyms. It is, however, essential to note that training transfer typically referred to within the context of the workplace. According to Muhammad and AlSheikh (2018:553), transfer of training occurs when the learning that takes place during training will be applied consistently within the work environment. Researchers and practitioners consistently conclude that the return on many training investments is low and organisational investments in training often wasted due to poor transfer of learning (Jasson & Govender, 2017:online). Transfer of learning is estimated to be 40% immediately following training, after 6-months 25% and after a year 15% (Donavan & Darcy, 2011:122; Grohmann & Kauffeld, 2013:136; Jasson & Govender, 2017:online). The inability to transfer learning is of particular concern in today's rapidly changing business climate where patient care in healthcare facilities and safety often depends on the speed with which people can learn and apply new ideas and information (Muhammad & Alsheikh, 2018:554-555).

1.2 Problem statement

Understanding the motivation of students to learn, and the transfer of learning is crucial. As motivation is one of the critical components in the learning transfer process that ignites students' will power to do the things they want to do (Grohmann et al., 2014:87; Sogunro, 2015:34). If a student is unmotivated, s/he may choose not to apply the newly learnt knowledge and skill into practice. According to Testers, Gegenfurtner and Brans-Gruwel (2015:475), motivation is the action to the transfer process and a variable in the transfer of learning context. Educators can create optimal conditions for the successful transfer of learning, but nothing will happen when a student is not motivated (Testers et al., 2015:475). Despite a broad agreement on the importance of motivation for the transfer of learning, empirical studies investigating motivation to transfer of learning are limited, inconsistent, and most of the studies exclude motivation to transfer (Colquitt & LePine 2000: 681; Gegenfurtner, Festner et al., 2009:125; Jacot, Raemdonck, Frenay, 2015:202; Nafukho et al., 2017:332; Tonhäuser & Büker, 2016:151).

Transfer of learning is not a new topic of research, notwithstanding, it is also not a resolved area of study. Khan, Mufti and Nazir (2015:201) stated that transfer of learning was, arguably, "one of the most important issues in the learning sciences" thus reiterating the view already expressed by other researchers regarding the importance of transfer (Abdullah & Suring, 2011:335; Khan et al., 2015:210). However, transfer of learning remains a problematic and contested concept, overall under-researched and the literature has remained fragmented and characterised by a variety of 'mixed' findings (Khan et al., 2015:211; Nafukho, Alfred & Johnson, 2017:331; Tonhäuser & Büker, 2016:129).

For this reason, this study explored the existing scientific evidence on the motivation of students in higher education to transfer learning through a scoping review.

1.3 Aim and objective of the scoping review

This scoping review aimed to explore the existing scientific evidence regarding the motivation of students in higher education to transfer learning. The objective of this review aimed to summarise existing literature on higher education students' motivation to transfer learning.

1.4 Methodology

1.4.1 Scoping review

The researcher conducted a scoping review by using a systematic process to identify data sources, extract data, analyse and interpret the findings and to draw conclusions from the results (Munn, Peters & Stern, 2018:4). A scoping review gives an overview of the existing literature, highlights any weaknesses or uncertainties, and provides more definite routes forward such as key themes, how they might intersect, possible comparative analysis or predicted outcomes and the general advancement of research (Pham et al., 2014:372).

For the study's purpose, the researcher followed the process as described by Peters et al. (2020:413) in the methodology manual of the Joanna Briggs Institute (JBI). The JBI used the framework proposed by Arksey and O'Malley (2005:22) and the one that Levac, Colquhoun and O'Brien (2010:4) refined to develop their guidelines on how to conduct scoping studies (Peters et al., 2020:413). Table 1.1 shows the scoping review methodological framework that was used during the study.

Table 1.1: Scoping review methodological framework (Peters et al., 2020:413)

1.	Defining and aligning the objective/s and research question/s: The review objective/s and specific review question/s is clearly stated. The objectives may be broad and will guide the scope of inquiry. The review questions are consistent with the title and direct the development of the specific inclusion criteria.
2.	Developing and aligning the inclusion criteria with the objective/s and question/s: The inclusion criteria provide a guide to understand what is proposed by the reviewer. It is a guide for the reviewer to base decisions on the sources to be included in the scoping study.
3.	Describe the planned approach to evidence searching, selection: The search strategy should be comprehensive to identify primary published evidence. Each step must be clearly stated in the protocol.

Continue...

4.	Searching for evidence: three-step search strategy as recommended in all JBI types of reviews will be utilised for this study.
5.	Selecting the evidence: The number of studies identified and selected for the inclusion in the scoping study must be reported. There should be a narrative description of the search decision process accompanied by the search decision flowchart (See Figure 2.4 PRISMA ScR flow diagram of the selection and elimination process).
6.	Extracting the data: The extraction of data for a scoping study is referred to as "charting the results" and should be logical and a descriptive summary of the results and aligned to the objective/s and the question/s of the review.
7.	Analysis of evidence: In some situations scoping review authors may choose to extract the results and descriptively, rather than analytically map and analyse the content.
8.	Presentation of the results: In a scoping study, the results may be presented as a "map" of the main conceptual categories in a logic diagrammatic or tabular form and in a descriptive format that aligns to the objective/s and scope of the review.
9.	Summarising of the evidence: Coming to conclusions and noting any implications of the findings in relation to the purpose of the review. The summarising of evidence may then be further refined towards the end of the review when the reviewer has the most significant awareness of the content of their included studies.
	Consultation of information scientists, librarians and/or experts (throughout).

1.4.2 Scoping review question

The review question was consistent with the title and directed the development of the specific inclusion criteria (Peters et al., 2020:416). The review question for the study is:

What is the existing state of the scientific evidence regarding the motivation of students in higher education to transfer learning?

Table 1.2 shows the application of the review question in the Population (P), Concept (C), and Context (C) format as suggested by Peters et al. (2020).

Table 1.2: Research question according to PCC

PCC Elements	Application in this study
Population	Students
Concept	Motivation to transfer learning
Context	Higher education

1.4.3 Inclusion and exclusion criteria

The inclusion criteria guided the researcher and co-researchers to decide which sources to include in the scoping review. There was a clear congruency between the title, objectives, question/s, and inclusion criteria of this scoping review. Table 1.3 shows the inclusion and exclusion criteria for this study.

Table 1.3: Inclusion and exclusion criteria

Criteria	Inclusion	Exclusion
Language	English, and Afrikaans, because these are the languages understood by the researcher and co-researchers.	Articles in other language of which translations into English are unavailable
Type of literature	Primary studies accessible through the local university library	Inaccessible through the local university library
Sources	Published and grey literature	
Study focus	Motivation to transfer learning	
Population and sample	Students in higher education	Employees Faculty Pre-primary, primary or high school education.
Time frame	1 st of January 1986 and the 31 st of July 2020 (Raymond Neo coined the term motivation to transfer learning first in 1986:743)	Published before 1 st of January 1986 or after 31 st of July 2020.

1.4.4 Literature search strategy and study selection

Searching for and selecting relevant literature is an iterative process involving searching the literature, refining the search strategy, and reviewing articles for inclusion in the study. To improve the rigour of the scoping review search strategy and study selections, the researcher made use of a systematic process and team approach to improve the transparency and replicability of the search process.

A "quick and dirty" search of at least two appropriate online databases relevant to the topic was done. The researcher reviewed the titles and abstracts presented as outcomes of the search. The purpose of the quick and dirty search was to have a general overview of publications aligned to the researchers' search strategy and help the researcher and reviewers to refine the inclusion, and exclusion criteria.

A librarian who is skilled in conducting literature searches for various types of reviews refined the Boolean search string and performed the searches on the various databases. During the literature search, the researcher completed the PRISMA ScR flow diagram of selection and elimination process as adapted from Peters et al. (2020:414).

1.4.5 Data extraction

The data extraction for a scoping study is 'charting the results' and is a logical and descriptive summary of the results that align to the objective/s and question/s of the study. Charting of the results was an iterative process in which the researcher and co-researchers continually extracted data, refined the extraction fields and updated the data charting form. Data were extracted verbatim from the articles to enhance the credibility of the study (Addendum C)

1.4.6 Analysis of the evidence

The descriptive format of the reported findings explains and describes the available evidence on the motivation of students' in higher education to transfer learning. Where possible, the findings were thematically analysed.

1.4.7 Presentation of the results

The researcher submitted a plan for presenting the results in the proposal registered on the Open Science Framework (open registration). Findings and the interpretation thereof are presented in tables or figures.

1.5 Rigour of the study

Rigour refers to the process of systematically studying a phenomenon, using appropriate design and methods for the problem that is being examined (Prion & Adamson, 2014: 107). Five aspects of rigour related to this scoping review will be presented (Peters et al., 2020).

1.5.1 An a-priori review protocol

An a- priori review protocol was developed by the researcher guided by the supervisor. The protocol was presented to an evaluation committee of internal experts in research within the School of Nursing at the University of the Free State, and external experts connected to other departments at the University of the Free State. Amendments from the committee were incorporate to strengthen the quality of the protocol. The protocol was further registered on the Open Science Framework; <https://osf.io/8k56v> (open registration) on the (02 September 2020) for comments by global community of scientists. To date no direct comments on the protocol were reviewed.

1.5.2 Explicit, transparent, peer review strategy

The search strategy inclusive of the final search string was developed from the review question, including the 'quick and dirty' search guided by an experienced university librarian. An iterative process enhanced by discussion among the researcher, one co-researcher and the librarian cemented the final search string. Decisions regarding the inclusion and exclusion of articles in this study were done independently by the researcher and two co-researcher, that was the supervisor and co-supervisor for this review. Discrepancies in decisions were discussed. The co-researchers have experience and expertise in the subject matter and in scoping reviews.

1.5.3 Standardised data extraction form

A standardised data extraction form was developed (Addendum C). This form was informed by literature (Peters, et al., 2020) and the review question. The researchers examined the form, piloted the form and discussed this form before extracting data from all the included articles. Data extraction was done verbatim, by the researcher and the co-researchers verified the extracted data.

1.5.4 Applying known frameworks

This review was underpinned by a Scoping Review framework developed by Peters et al. (2020).

1.5.5 Standardised Reporting

The PRISMA-ScR standards for reporting scoping reviews was applied in this study (Addendum D).

1.6 Ethical considerations

The ethical considerations of this study were guided by the framework for ethical educational research (Burgers & Cilliers, 2016:online). Several principles underpinned this framework, namely educational value, scientific validity, ethical oversight, fair selection of participants, favourable risk, voluntary informed participation, respect of recruited participants, provision of appropriate educational interventions or other benefits of social value after research, and collaborative partnerships. All of these principles is not applicable to a scoping review, integrity and merit of the work and plagiarism will be discussed with the following principles of the framework: educational value, scientific validity, and ethical oversight.

1.6.1 Integrity and merit of the work

Academic integrity is the moral code or ethical policy of academia, and includes values such as prevention of cheating or plagiarism, maintenance of academic standards, honesty, and rigour in research (Tauginiené et al., 2019:345). The researcher and co-researchers

demonstrated professionalism, competence, intellectual and moral integrity and quality, by ensuring:

- the scoping review is independent, impartial, credible and honest;
- the quality of the research design is to deliver the intended results, with good alignment between aims, questions and methodology;
- defending and holding to the evidence generated, regardless of any pressures to vary or suppress findings; and
- delivering technically competent work and defining standards of moral and honest behaviour (Tauginiené et al., 2019:355).

1.6.2 Plagiarism

Plagiarism constitutes a representation of the work of others as one's own work. The reference list and in-text references assign the credit to sources used in the study (Brink, Van der Walt & Van Rensburg, 2012:44). The researcher endeavoured to respect others' intellectual property through the correct use of references and avoid plagiarism (Botma et al., 2010:277). This dissertation was subjected to plagiarism check through Turn-it-in® software (Addendum E).

1.6.3 Educational value

This ethical principle reflects that educational research should have important educational, research or social applications (Burgess & Cilliers, 2016:online). By explore the existing scientific evidence regarding students' motivation in higher education to transfer learning bearing the possibility of how exactly motivation orientations impact the underlying cognitive processes to improve transfer of learning in higher education, as part of health sciences to ensure that educators and researchers in higher education be able to characterise and understand what motivate students to transfer learning to improve the quality of education and health care delivered (Ma et al., 2018:2).

1.6.4 Scientific Validity

The concept of scientific validity presumes that the researcher should select appropriate rigorous designs that effectively address the review objective and research question

(Burgess & Cilliers, 2016:online). A scoping review research method underpinned this study. This method were reasoned appropriate for the research. With searching and extracting of data, of relevant literature for this the review the following key ethical considerations were followed search biases and ensuring accuracy of data extraction (Suri, 2020:online).

1.6.4.1 Search for relevant literature

The key ethical consideration associated with searching relevant literature is in designing an appropriate searching strategy (Suri, 2020:online). In designing an appropriate search strategy, the researcher should carefully consider common forms of search biases, such as database bias, citation bias, availability bias, language bias, country bias, familiarity bias and multiple publication bias (Suri, 2020:online). A number of strategies were used to minimise the common forms of bias in this scoping review, and are discussed below. To ensure that studies relevant to the review question and objective were included in this scoping review, the researcher had a well-defined search strategy. Explicit reporting on the search regarding search strategies, search engines, databases accessed and the number of titles, abstracts and full-text obtained enhances credibility and repeatability of the search. To conduct a comprehensive and unbiased search, more than one search strategy was used: (1) high quality electronic search in multiple databases with the help of a skilled librarian with in-depth knowledge of various evidence resources to conduct comprehensive literature searches was included. Therefore the potential impact of multiple publications base on the same dataset was limited (Suri, 2020:online). (2) The second search strategy, ancestor searching, may lead to citation bias. The researcher scrutinised the references obtained during the ancestor search. Inclusion was based only on the potential of the title of each reference to adhere to the inclusion criteria. (3) Grey (unpublished literature) was included in the inclusion criteria. Another internal threat to validity during a search is language bias. During the search limitations of English, and Afrikaans, were set on language. The articles that were originally published in other languages were obtained in English. The two articles in Korean were unobtainable in English, and were excluded, providing grounds for language bias.

1.6.4.2 Accuracy of data extraction

Researchers have a responsibility to plan for accurate data extraction by ensuring that data are extracted independently by at least two authors, any discrepancies are resolved, and the decision on which data to include is agreed by all (Wager & Wiffen, 2011:133). Accuracy in this review was ensured enhanced because the researcher and two co-researchers charted the data independently by independent data extracted by the researcher and two co-researchers. Discrepancies of the charted data extraction were resolved through virtual discussion until consensus was reached on which data to include in this review and checking of the article. With the data extraction the researcher and co-researchers reflected upon the authors' contextual positions, their methodological orientations, assumptions they are making and how they influence the findings of the original study (Suri, 2020:online).

1.6.5 Ethical oversight

A research study is expected to ensure an independent review of scientific and ethical merit (Burgers & Cilliers, 2016:online). The Health Sciences Research Ethics Committee (HSREC) of the University of the Free State approved the research proposal, ethics number: UFS-HSD2020/0421/2605 (Addendum A) and adjustment of minor changes (Addendum B).

1.7 Significance of the Study

Motivation to transfer learning is essential for the transfer of learning. Without motivation, newly acquired knowledge and skills will not be applied (Abdullah & Suring, 2011:335). Prior research studies relevant to the scope of this review were limited. This limitation was considered as a significant opportunity and a catalyst for this review. This review intended to make the following contributions:

- (a) to summarise and synthesise evidence on motivation by students in higher education to transfer learning;
- (b) to identify the gaps in scientific evidence related to motivation by students in higher education to transfer learning; and
- (c) to offer directions for future research in the field of motivation by students in higher education to transfer learning.

1.8 Conclusion of the chapter and dissertation layout

This chapter presented an overview of this scoping review- through a description of the background, justification for the review and the scoping review methodology. In addition, the researcher also described strategies used to enhance the rigour of this review, including the ethical considerations and the significance of this review. This dissertation is presented in four chapters namely;

Chapter one: Overview of the review

Chapter two: Methodology/literature search

Chapter three: Data

Chapter four: The study findings, conclusions, recommendations and limitations

The next chapter will present the literature search guided by the Peters et al. (2020) framework for scoping reviews.

CHAPTER 2: METHODOLOGY

2.1 Introduction

A research methodology is the entire strategy for a research study (Grove, Burns & Gray, 2013:195). Polit and Beck (2012:733) view methodology as “the steps, procedures and strategies for collecting and analysing data in a research investigation”. These steps, procedures and strategies should be addressed with such detail in the methodology chapter that another person would be able to replicate the original study later (Botma et al., 2010:311). It is essential to continuously refer back to the review question, the aim and objective to ensure that the intended review question is answered and the application of all key concepts is enabled (Peters et al., 2020:416). The aim of this review was to explore the existing scientific evidence regarding the motivation of students in higher education to transfer learning. A scoping review was chosen as an appropriate methodology and design to achieve this aim.

This chapter is an expansion of the methodology section presented in Chapter 1 and describes the application of scoping review methodology. The researcher used the JBI scoping review methodology framework, which represents the nine steps in a scoping review (Peters et al., 2020:413). The research methodology with the research methodology framework, and the first five of the nine steps in a scoping review will be discussed in this chapter. The first five steps, excluding Step 3, as discussed in-depth in this chapter include:

Step 1: Defining and aligning the objective/s and review question/s;

Step 2: Developing and aligning the inclusion criteria to the objectives;

Step 4: Searching for the evidence, and

Step 5: Selecting the evidence.

The researcher omitted Step 3: Describing the planned approach to evidence searching, selection, data extraction and presentation of the evidence from this chapter as it was described in detail in the proposal registered on the Open Science Framework. Figure 2.1 shows the sequence of discussion in this chapter.

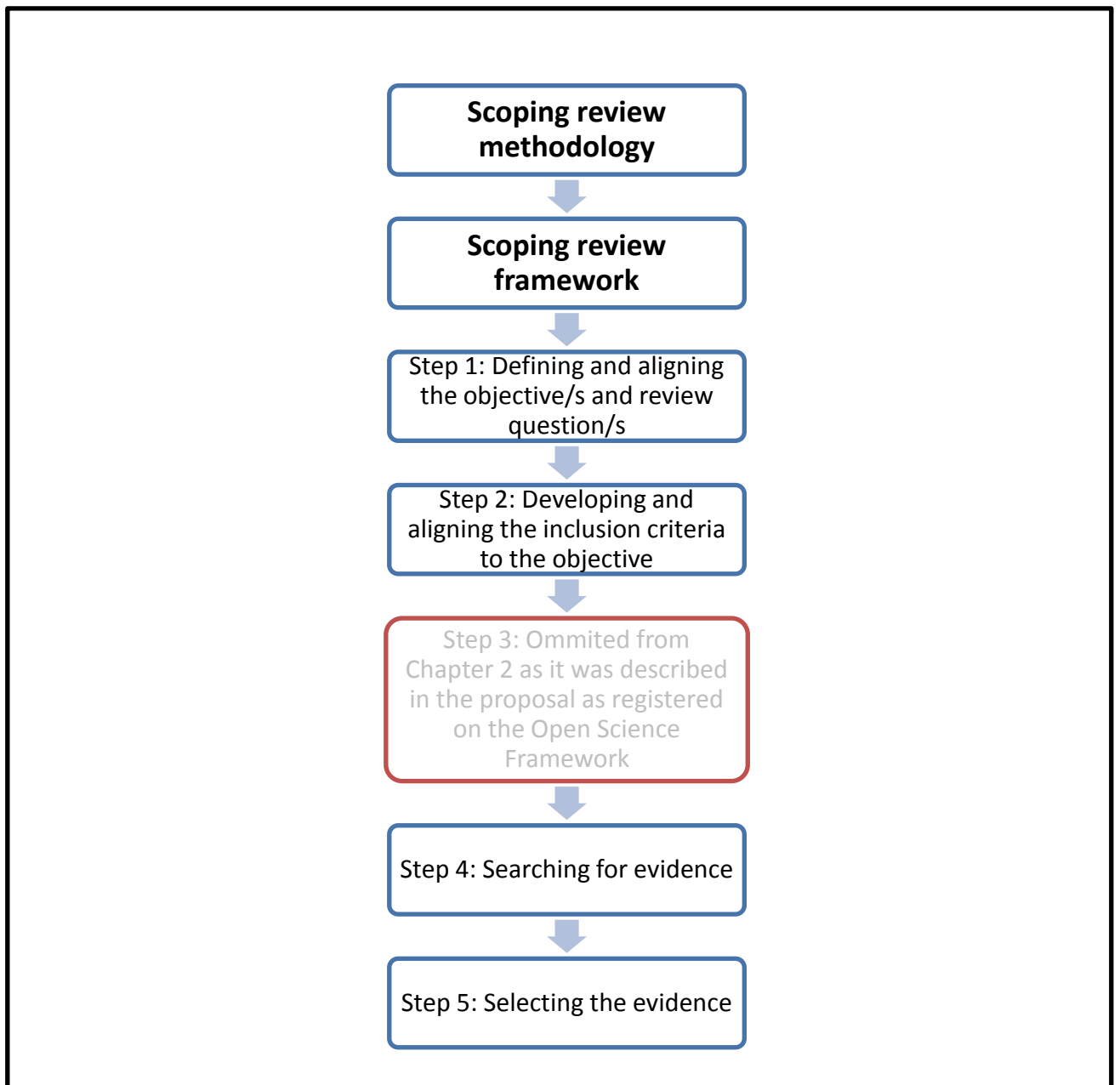


Figure 2.1: Sequence of the discussion in this chapter

2.2 Scoping review methodology

A scoping review differs from all other reviews in its purpose and aims, and is a relatively new approach to evidence synthesis (Hanneke et al., 2017:3; Peterson et al., 2016:12; Sucharew & Macaluso, 2019:416). While there is no single definition for the scoping review, authors generally agree that a scoping review aims to address broader, more complex, and exploratory research questions (Levac et al., 2010:1; Munn et al., 2018:2). Contrary to other reviews that answer precisely defined, narrow questions, a scoping review describes existing and available literature on a given topic and gives a broad or detailed overview of the focus of the study (Levac et al., 2010:1; Morris et al., 2016:346; Munn et al., 2018:2). Scoping

reviews are flexible and can account for the volume and diversity of relevant literature and studies available (Armstrong et al., 2011:178; Peters, 2020:409; Sucharew & Macaluso, 2019:417).

Similar to other reviews, scoping reviews require comprehensive and structured searches of the literature to maximise the capture of relevant information, provide reproducible results, and decrease potential bias from inconsistent implementations (Booth & Grant, 2009:94, Sucharew & Macaluso, 2019:417). Searching comprehensively for literature to review is an iterative process, and involves a team that includes reviewers and a skilled librarian, and follows a transparent process (Levac et al., 2010:5, Munn et al., 2018:3). To get a comprehensive picture of the existing research, scoping reviews commonly include findings from a range of different study designs and approaches not feasible in other reviews, namely mixed and multiple methods, as well as both qualitative and quantitative research (Armstrong et al., 2011:178, Peters et al., 2020:409; Sucharew & Macaluso, 2019:417). A scoping review is thus an appropriate alternative to a review, when the literature is vast and complex (Munn et al., 2018:3 & 4; Nyanhoka et al., 2019:100; Peters et al., 2020:411; Pham et al., 2014:373; Sucharew & Macaluso, 2019:417). In so saying, this review was undertaken to examine emerging evidence and draws upon multiple study designs to answer the review question.

As with all reviews, an *a priori* protocol must be developed before undertaking the scoping review, as it predefines the objectives and methods (Lockwood, Dos Santos & Pap, 2019:288; Munn et al., 2018:5; Peters et al., 2020:414). The protocol is a systematic approach for the conduction and reporting of a review; allowing transparency of the process; permitting readers to see how the results of the scoping review were arrived at, and providing a vital plan that limits the possibility of reporting bias in the review process (Munn et al., 2018: 5; Peters et al., 2015:142; Peters et al., 2020:414). The criteria that the reviewers intend to use to include and exclude studies; identify relevant data, and explain how data will be charted and mapped must essentially be described in detail in the protocol (Peters et al., 2020:414). In accordance with the work of Peters et al. (2020:413), this study's review protocol has been based on the scoping review methodological framework described by the (JBI)and has been approved by a research evaluation committee, constituted according to the guidelines of the University of the Free State's (UFS) Faculty of Health

Sciences, and the Health Sciences Research Ethics Committee (Ethics number: HSD2020/0421/2605). The protocol was also registered on the Open Science Framework on the 3rd of September 2020.

- Registration type: Open-ended registration;
- Registered from: <https://osf.io/8k56v>;
- Category: Other; Registration ;
- DOI: No DOI assigned; Publication;
- DOI: No publication DOI.

The end product of a scoping review is typically a narrative presentation, with minimal or limited statistical information. A scoping review illustrates what is known about the topic, and what the knowledge gaps are. A completed scoping review can be viewed as a stand-alone scholarship and can serve as a richly informative starting point for further investigations to understand and contribute to research, education, practice and policy (Munn et al., 2018:6).

2.2.1 Purpose of a scoping review and its application to this review

The general purpose of a scoping review is to provide an overview of the available research evidence without constructing a summary answer to a specific research question (Armstrong et al., 2011:147; Munn et al., 2018:2; Sucharew & Macaluso, 2019:416). Unlike other reviews that address relatively precise questions, based on specific criteria of interest such as Population, Intervention, Comparator and Outcome (PICO), scoping reviews address broad questions and use broader criteria of interest, including Population, Concept and Context (PCC), thus avoiding a narrow focus (Grant & Booth, 2009:94; Levac et al., 2010:2; Lockwood et al., 2019:289; Morris et al., 2016:348).

The review question of the present study has a clearly articulated scope of inquiry, namely:

What is the existing state of the scientific evidence regarding the motivation of students in higher education to transfer learning?

The outcome of distilling the review question according to the PCC criteria of interest is that the population has been identified as “students”, with “motivation to transfer learning” as the concept and “higher education” as the context.

According to Nyanchoka et al. (2019:107), scoping reviews map the existing evidence in a broader rather than an in-depth contents area. By mapping an available body of literature , gaps in the literature related to the review question can be identified that could aid planning of future research (Bragge et al., 2011:2). The goal of this scoping review was to determine the range of available evidence on the review topic and question, and to present this evidence as a map of located data (Lockwood et al., 2019:289; Munn, 2018:2; Nyanchoka et al., 2019:100; Peters et al., 2020:409).

As explained, a scoping review aims to provide an overview of, or to map the key concepts that underpin a field of research (Grant & Booth, 2009:94, Peters et al., 2002:410). Scoping reviews are often performed to investigate design, or examine and clarify the working definitions or characteristics of a particular concept used in literature (Munn et al., 2018:4; Peters, 2020:409; 411; Stoffels et al., 2018:2). For this review, a systematic search of available evidence for *motivation of students in higher education to transfer learning* was conducted to identify those sources and fundamental concepts that underpin this field of research.

Scoping reviews tend to be a useful approach for reviewing evidence in emerging fields, or for topics where it is still unclear what other, more specific questions can be posed or addressed by a further precise systematic review (Munn et al., 2018:3). There is already an extensive body of knowledge on motivation and the motivation to learn, but scientific facts on the motivation of students in higher education to transfer learning itself is relatively unknown.

Scoping reviews are often also conducted as precursors to systematic reviews, to enable authors to identify the nature of a broader field of evidence or provide indicators of topics for subsequent systematic reviews. When scoping reviews are done as antecedents for other reviews, reviewers can usually be assured of locating adequate volumes of relevant studies for inclusion (Armstrong et al., 2011:147; Peters et al., 2020:409). Current knowledge regarding an identified topic and its posed research question/s may influence

the breadth and significance of a scoping review. Therefore, it is an ideal methodological technique to explore any new topics or rapidly evolving science to guide a more in-depth systematic review, or other scholarly endeavour (Munn et al., 2018:5; Sucharew & Macaluso, 2019:417).

For the sake of the study, this appraisal was conducted as a stand-alone review and not as a precursor to a systematic review.

2.3 Scoping review framework

The researcher used the nine-step descriptive, analytical method of conducting a scoping review as described by Peters et al. (2020:413) in the methodology manual of the (JBI). A descriptive multi-step analytical method for conducting a scoping review was initially proposed by Arksey and O'Malley (2005:22). In 2005, Arksey and O'Malley published the first framework for conducting scoping reviews detailing the purpose of this methodology, including specified steps to guide researchers (Peterson et al., 2016:13). Subsequently, Levac and colleagues (2010) enhanced the clarity and rigour of the review process by providing more explicit detail of each stage of the review process, and the JBI applied additional framework to develop their approach to scoping reviews (Peters et al., 2017). In 2020, Peters et al. (2020:413) revised the 2017 nine-step process of the scoping review framework on behalf of the JBI. This amendment still followed the nine-step process described by Peters et al. (2020:413).

A short description of each step is presented in Figure 2.2. Steps 1–5 are shown here in one colour, with a different colour for Steps 6–9, which are discussed in the chapter on data.

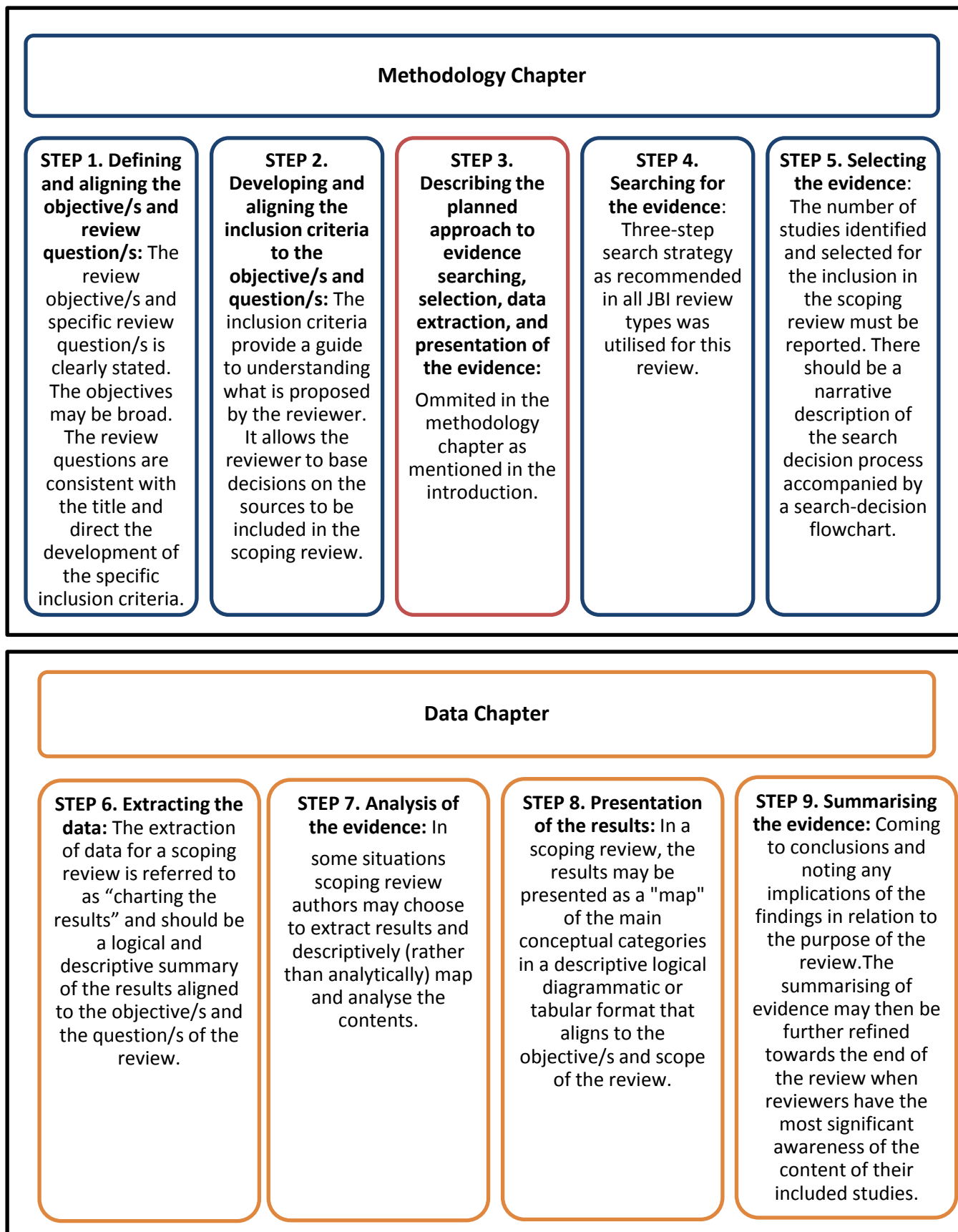


Figure 2.2: Scoping review methodology framework (Peters et al., 2020:413)

2.3.1 Step 1. Defining and aligning the objective/s and review question/s

Clarity of the review question/s ensures effectiveness in the literature search and provides a clear structure for the development of the scoping review. As with the title, the review question should reflect the Population, Concept and Context (PCC). According to Peters and colleagues (2020:416), a scoping review will generally have one primary question that adequately addresses the PCC.

The primary review question of this review is consistent with the title, as recommended by Peters et al. (2020:416), namely:

What is the existing state of the scientific evidence regarding the motivation of students in higher education to transfer learning?

Useful indicators for conducting a scoping review include clearly defined objectives, based on the topic and review question to ensure understanding of the field of inquiry, or where future research planning requires a clearer picture of the availability of existing research (Lockwood et al., 2019:289, Munn, 2018:2; Nyanchoka et al., 2019:100; Peters, 2020:409). According to Peters et al. (2020:416), the primary question in a scoping review should correspond with its objectives. The objective of this review aimed to summarise existing literature on higher education students' motivation to transfer learning.

2.3.2 Step 2. Developing and aligning the inclusion criteria to the objectives

A scoping review question directs the development of the specific inclusion criteria for the scoping review. The inclusion criteria in the scoping review should be clearly defined, as it guides the reader to clearly understand what is planned by the reviewers, and, more importantly, guides them re-decisions on literature sources which should be included in the scoping review. There must be an alignment between the title, review question, and inclusion criteria in the scoping review (Peters et al., 2020:418). To ensure this alignment between the title, review question, and the refined inclusion and exclusion criteria, the researcher made use of a "quick and dirty" literature search for this review.

According to Wheeler (2014:2), a "quick and dirty" literature search is a preliminary search strategy to identify the literature; common keywords for the research area; databases and

the refinement of inclusion and exclusion criteria for a study. A “quick and dirty” literature search of a minimum of two online databases applicable to the title was conducted, using synonyms of the title, and the keywords from the PCC elements to establish and refine the inclusion and exclusion criteria. The search for this review was done with the Cumulative Index for Nursing and Allied Health Literature (CINAHL) full-text and MEDLINE databases by means of the following search terms:

("transfer* learn*" or "transfer* of learn*" or "transfer* literatur*")

AND

(willing* or support* or motivat* or (student* n2 character*))

AND (transfer* n3 (willing* or motivat*))

The outcome of this “quick and dirty” search resulted in 179 960 hits on CINAHL, and 1 654 833 hits on MEDLINE, all between 1989 and 2020. The findings reflected diverse literature presented in various databases, through which the researcher scanned during both searches for titles and some of the abstracts. Most of the literature sources were published in English, German, French, Spanish, Korean or Chinese. Most addressed motivation to learn, but not motivation to transfer learning, and were therefore not applicable to this review question and objectives. The population reflected in these articles were students involved in further education, or junior school learners, and were thus nonapplicable to the population of higher education students in this review. However, the findings of the “quick and dirty search” did establish the search terms of the field, and the inclusion and exclusion criteria.

The four (4) main components used in describing the inclusion and exclusion criteria (Whittemore & Knaf, 2005:57), and how they were applied in this review include:

- *Language*: Published literature, presented in English, and Afrikaans was included in this review.
- *Types of literature*: Evidence for this review was provided in the form of primary, electronic texts, as well as grey literature from diverse methodologies.
- *Sources of published and grey literature*: Access was achieved through the University of the Free State’s electronic library.

- *Time frame*: Published literature dating from the 01st of January 1986 to the 31st of July 2020 was included in this review. These dates were influenced by the findings of the “quick and dirty” search, and the fact that Raymond Neo first coined the term *motivation to transfer learning* in 1986. Before 1986, a limited number of articles related to motivation to transfer learning were reported.

The inclusion and exclusion criteria were aligned with the research objectives and question, which increased the likelihood of findings (Peters et al., 2020: 417). The inclusion and exclusion criteria for this review are specific:

Inclusion criteria

Literature included in this review:

- Reflected motivation to transfer learning
- Was available as full-text articles
- Was dated between the 01st of January 1986 and the 31st of July 2020
- Was applicable to higher education students.

Exclusion criteria

The following criteria were used to exclude literature from this review:

- All literature regarding pre-, primary or high school education
- Literature where English versions could not be accessed or retrieved
- Literature published before the 01st of January 1986 or after the 31st of July 2020.

2.3.3 Step 3. Describing the planned approach to evidence searching, selection, data extraction and presentation of the evidence

This step was omitted in this chapter, as it is described in detail in the proposal registered on the Open Science Framework, as previously mentioned in the introduction and scoping review framework headings.

2.3.4 Step 4. Searching for evidence

In order to identify both published and unpublished (grey literature) primary sources of evidence, the search strategy for a scoping review should ideally aim at being as

comprehensive as possible, within the constraints of time and resources (Peters et al., 2020:419).

Discussed under Step 4 is the initial and final search string, and process of searching the literature.

2.3.4.1 The search string

The Boolean search method allows a user to combine or limit words and phrases in an online search in order to retrieve relevant results, and translate the review question into a research string (Aliyu, 2017:217-218). Boolean operators and modifiers are used to ensure a structured search string that allows the user to insert words or phrases such as AND, OR, NOT to limit, broaden or define the search results (Aliyu, 2017:218; Grewal, Kataria & Dhawan, 2016:638). Boolean operators allow a combination of five or more different modifiers to conduct a search and utilise the search engine to its fullest potential (Aliyu, 2017:218; Grewal et al., 2016:638). By using the Boolean operators and modifiers, the precision of the search string was enhanced in this review. The search terms, their truncation symbols, and the Boolean operators were connected to form the initial and final search string for the review.

Figure 2.3 shows that an initial search was conducted that led to the refinement of the search string and a final search of the literature. Both processes are described in the following section.

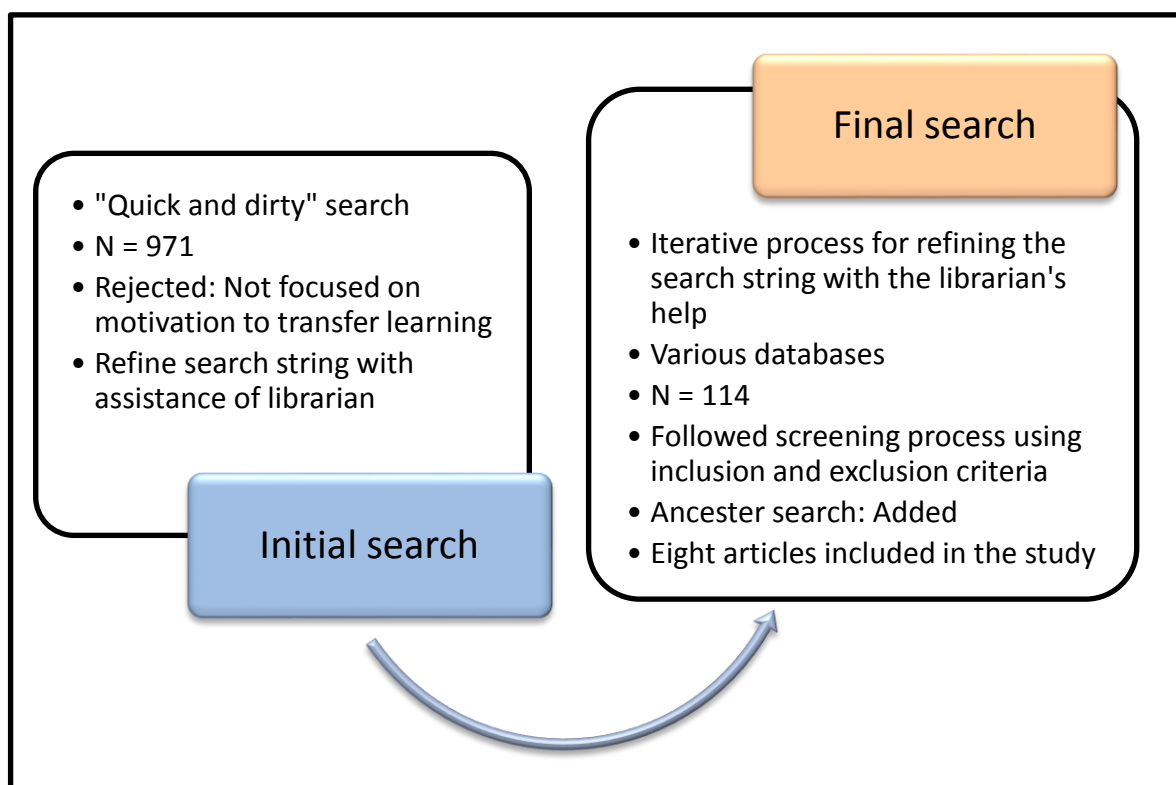


Figure 2.3: Search-for-evidence process

2.3.4.2 Initial search string

The search terms and the Boolean operators and modifiers were used in combination to formulate an initial search string. Table 2.2 shows the initial search string with the Boolean operators and truncation in place.

Table 2.1: Initial Boolean operators in the initial search string

PCC Elements	Search String
Population	(Student* or learner* or undergraduate*) AND
Concept	("transfer* teaching" or "transfer* of teaching" or "transfer* learning" or "transfer* of learning" or "appl* teach*" OR "appl* learn*" OR "theor* pract* integr*" OR "motivat* to transfer*") AND
Context	("Health Science*" OR Nurs* OR Physiotherap* or "physical therap*" or "occupational therap*" or dentis* OR nutrition* or medic* or pharmac* or veterinary or "Public Health" OR Biomed* or Midwif* or "Health Management" OR "alternative medicine" or "complementary medicine") 1986 –

The initial search was conducted on the 25th of February 2020 by a UFS librarian on the EBSCOhost interface with the search string presented in Table 2.2. The initial search extracted 971 hits from the following databases: Academic Search Ultimate; Africa-Wide Information; CINAHL with Full Text, Communication & Mass Media Complete; ERIC; Health Source – Consumer Edition; Health Source: Nursing/Academic Edition; Humanities Source Ultimate; MasterFILE Premier; MEDLINE; PsycARTICLES; PsycINFO; SocINDEX with Full Text; SPORTDiscus with Full Text.

After the automatic system deduplication, 616 hits remained. The remaining titles (n = 616) were evaluated by the researcher and one co-researcher for relevance to the review question. The whole initial search was subsequently discarded as the articles addressed the transfer of learning or learning motivation in general, but not specifically motivation to transfer learning.

2.3.4.3 Final search string

The researcher and co-researcher met to discuss challenges and uncertainties related to the review selection and collaboratively refined the initial search string. The refinement was done in the “concept” section of the PCC Elements, as the articles were not specific to the review focus of motivation to transfer learning. The second refinement on the initial search string was to broaden the context to all higher education instead of only health sciences, resulting in the final search string. Table 2.3 shows the final Boolean operators with the final search string.

Table 2.2: Final Boolean operators with the final search string

PCC Elements	Search String
Population	(classroom* or student* or undergrad* or "higher educat*") AND
Concept	motivat* and (transfer* n2 (train* or learn*)) and (motivat* n3 transfer*) AND
Context	"Higher educat*"

2.3.4.4 Searching for the literature

A final literature search was conducted on the 13th of March 2020. The same UFS librarian as in the initial investigation searched the electronic databases again. The final literature search yielded 114 hits from the following databases on EBSCOHost: Academic Search Ultimate, Africa-Wide Information, Applied Science & Technology Source Ultimate, CINAHL with Full Text, Communication & Mass Media Complete, ERIC, Health Source-Consumer Edition, Health Source: Nursing/Academic Edition, MEDLINE with Full Text, APA PsycArticles, and APA PsycInfo. The databases for the final search string differed slightly from the initial search, possibly due to the fact that the initial search string included more search terms, resulting in a broader outcome. Table 2.4 indicates the number of hits per database in the initial and final searches. After the automatic system deduplication 89 hits remained, and after manual deduplication 84 hits were left.

Table 2.3: Number of articles loaded per database in the initial and final searches

Database	Articles loaded in the initial search	Articles loaded in the final search
ERIC	102	42
APA PsycInfo	141	41
Academic Search Ultimate	185	16
MEDLINE with Full Text	242	4
CINAHL with Full Text	148	3
Africa-Wide Information	16	2
Applied Science & Technology Source Ultimate		2
Health Source: Nursing / Academic Edition	64	2
Communication & Mass Media Complete	14	1
APA PsycArticles		1
SocINDEX with Full Text	22	
MasterFILE Premier	17	
SPORTDiscus with Full Text	8	
Humanities Source Ultimate	6	
PsycARTICLES	6	
TOTALS	971	114

2.3.5 Step 5. Selecting the evidence

The literature search was an iterative multi-step process executed in sequential steps: Refining the search string; evaluation of the study/outputs' titles, then the abstracts; searching for full-text articles, and finally an evaluation of the full-text papers for study

inclusion. The process was guided by the inclusion and exclusion criteria of the review. The researcher made use of a systematic process and team approach to improve the transparency and replicability of the search process (see Figure 2.3 for the process of searching for sources).

The selection of relevant sources for this review is recorded on the PRISMA ScR flow diagram (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews), as adopted from Peters et al. (2020:414). Figure 2.4 illustrates the review decision process, and maps out the number of articles identified, included and excluded in this review. The reasons for excluding full-text articles are not reported on the PRISMA ScR flow diagram, as they are discussed in the narrative in the section on searching for full-text and evaluation (Tricco et al., 2018:2).

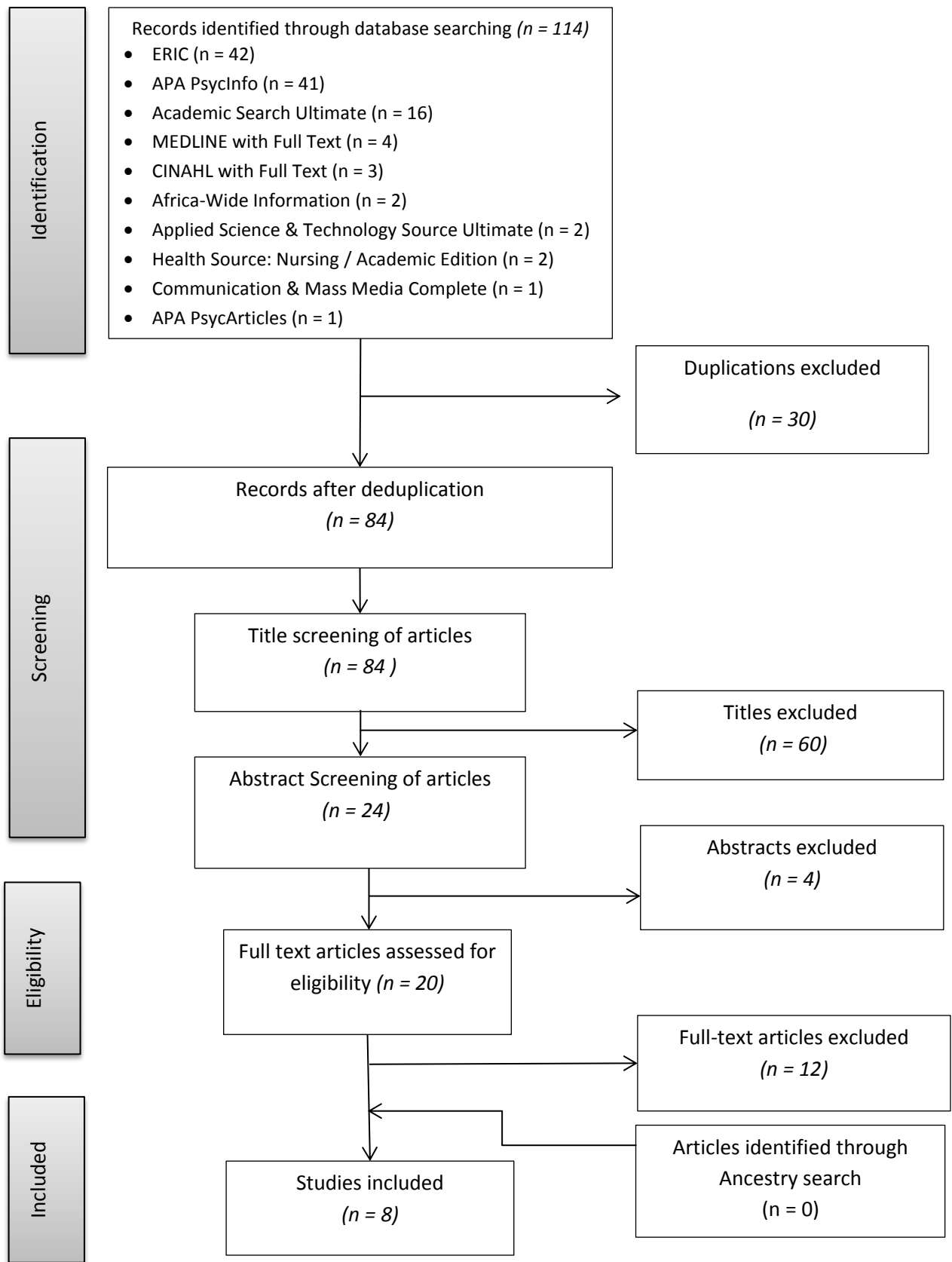


Figure 2.4: PRISMA ScR flow diagram of the selection and elimination process

The purpose of selecting the evidence is that the number of studies identified and chosen for inclusion in this scoping review can be reported, and is accompanied by a narrative description of the search decision process (Lockwood et al., 2019:290; Peters, 2020:420; Pham, 2014:375). Discussed under the selection of the evidence in Step 5 is the evaluation of the titles generated, the evaluation of abstracts generated, the search for full-text articles and evaluation of the articles, ancestry search and a critical appraisal of the included full-text articles.

2.3.5.1 Evaluation of the titles generated

Applying the inclusion and exclusion criteria, the researcher and a co-researcher – a full professor in nursing science, experienced in conducting various forms of reviews – individually evaluated the selected 84 titles. After comparing the results of the title evaluation, the researcher and the co-researcher reached consensus via discussion on which titles to include and exclude. In total they excluded 60 irrelevant titles, with 24 titles remaining. The second co-researcher was the co-supervisor for this review and holds a Doctoral degree with specific interest in nursing education, specific focus on the transfer of learning. The second co-researcher was only selected to be involved from full text evaluation, therefore was not included in the title and abstract evaluation.

2.5.3.2 Evaluation of the abstracts generated

The researcher and a co-researcher followed the same process as described in reviewing the titles. This review process alleviated ambiguity with a broad review question and ensured that abstracts selected were relevant for full article review. Figure 2.4 shows that four (4) abstracts which did not meet the inclusion and exclusion criteria were eliminated, leaving 20 abstracts for full-text evaluation.

2.5.3.3 Searching for full-text and evaluation

Citation information on the abstracts meeting the inclusion criteria was captured and forwarded to the UFS librarian for retrieval of the full-text articles. The librarian was able to retrieve all 20 listed full-text articles. The researcher, and two co-researchers read all 20 these full-text articles independently and appraised the articles against the inclusion and exclusion criteria. Inconsistencies in individual decisions regarding the inclusion of the full-

text articles were disentangled during a virtual discussion, resulting in the eight (8) full-text articles that were included for review.

Figure 2.4 indicates that the three reviewers excluded 12 full-text articles for the following reasons:

- One (1) article did not meet the inclusion criteria of language, as it was published in the Korean language. Attempts to acquire an English version from the authors of the article were futile (n = 1) (Han & Kim, 2019).
- One (1) article was eliminated as the paper presented strategies for designing meaningful educational experiences (n = 1) (Collins, 1994).
- Two (2) articles were received incomplete. Attempts to acquire complete versions were futile (n = 2) (Lioa, 2012; Schehl, 2012).
- The aim of two (2) article related to learning motivation, but did not meet the criteria of motivation to transfer (n = 2) (Arzensek, Kosmrlj & Sicra, 2014; Renkl, 1997).
- Four (4) articles did not meet the inclusion criteria that higher education students must represent the population (n = 4) (Moshinskie, 2001; Olivos, Santos, Martínc, Cañas, Gómez-Lázaro & Maya, 2016; Tellis, 2004; Vandergoot Sarris, Kirby & Ward, 2018).
- Two (2) articles included no primary sources (n = 2), and
- Could not be linked to the review question (n = 2). (Misko, 1995; Ngeow, 1998).

i. Ancestry search

Ancestry searching involves reviewing bibliographies for any useful citations found in the included full-text articles (Poirier & Behnen, 2014:2). In the fourth and final stage of this scoping review, all reference lists of the included studies were reviewed by the researcher. The final selected articles referenced each other, and literature saturation was achieved as nothing new could be added to the information collected (Fusch & Ness, 2015:1409; Saunders et al., 2018:1894). The ancestry search yielded no full articles that could be added to the review.

ii. Critical appraisal

Usually, scoping reviews do not include a quality appraisal of the evidence (Arksey & O'Malley, 2005). Some researchers recommend appraising literature so that the results could be distributed usefully to others for practice, policy making, or further research (Daudt, Van Mossel & Scott, 2013; Levac et al., 2010). The identified full-length articles were categorised based on the methodology used to generate their evidence, namely qualitative research (n = 1), mixed methods (n =1), and quantitative research (n = 6). The researcher then evaluated the methodological integrity of the full-length articles included in the review. Standardised reporting guidelines, known as the Critical Appraisal Skills Programme (CASP) Checklist for qualitative and quantitative reviews were used. This appraisal included the methodological quality of the individual studies. However, none were excluded based on the appraisal results (Hanneke et al., 2017:6; Peters et al., 2020:419). All the included studies complied with the standards of the CASP Checklist.

2.4 Rigour of the selection process

Establishing rigour within a scoping review is essential to the credibility of the results of the review (Lockwood et al., 2019:289). The researcher employed the following strategies to enhance rigour:

- **The researcher made use of a systematic process and team approach to improve the transparency and replicability of the search process.** The systematic process of this review has been underpinned by Peters et al.'s (2020) Framework and Reporting Guidelines. Selection bias was addressed by dividing the topic of the research review into different parts, and the description of concepts into alternative terms to ensure a broader inclusion of databases. An additional ancestry search was done to ensure saturation when the same references were repeated. In this review, use was made of a skilled University librarian experienced in searching for review studies, to minimise the time spent on searching for evidence. Consensus on all the included articles was reached through in-depth discussion (O'Brien et al., 2016:5).
- **Keeping a datasheet for the full-text articles that are included in this review.** For this study, the datasheet was kept electronically, as discussed in the data chapter.

- **The purpose of the scoping review was linked to the review question**, which increased the efficiency and quality for future research synthesis (Daudt et al., 2013:4; Levac et al., 2010:3).
- **Saturation was achieved as the sources retrieved from the reference list of included studies became redundant** (Saunders et al., 2018:1894). The same citations were being repeated regularly and no new sources were identified (Arksey & O'Malley, 2005:7; Fusch & Ness, 2015:1409).
- **The researcher used standardised tools for evaluation of the methodological integrity of included articles.** In this scoping review, the quality of the included articles from a wide range of methodologies and sources were evaluated, using the standardised reporting guidelines known as the Critical Appraisal Skills Programme (CASP) Checklist. Critical appraisal of evidence gathered for a scoping review is not a general expectation. However, the researcher included this process to strengthen the description of the quality of evidence from the field (O'Brien et al., 2016:5). Critical appraisal of the full-text sources increased the transparency and reproducibility of this review.
- **Engaging with qualified and experienced collaborators.** The review team for this study included the researcher, and co-researchers. The co-researchers are both senior researchers and have conducted and published numerous reviews. The niche areas of these two co-researchers is the transfer- and motivation to transfer learning. Both reviewers have advanced academic qualifications: One co-researcher is a UFS full professor, and the other holds a Doctoral degree, and is engaged in research in nursing education, including specific focus on the transfer of learning.
- **Collaborating in reaching consensus.** The elimination of specific articles was based on a consensus decision by the reviewers. The reviewers discussed any and all inconsistencies in their decisions, reaching final consensus during a virtual meeting.

2.5 Limitations

Box 2.1 Limitations of this scoping review



The most noted limitation of the review is the few studies identified despite the researcher having used multiple search strategies. Most studies were excluded because their context was in continuing education and workplace based education therefore not meeting the inclusion criteria of higher education. All full-text articles did not meet the inclusion criteria of language and limited the number of full-text articles to select. The researcher enquired from the author if the article is available in English, but the author did not respond.



The researcher was not blinded during the critical appraisal phase. There was no conflict of interest as both the studies and authors of the critically appraised articles were unknown to the researchers.



Although the researcher was inexperienced with regard to the scoping review methodology, the co-researchers were experienced researchers who have done similar studies.

2.6 Summary of the chapter

The purpose of this chapter is to describe the steps and procedures of the research process in such detail that another researcher would be able to replicate the research review. The scoping review followed the nine (9) step process as described by Peters et al. (2020:413). The first five steps have been discussed, where the researcher referred to the research question, and the aim and objective of the review throughout the chapter. The process of searching for sources was described in sub-headings in the initial and final search strings,

including the refinement of the search string with Boolean operators, and the process of searching for literature. The search in literature was described under subheadings for generating and evaluating titles, abstracts and full-text sources to be searched and included in this study. Finally, the inclusion and exclusion criteria; quality appraisal of the full-text articles according to the CASP Checklist, and a subheading of ancestry-search was discussed. The selection of evidence according to the Prisma flow diagram, as adopted from Peters et al. (2020:413), while the reasons for inclusion and exclusion of articles were itemised in detail.

The next chapter will present the following steps Step 6: Extracting the data, Step 7: Analysis of the data, Step 8: Presentation of the results and Step 9: Summarising the evidence as guided by the Peters et al. (2020) framework for scoping reviews.

CHAPTER 3: DATA

3.1 Introduction

This review explored the existing scientific evidence regarding the motivation of students in higher education to transfer learning. However, some of the included studies stated motivation to transfer knowledge and not learning. Knowledge transfer is a mechanism in business enterprises as it discussed employees` motivation to transfer in terms of a desire to share acquired knowledge with people within their work unit rather in terms of motivation to transfer newly acquired knowledge from the training setting to the workplace (Gegenfurtner, Veermans et al., 2009:22). According to Gegenfurtner, Veermans et al. (2009:22) knowledge transfer is critical for solving novel problems and performing new task, as it ensures that employees becomes the most valuable resource, as through training, employers can motivate performance (Islam, 2018: 275). As knowledge transfer is a concept that is mostly used in human resource development research, and the majority of literature on the subject is done in human resource development or professional development the terms 'knowledge transfer' and 'learning transfer' will be used interchangeably in this chapter. The researcher is aware that learning and knowledge do not have the same conceptual meaning for this review. In this chapter, the findings of this review will be stated and arranged in a logic sequence. The researcher used the JBI scoping review methodology framework, which presents nine steps of a scoping review (Peters et al., 2020:416). The research methodology, the research methodology framework and the first five of the nine steps of the scoping review methodology were discussed in Chapter 2. In this chapter, the following steps will be discussed: Step 6: Extracting the data, Step 7: Analysis of the data, Step 8: Presentation of the results and Step 9: Summarising the evidence.

3.2 Step 6: The extraction of the evidence

In scoping reviews, the data extraction process is referred to as "data charting" and provides a logical and descriptive summary of the results that align with the objective and question/s of the scoping review (Peters et al., 2020:421). A Microsoft Excel™ spreadsheet was developed as part of the protocol to chart the characteristics of the included studies and key information relevant to the review question and objective (See Addendum C: Data

extraction sheet). The components of the data extraction sheet were characteristics of the included articles, namely the study title, year of publication, author names, and the discipline in which the research was done. The data extraction sheet also included the country where the study was conducted, the definition of “motivation to transfer learning”, the research question, aim/purpose of the study, study objectives/hypotheses, methodological approaches, and the research design of the study. Models/theories used in the studies, factors influencing motivation to transfer learning, study population, namely the age, gender and sample size, were also extracted. In addition, the data extraction sheet included the data collection and analysis method, the study findings, study results, implication for practice, limitations and recommendations from the study Table 3.1 is a summary of the data extraction fields.

Table 3.1: Data extraction fields

1	Characteristics of the study (study title, year of publication, author names and discipline)
2.	Country where the study was conducted
3.	Definition of “motivation to transfer learning”
4.	Study question and or hypotheses
5.	Aim of the study
6.	Objectives of the study
7.	Methodological approaches
8	Study design
9.	Models/theories used
10.	Factors influencing motivation to transfer learning
11.	Study population (sample size gender, and age)
12.	Data collection and data analysis method
13.	Study Results
14.	Implication for practice
15.	Limitation of the study
16.	Recommendation from the study

The researcher and two co-researchers piloted the data extraction sheet by independently charting data from three included articles. The researcher and the co-researchers met to determine whether their approach to data extraction was consistent with the research question, objectives and aim of the scoping review. The meeting resulted in the refinement of the data extraction sheet to enhance consistency. The researcher and the co-researchers added the following fields to the initial datasheet, namely: factors influencing motivation to

transfer learning, the implication for practice, limitations of the study, and recommendation from the study.

The eight articles were shared between the researcher and the two co-researchers. These two co-researchers are senior researchers who have conducted and published numerous reviews. The co-researchers have advanced qualifications; one researcher is a full professor, and the other has a doctoral degree. Both are engaged in research in nursing education with a specific focus on "transfer of learning". The researcher and the two co-researchers made the decision regarding the full-text articles inclusion in this review.

The data from each eligible article were charted independently in a Microsoft Excel™ spreadsheet by capturing the verbatim quotes from the original full-text articles. The data extraction process involved the reading and re-reading of the included studies by the researcher and the co-researchers before extracting relevant statements (Polit & Beck, 2018:281). The extracted data were reviewed iteratively against the data extraction fields, which were inferred with constant reference to the review question: "What is the existing state of the scientific evidence regarding the motivation of higher education students to transfer learning?"

After individual data extraction, the researcher and co-researchers had a virtual meeting during which they compared the charted data and discussed discrepancies until they reached consensus. These iterative discussions enhanced consistency and transparency among the researcher and co-researchers (Arksey & O'Malley 2005; Armstrong et al., 2011; Mohajan, 2017:60). (See Addendum C for the data extraction sheet).

3.3 Step 7: Analysis of evidence

Analyses of scoping reviews are primarily dependent on the purpose of the review and the researchers' judgement. Transparency and an explicit justification of the approaches that the review team have taken in analysing and reporting the evidence are the most imperative considerations (Peters et al., 2020:422). The process of analysis and categorisation of the evidence for this review was based on the review question (Peters et al., 2015:142).

A collaborative inductive approach was used to cluster the extracted data into themes, including an enumeration of specific extracted data. See Figure 3.1 for the schematic layout of the data analysis process.

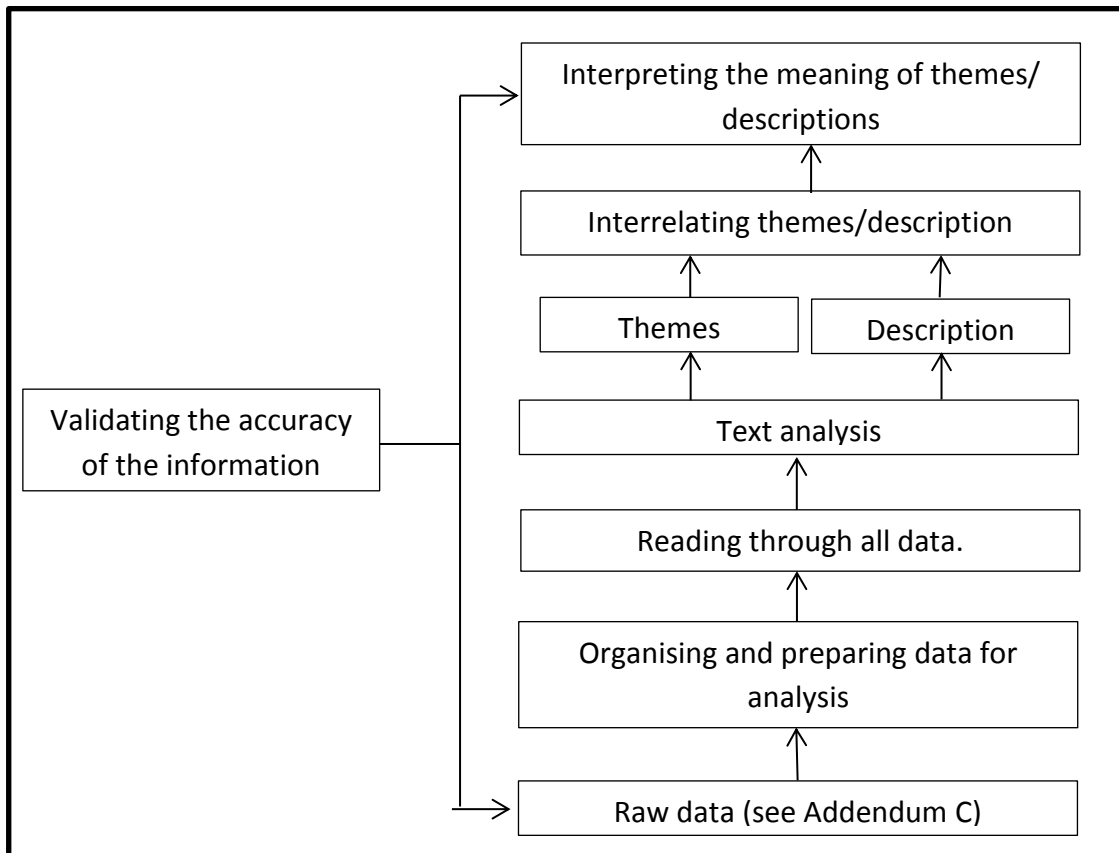


Figure 3.1: Data analysis process (authors' own)

The researcher analysed and reported on the extracted data in a narrative descriptive approach. The analysis of the extracted data was aligned with the review aim and described under the following thematic content categories (see Table 3.2): Characteristics of the included studies; Purpose of the included studies; Models/theories used; Methodology; Motivation to transfer learning, and Outcome of the included studies. For each category, a descriptive explanation are provided, accompanied by a diagrammatic or tabular representation (Colquhoun et al., 2014:1294). These results are described in relation to the review question and in context to the overall study purpose (See Figure 3.1: Data analysis process).

Table 3.2: Thematic categories and components included in each category

Thematic category	Components
Characteristics of included articles	Year of Publication; Discipline of publication; Country where the study was conducted.
Purpose of the included articles	Study question, aim, and objectives.
Models or theories used	Models reported in the articles .
Methodology	Methodological approaches, study design, study population, sample size, and gender of participants, data collection, and data analysis.
Motivation to transfer learning	The concept of motivation to transfer learning, factors influencing motivation to transfer learning.
Outcomes of the included articles	The results, implication for practice, limitation and recommendation from the study.

3.4 Step 8: Presentation of results

The results of this scoping review are presented in a descriptive, diagrammatic and tabular format that aligns with the review question and objective. The descriptive, diagrammatic and tabular format of the presentation of the results will follow the thematic categories and components as summarised in Table 3.2.

3.4.1 Characteristics of the included studies

Table 3.3 is a summary of the characteristics of the eight (N = 8) included articles and reflects the year of publication, the discipline in which the research was conducted, and the country where the study was conducted. Following is a brief description of each characteristic.

Table 3.3: Characteristics of included articles

Characteristics	Distribution (N = 8)
Year of Publication	
2012-2015	7
2016-2019	1
Discipline in which research was conducted	
Computers in human behaviour	1
Development and evaluation	1
Education/teaching/training	6

Continue...

Country where the study was conducted	
Belgium	1
Iran	1
Republic of Korea	1
Turkey	1
United States of America	4

Most articles included in this review were five years and older (Belenky & Nokes-Malach, 2012; Belenky & Nokes-Malach, 2013; Gonzalez, 2012; James, 2012; Joo, Sunyoung & Son, 2014; Khorshidi & Nimchahi, 2016; Peters, Barbieri, Faulx & Hansez, 2013), with only one article published in the last five years (Yurtseven & Altun, 2016). The articles were spread over three disciplines, namely Computers in Human Behaviour (Joo et al., 2014:335), Instructional Design, Development and Evaluation (Gonzalez, 2012:2) and Education or Teaching or Training (Belenky & Nokes-Malach, 2012:86; Belenky & Nokes-Malach, 2013:21; James, 2012:51; Khorshidi & Nimchahi, 2016:86; Peters et al., 2013:375; Yurtseven & Altun, 2016:51). The majority of the research was done in upper-middle- and high-economic income countries namely, Belgium (n = 1), and United States of America (n = 1) as high-income countries. Turkey (n = 1), and Iran (n = 1) as upper-middle-income countries, and Korea (n = 1) as the only low-income country.

3.4.2 Purpose of the included studies

The following will be discussed: the study question and or hypotheses, the aim, and the objectives of the eight included articles.

3.4.2.1 Study questions and or hypotheses

The study question and/or hypotheses as used in the included studies are presented in Table 3.4. The research question/s is/are presented in “Calibri no 11 font”, the hypotheses in Italic, and the abbreviation “H”.

Table 3.4: Study question and or hypotheses

Study question or hypotheses	Author/s
1) How will existing mastery-approached orientations impact learning and transfer? <i>H1 Existing mastery-approach orientation will lead to better transfer.</i> 2) How will different instructional activities influence goal adoption and learning behaviour? <i>H2 intervention activities will lead to more mastery-related goal adoption than tell-and-practice activities and more attention to import conceptual features of the learning problems.</i> 3) <i>H3 there will be a moderation effect on invention activities on the beneficial effect of mastery approach orientation for transfer; such that the effects of mastery approach orientation will be a stronger predictor of the likelihood of transfer for the tell-and-practice activities than for invention.</i>	Belenky & Nokes-Malach (2012:406-407).
1) What is the relationship between achievement goals orientations and transfer? 2) How do the factors of structure (invention of tell and practice) and framing (mastery vs performance) affect mastery-related goal adoption during the task? 3) How do the structure and framing interact with a student's initial mastery-approach goal orientation to affect transfer?	Belenky & Nokes-Malach (2013:24).
1) Does prior knowledge significantly increase transfer performance? What is the magnitude of the relationship? 2) Does self-regulation significantly increase transfer performance? What is the magnitude of the relationship? 3) Does self-regulation significantly mediate the relationship between prior knowledge? 4) Does self-regulation significantly mediate the relationship between prior knowledge and the transfer of learning? What is the magnitude of the relationship? As this study employs SEM to model the relationships among construct, a number of questions about model fit must also be addressed (Bollen & Long, 1993) 5) Does the specified model reasonably fit the data according to fit standards (x2, CFI, RMSEA, AIC, etc.)? 6) Which of the specified models (M1, M2, M3, M4, M5) best fit the data? 7) What modifications, if any, are proposed to improve the model's data fit?	Gonzalez (2012:24).
1) Are students in an EAP writing course motivated to transfer learning to the intended target context? 2) What factors influence these students' motivation to transfer learning?	James (2012:54).
1) Do E-learners' internal value, learning usefulness and learning environment affect learner satisfaction? 2) Do E-learners' internal value, learner usefulness, learning environment, and learner satisfaction affect learner achievement? 3) Do E-learners' internal usefulness, learning environment, leader satisfaction and learner achievement affect the motivation for skill transfer?	Joo et al. (2014:336).
1) Does the type of motivation affect the development of language learners' interlanguage pragmatic competence? 2) Does the type of motivation affect negative pragmatic transfer?	Khorshidi & Nimchahi (2013:88).

Continue...

<ol style="list-style-type: none"> 1) <i>H1 Motivation to train (intrinsic and extrinsic) impacts learning positively.</i> 2) <i>H2 Motivation to train (intrinsic and extrinsic) impacts motivation to transfer positively.</i> 3) <i>H3 Lack of personal interaction impacts satisfaction negatively.</i> 4) <i>H4 Difficulty satisfaction (H4a) impacts learning negatively, while enjoyment-satisfaction (H4b) and utility satisfaction impact learning positively.</i> 5) <i>H5 Difficultly-satisfaction (H5a) impacts motivation negatively to transfer, while enjoyment satisfaction (H6b) and utility satisfaction (H5c) impact motivation to transfer positively.</i> 6) <i>H6 Motivation to train (intrinsic and extrinsic) impacts difficultly- satisfaction (H6a) negatively and impacts enjoyment satisfaction (H6b) and utility-satisfaction (H6C) positively.</i> 7) <i>H7 Learning impacts motivation to transfer positively.</i> 	<p>Peters et al. (2012:376-378).</p>
<ol style="list-style-type: none"> 1) Is there a significant difference between instrumental motivation post-test scores in favour of the treatment group according to the levels of students? 2) Is there a significant difference between integrative motivation post-test scores in favour of the treatment group according to the levels of the students? 3) What are the views of students about UbD¹ implementation? 	<p>Yurtseven & Altun (2016:52).</p>

One of the included studies only used hypotheses testing to underpin their study (Peters et al., 2012:376-378). Six studies made use of research questions to address the aims and objectives of the studies (Belenky & Nokes-Malach, 2013:24; Gonzalez, 2012:24; James, 2012:54; Joo et al., 2014:336; Khorshidi & Nimchahi, 2013:88; Yurtseven & Altun, 2016:52). One study used hypotheses and research questions to attain the aim and study objectives to predict how students' achievement goals interact with different forms of instructions to promote motivation in knowledge transfer (Belenky & Nokes-Malach, 2012:406-407). Belenky and Nokes-Malach's (2013:24) research questions focused on the relationship between achievement goals and the role of motivation in knowledge transfer, specifically focusing on how factors of structure and framing interact with a student's mastery-approach goal orientation to affect transfer. Gonzalez's (2012:24) research questions focused on the identification and validation of a model to describe the relationship's self-regulation and prior knowledge as motivational constructs have on the transfer of learning. James (2012:54) and Joo (2014:336) used research questions focused on internal value, learning usefulness, satisfaction and learning environment effects the motivation for skill transfer. Peters et al. (2012:276-378) presents hypotheses aimed at identifying the influence of internal values, satisfaction types, and types of motivation that influence motivation to

¹ Understanding by design

transfer learning. Yurtseven and Altun's (2016:52) research questions focused on the effect of instrumental and integrative motivation on learning a foreign language.

3.4.2.2 Aim and purpose

The researcher made use of an inductive grouping of the included evidence, based on the main features of the aims and purposes of the included articles (N = 8).

Table 3.5: Main features of the aim and purpose

Main features of the aim/purpose	Author/s
Examine the role of motivation in knowledge transfer, specifically focusing on how students' achievement goals impact transfer.	Belenky & Nokes-Malach (2012:400); Belenky & Nokes-Malach (2013:21).
Identify and validate a model that describes the role motivational constructs play in promoting transfer of learning.	Gonzalez (2012:2).
Identify the influence of internal values, satisfaction types, and types of motivation that influence motivation to transfer.	James (2012:51); Joo et al. (2014:336); Peters et al. (2012:375).
Determine whether interlanguage development is affected by the type of motivation.	Khorshidi & Nimchahi (2013:90).
Investigate students' foreign language learning motivation and their views about integration of UbD into their lessons.	Yurtseven & Altun (2016:51 & 52).

The five main features related to the aims and purpose of the included articles, as presented in Table 3.5 were: Examining the role of motivation in knowledge transfer, specifically focusing on how students' achievement goals impact knowledge transfer (Belenky & Nokes-Malach, 2012:400; Belenky & Nokes-Malach, 2013:21). One study identified and validated a model that describes the role, motivational constructs play in promoting transfer of learning (Gonzalez, 2012:2). Three of the included articles aim to identify the influence of internal values, satisfaction types, and types of motivation that influence motivation to transfer (James, 2012:51; Joo et al., 2014:336; Peters et al., 2012:375). Khorshidi and Nimchahi (2013:900) aimed to determine whether interlanguage development is affected by the type of motivation, while Yurtseven and Altun (2016:52) investigated students' foreign language learning motivation and their views about integration of UbD into their lessons.

3.4.2.3 Objectives of the included studies

The research objectives of the included evidence divided the research aims into several parts and addressed each component separately. The researcher made use of an inductive

grouping of the included evidence based on the main collective elements of the objectives of the included articles. (See Table 3.6).

Table 3.6: Collective element of research objectives addressing the research aim and question

Collective elements of the research objectives or hypotheses	Author/s
The influence of learner satisfaction, motivational types and internal values on motivation to transfer.	James (2012:51 & 90); Joo et al. (2014:337); Peters et al. (2012:375).
The influence of mastery approaches and mastery goal's effect on motivation to transfer learning.	Belenky & Nokes-Malach (2012:418-419); Belenky & Nokes-Malach (2013:21-28).
Relationship among variables to validate a measurement model.	Gonzalez (2012:83).
Pragmatic interlanguage development concerning the type of motivation.	Khorshidi & Nimchahi (2013:90).
The contributions of UbD on students' foreign language learning motivation.	Yurtseven & Altun (2016: 52).

The five broad collective elements addressing the research aim and question are: the influence of learner satisfaction; motivational types; and internal values on motivation to transfer learning (Peters et al., 2012:375; Joo et al., 2014:337). The influence of mastery approaches and mastery goal's effect on motivation to transfer learning (Belenky & Nokes-Malach, 2012:418-419; Belenky & Nokes-Malach, 2013:21-28), and relationship among variables to validate a measurement model (Gonzalez, 2012:83). The other two studies addressed pragmatic interlanguage development concerning the type of motivation (Khorshidi & Nimchahi, 2013:90), and the contributions of understanding by design (UbD) on students' foreign language learning motivation (Yurtseven & Altun, 2016:52).

3.4.3 Models and theories

Models are used in research to broadly explain the phenomena of interest, express assumptions and reflect a philosophical stance (Polit & Beck, 2018:123), whereas theories are a set of integrated defined concepts, and related statements that can be used to describe, explain, predict or control the phenomenon being discussed (Polit & Beck, 2018:123). All models and theories relevant to the purpose of the evidence were extracted on the data extraction sheet as shown in Addendum C.

Table 3.7: Models and theories used in the included articles

Model or theory	Author/s
The model of goal achievement by Elliot and McGregor (2001).	Belenky & Nokes-Malach (2012:404).
Flawed four-level evaluation model by Holten (1996).	Peters et al. (2012:378).
Bandura's self-efficacy theory (1993).	Gonzales (2012:16).
Integrative model to confirm the structural relationships among the variables as a hypothetical research model.	Joo et al. (2014:336).
None described.	James (2012); Belenky & Nokes-Malach (2013); Khorshidi & Nimchahi (2013); Yurtseven & Altun (2016).

Four articles used theories or models to describe the phenomena of interest broadly and explain the relevance of variables to motivation to transfer learning (Belenky & Nokes-Malach, 2012:404; Gonzales, 2012:16; Joo et al., 2014:336; Peters et al., 2012:378). One of the studies by Belenky and Nokes-Malach (2012:404) used the model of goal achievement by Elliot and McGregor (2001). Peters et al. (2012:378) used the Flawed four-level evaluation model by Holten (1996), while Gonzales (2012:16) applied the self-efficacy theory by Bandura (1993). Joo et al. (2014:336) adopted an integrative model to confirm the structural relationships among the variables. Four articles, as presented in Table 3.5, did not explicitly state a theory or model used in their research (Belenky & Nokes-Malach, 2013; James, 2012; Khorshidi & Nimchahi, 2013; Yurtseven & Altun, 2016). None of the studies used the same theory or model.

3.4.4 Methodology

In the methodological section of this chapter, the following is presented; the methodological approaches, study design, study, population, data collection and data analysis used in the included studies.

3.4.4.1 Methodological approaches

Methodology refers to the overarching strategy and rationale of research and involves the methods, and the theories or principles behind them, to develop an approach that matches the research objectives (Sileyew, 2019:3).

Table 3.8: Methodological approaches of the included studies

Methodological approach		Author(s)
Qualitative	1	James (2012:54).
Quantitative	6	Belenky & Nokes-Malach (2012:408); Belenky & Nokes-Malach (2013:24); Gonzalez (2012:83); Joo et al. (2014:338); Khorshidi & Nimchahi (2013:86); Peters et al. (2012:379).
Mixed method	1	Yurtseven & Altun (2016 52-53).

The methodological approaches (See Table 3.8) used in included articles were; one study used a qualitative approach (James, 2012:54), while six studies used quantitative approaches (Belenky & Nokes-Malach, 2012:408; Belenky & Nokes-Malach, 2013:24; Gonzalez, 2012:83; Joo et al.,2014:338; Khorshidi & Nimchahi, 2013:86; Peters et al., 2012:379) and only one source used a mixed-method approach (Yurtseven & Altun, 2016:52-53).

3.4.4.2 Study Design

The hierarchy of evidence is typically represented as a pyramid shape (Murad, Alsawas & Alahdab, 2016:125) that visually depicts the evidential strength of different research designs (Polit & Beck, 2018:23). Figure 3.2 is one of several available representations of a hierarchy of an evidence pyramid. Studies with the highest internal validity, characterised by a high degree of quantitative analysis, and rigorous scientific methodology, are at the top of the pyramid. Observational research or qualitative studies and expert opinion feature at the bottom of the pyramid (Munn, Lockwood & Moola, 2015:132).

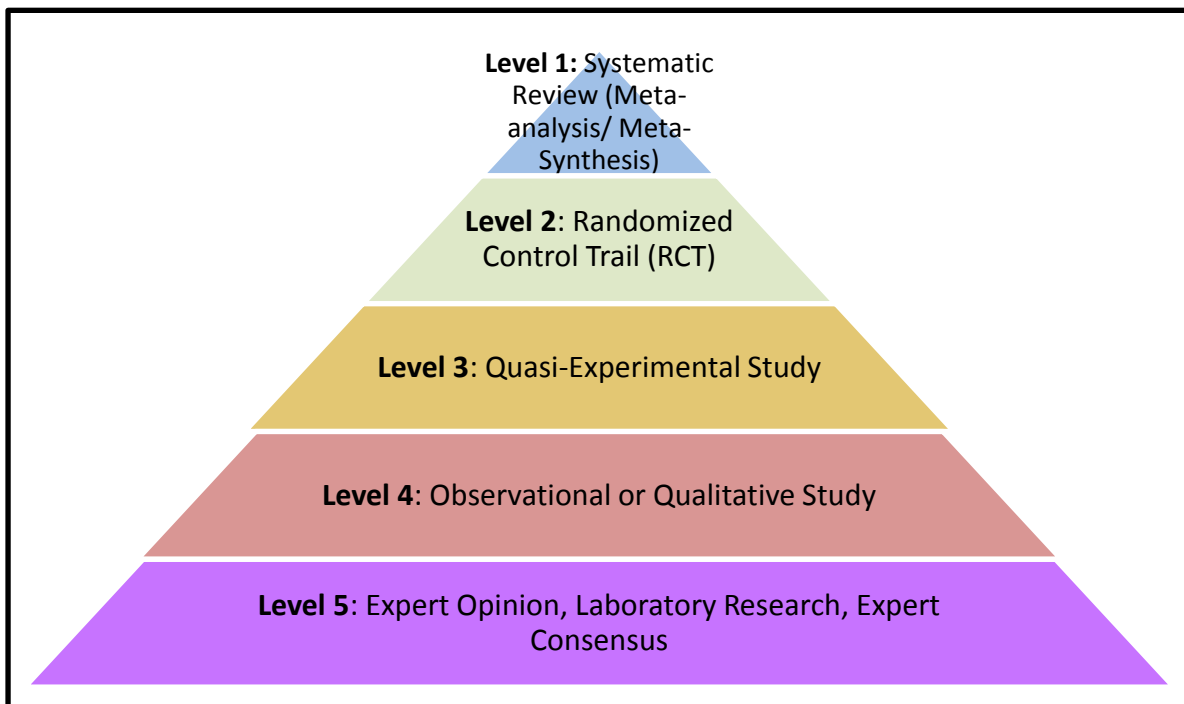


Figure 3.2: ASPAN hierarchy of evidence. ASPAN, American Society of PeriAnesthesia Nurses

The eight (N = 8) full-text articles included in this review were assessed and distributed according to the American Society of PeriAnesthesia Nurses (ASPAN) hierarchy of evidence as follows: Three articles were classified under Quasi-experimental study design, as they included pre-test/post-test (Belenky & Nokes-Malach, 2012:408; Belenky & Nokes-Malach, 2013:24; Peters et al., 2012:379). Belenky and Nokes-Malach (2012:408) used a two-by-two design (Learning activity: "invention" vs "tell and practice") and (Learning resource: "present" vs "not") between subjects, while Belenky and Nokes-Malach (2013: 4) used a two-by-two design, namely structure: "invention" vs "tell and practice" framing: "mastery" or "performance instructions" between-subject. The participants in both studies were randomly assigned to one of the four conditions. Five of the studies were classified under observational descriptive or qualitative designs that included a correlation (Gonzalez, 2012:98) a mixed method (Yurtseven & Altun, 2016:52-53), two descriptive quantitative studies (Joo et al., 2014:338; Khorshidi & Nimchahi, 2013:86) and a single qualitative studies design (James, 2012:54).

3.4.4.3 Study population

The study population represents the number of the selected group of people or elements included in a study (Polit & Beck, 2018:162). The group of people or elements are selected from the general population and are considered as representative of the entire population

for that specific study (Polit and Beck, 2018:162). Under the study population the sample size, gender and the age of the included evidence will be discussed.

3.4.4.4 Sample sizes

All eight of the included studies reported on the actual sample size used in the studies (N = 8), as summarised in Figure 3.4. In the following section, the sample sizes are presented from the smallest to the largest sample size from the included articles.

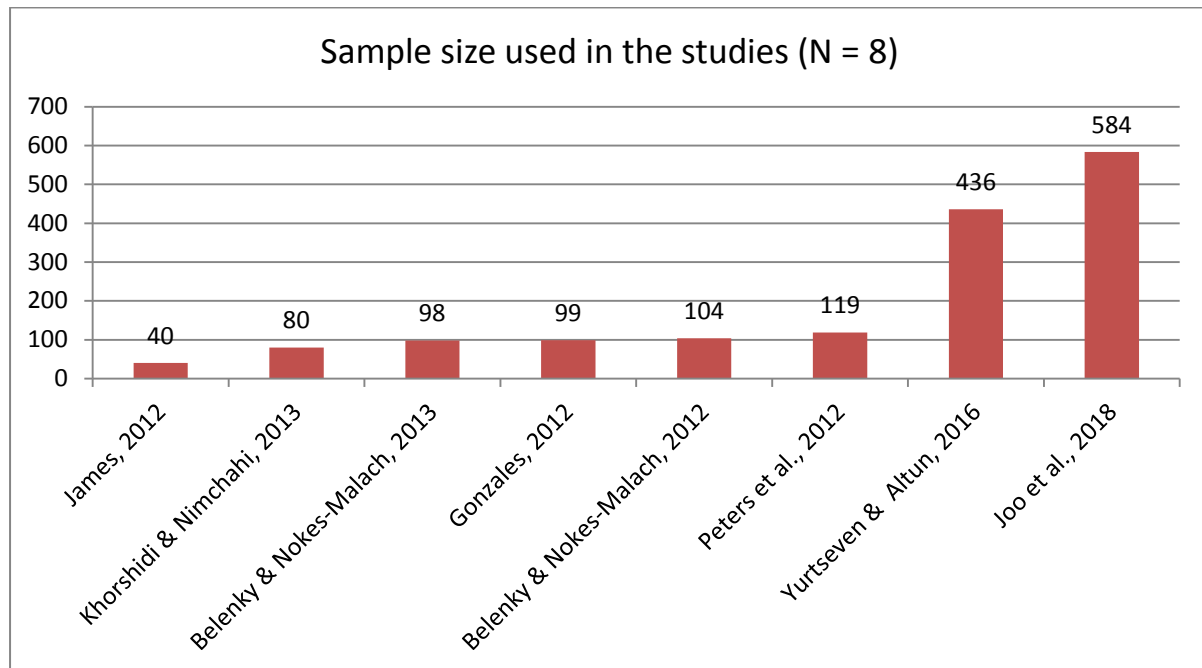


Figure 3.3: Sample sizes used in the included studies

Sample sizes varied from 40 participants in the qualitative study (James, 2012:55) to 584 respondents in a quantitative study (Joo et al., 2018:338). The two more extensive quantitative studies had 436 and 584 respondents, respectively (Joo et al., 2018:338; Yurtseven & Altun, 2016:53). Figure 3.4 shows that the remaining five quantitative studies had small sample sizes that varied between 80 and 119 (Belenky & Nokes-Malach, 2012:408; Belenky & Nokes-Malach, 2013:24; Gonzales, 2012:119; Khorshidi & Nimchahi, 2013:89; Peters et al., 2012:379).

3.4.4.5 Gender of the sample size

Only five of the included studies reported on the gender of the participants. The gender distribution of the participants of the included studies is presented alphabetically according to the author's names.

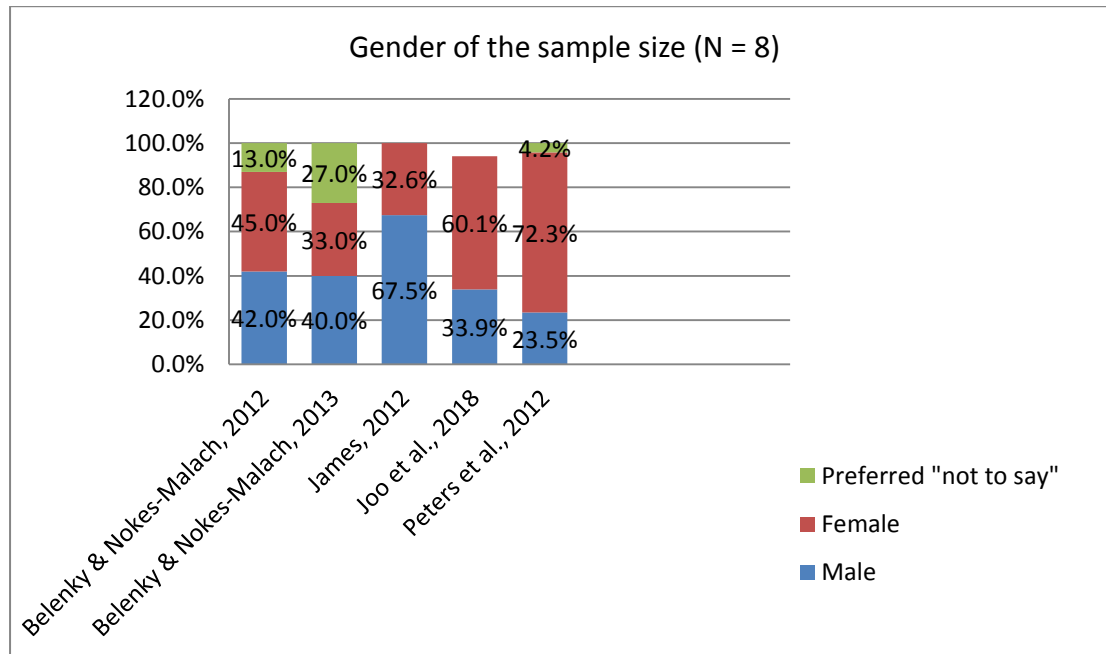


Figure 3.4: Genders of the sample

Figure 3.4 is a summary of the gender distribution of the sample, and shows that five studies reported on the gender of the sample (Belenky & Nokes-Malach, 2012:408; Belenky & Nokes-Malach, 2013:24; James, 2012:55; Joo et al., 2018:338). The authors did not report the gender of their participants in the other three studies (Gonzales, 2012; Khorshidi & Nimchahi, 2013; Yurtseven & Altun, 2016). One study recorded the males and females that were part of the sample as a number and not as a percentage (Peters et al., 2012:379). To enhance the description in this review, the researcher converted the numbers into percentages, as presented in Figure 3.4. The study by James et al. (2012:55) had disproportionately more males than females, while the opposite is true for the studies by Joo et al. (2018:338) and Peters et al. (2012:379). Males and females are equally distributed in both studies by Belenky and Nokes-Malach (2012:408) and Belenky and Nokes-Malach (2013:24). In three of the included studies the gender distributions do not add up to a sum total of 100%. Some of their participants preferred not to state their gender, Belenky and Nokes-Malach (2012:408) mention that 13% of the study population did not report their

gender on the demographic sheet. In one study, the author reported the “rest of the participants” did not indicate their gender (Belenky & Nokes-Malach, 2013:24). Joo et al. (2014:338) do not discuss or mention any reason for the gender not adding to the sum of 100%, while Peters et al. (2012:379) state that the demographic data of five students were missing. Only one study added up to a sum total of 100% in the distribution of male and female in the sample size (James et al., 2012:55).

3.4.4.6 Age of the respondents/participants

The included studies (N = 8) reported on average age, and age ranges as summarised in Table 3.9.

Table 3.9: Average age, and age ranges of the sample size

Average age	Age range	Author/s
20.95 years		James (2012: 55).
	18–22 years	Belenky & Nokes-Malach (2012:408).
25 years	20–60 years	Peters et al. (2012:379).
	19–62 years	Joo et al. (2014:338).
		Belenky & Nokes-Malach (2013); Gonzales (2012); Khorshidi & Nimchahi (2013); Yurtseven & Altun (2016).

The age ranges mentioned in three of the studies are between 18 and 62 years (Belenky & Nokes-Malach, 2012:408; Joo et al., 2018:338; Peters et al., 2012:379). The age range distribution was as follows: 18–22 years (Belenky & Nokes-Malach, 2012:408), 20–60 years (Peters et al., 2012:379), and 19–62 years (Joo et al., 2014:338). Two studies indicated the average age of the sample size as 25 years (James, 2012:55), and 20.95 years (Peters et al., 2012:379). However, four of the included studies did not mention the average age or age range of the participants (Belenky & Nokes-Malach, 2013; Gonzales, 2012; Khorshidi & Nimchahi, 2013; Yurtseven & Altun, 2016).

3.4.4.7 Data collection and data analysis methods

The following section is a description of the data collection and data analysis methods used in the included studies. The data collection and data analysis methods are summarised in Table 3.10.

Table 3.10: Data collection and analysis methods used in the studies

Author	Data collection method	Data collection tool	Source of tool	Validation of tool	Data analysis
Belenky & Nokes-Malach (2012:418 & 422).	Questionnaire	Achievement Goal Questionnaire.	Elliot and McGregor (2001).	Cronbach's alpha was calculated for the achievement goal constructs on the Achievement Goal Questionnaire. Cronbach's alpha values on the initial questionnaire the mastery approach and performance-approach items had good consistency ($\alpha = .86$ and $.92$, respectively), and the mastery-avoidance and performance-avoidance constructs approached adequate consistency ($\alpha = .68$ and $.68$, respectively).	Binary logic regression
Belenky & Nokes-Malach (2013:24-28).	Questionnaire	Achievement Goal Questionnaire.	Elliot and McGregor (2001).	The reliability was high for the mastery-approach, mastery-avoidance, and performance-approach constructs ($\alpha > .7$). The performance-avoidance construct was somewhat lower ($\alpha = .60$). The four affect items assessed the participant's affective state and had low reliability ($\alpha = .34$). As such, they could not be combined into a scale, and are omitted from the results.	Logic regression
	Questionnaire	Activity questionnaire.	Author-generated.		Exploratory analysis
Peters et al. (2012:380).	Questionnaires	Questionnaires.	Author-generated.	Factor analysis with the cut-off point $.30$ Any item below this point was dropped. Cronbach alpha for inter correlations, all was below $.9$. According to Nunnally and Bernstein (1994), the acceptable value for a new scale is $.70$. The Cronbach's alphas highest score was $.85$ and the lowest $.74$.	Logic regression and structural equation modelling analysis

Continue ...

Author	Data collection method	Data collection tool	Source of tool	Validation of tool	Data analysis
Gonzales (2012:123).	Survey	Motivation Questionnaire.	Motivation Elliot, McGregor & Gable (2001); Elliot & Church (1997; 1999; Linnenbrink-et al. (2010).	Validation was mentioned.	Descriptive statistics
		Prior knowledge questionnaire.	Author-generated.	Expert panel.	
		Self-regulated learning questionnaire.	Pintrich et al. (1993) Duncan & McKeachie (2005).	To measure self-regulated learning, the Critical Thinking ($\alpha = .80$) and Metacognitive Self-Regulation ($\alpha = .79$) scales from the Motivated Strategies for Learning Questionnaire (MSLQ) are used (Pintrich et al., 1993).	
		Transfer of learning task	Author-generated.	Expert panel.	
James (2012:56).	Semi-structured interview	Interview guide-conducted by the author.	Not applicable.	Not applicable.	Deductive and inductive analysis

Continue ...

Author	Data collection method	Data collection tool	Source	Validation	Data analysis
Joo et al. (2014:337-338).	Survey	Questionnaire.	Internal values: Pintrich & DeGroot (1990).	For the inter-item consistency of the measurement instrument, Cronbach's α was .88.	Multi-variate analysis, to examined average and standard deviation, skewness, and Kurtosis to confirm the normalization of multivariate distribution of the collected data and Correlation to investigate the relevance among the main variables at each learner level.
			Shin's (2003) instrument to measure satisfaction.	The Cronbach's α of inter-item consistency was .94.	Multi-level analysis and factor analysis
			Noe and Schmitt's (1986) measure motivation to transfer learning.	The Cronbach's α of inter-item consistency was .86.	Multi-level analysis and factor analysis

Continue ...

Author	Data collection method	Data collection tool	Source	Validation	Data analysis
Joo et al. (2014:337-338).			Warr and Bunce (1995) measurement instrument of learning usefulness.	Inter-item consistency of the measurement instrument Cronbach's α was .93.	Multi-level analysis and factor analysis.
			Kim's (2009) instrument to measure learning environment.	The Cronbach's α of inter-item consistency was .92.	Multi-level analysis and factor analysis.
Khorshidi & Nimchahi (2013:90).	Questionnaire	Attitude/motivation test battery (AMTB).	Designed by Gardner (1985).	Not discussed.	Sample T-test and descriptive statistics.
	Questionnaire	Discourse completion task (DCT) on pragmatic transfer.	Author-generated.	Researchers own DCT reliability and validity was testified by researchers at the language institution in Iran.	
Yurtseven & Altun (2016:53-54).	Questionnaire	Motivation Attitude test battery (MAS) developed by Dornyei (1998) as adapted to Turkish by Mendi (2009).	Dornyei (1998).	For the integrative motivation sub-dimension, the Cronbach's AlphaCoefficient was .92 while it was .89 for the instrumental motivation sub-dimension, which meant that the scale was reliable.	Covariance and independent sample T-test.
	Focus groups	Not applicable.	Not applicable.	Initially, the transcript forms were created for the collected qualitative data. Three experts and focus-group interview participants confirmed the accuracy of the forms. Besides, focus-group interviews were repeated twice, to check whether the participants' answers were the same as the questions asked.	Content analysis.

3.4.4.8 Data collection

The data collection section was divided in Table 3.10 in four sub-sections, namely data collection method; the tool that was used to collect data; the source of the data collection tool; whether the data collection tool was validated; and the outcome of the validation. Questionnaires as data collection tools were used in the included evidence: two studies used different measuring instruments to measure Attitude/motivation (Khorshidi & Nimchahi, 2013:86; Yurtseven & Altun, 2016:53). Yurtseven and Altun (2016:53) used the motivation/attitude test battery (MAS) developed by Dornyei (1998) adapted to Turkish by Mendi (2009) in their mixed-method study. Khorshidi and Nimchahi (2013:86), in a quantitative design, used the attitude/motivation test battery (AMTB) as designed by Gardner (1985). Two studies used the same instrument to measure motivation to transfer learning, namely the Achievement Goal Questionnaire (Belenky & Nokes-Malach, 2012:414; Belenky & Nokes-Malach, 2013:27). Gonzales (2012:123) used four questionnaires to collect data of which two were validated through an online survey with experts. The other two questionnaires used in the study by Gonzales (2012:123) were the motivational instrument that was validated by Elliot and Church (1997), Elliot, McGregor and Gable (2001), Linnenbrink-Garcia et al. (2010), and Bandura's (2006) guidelines, and the self-regulated learning instrument, and was validated by Pintrich et al. (1993), and Duncan and McKeachie (2005).

Belenky and Nokes-Malach (2013:27), Gonzales (2012:123), Joo et al. (2014:338), and Khorshidi and Nimchahi (2013:86) developed their own questionnaires. Belenky and Nokes-Malach (2013:27) used an author-generated activity questionnaire. Joo et al. (2014:338) created an author-generated online survey questionnaire to measure learners' internal values, satisfaction, motivation to transfer learning, learning usefulness, and the learning environment. Joo et al. (2014) adapted Pintrich and DeGroot's (1990) instrument to measure learners' internal value. The instrument by Shin (2003) was used to measure satisfaction and Noe and Schmitt's (1986) instrument was adapted to a cyber-university environment to measure motivation to transfer learning. The instrument by Warr and Bunce (1995) was used to measure learner usefulness, and Kim's (2009) instrument was used to measure the learning environment.

Khorshidi and Nimchahi (2013:90) used an author-generated questionnaire, namely the Discourse completion task (DCT) on pragmatic transfer to collect data in their study.

A semi-structured interview-guide compiled by the author was used in the one single qualitative study (James, 2012:56). Yurtseven and Altun (2016:53) used focus-group interviews as part of a mixed-method design (See Addendum C: Data extraction sheet).

3.4.4.9 Data analysis methods

Table 3.10 shows the different data analysis methods in the included evidence. Three quantitative studies used binary logic regression and logic regression for data analysis (Belenky & Nokes-Malach, 2012:418 & 422; Belenky & Nokes-Malach, 2013:28; Peters et al., 2012:380). For their activity questionnaire Belenky and Nokes-Malach (2013:28) used exploratory analysis to analyse students' self-reported responses to questionnaires administered during the learning activities, while Peters et al. (2012:380) used structural equation modelling for data analysis. One study made use of multiple-level analysis, correlation and multivariate analysis (Joo et al., 2014:338). The dissertation by Gonzales (2012) used descriptive statistics as data analysis method (Gonzales, 2012:107). With the validated questionnaire of Khorshidi and Nimchahi (2013:90) sample t-test was used as the data analysis method and descriptive analysis with the author-generated DCT-task on pragmatic transfer.

The single qualitative study of James (2012:56) used deductive and inductive content analysis for their semi-structured interviews. The mixed method study of Yurtseven and Altun (2016:53) used descriptive analysis and independent sample t-test for the quantitative part of the study, and the used content analysis for the qualitative part of the study.

3.4.5 Motivation to transfer learning

The concept of motivation to transfer learning, and factors influencing motivation to transfer learning are the subheadings in this section.

3.4.5.1 Concept "motivation to transfer learning"

None of the included eight articles specifically defined the concept "motivation to transfer learning". Four of the articles have statements on motivation to transfer learning that

capture the bare essence of the concept (James, 2012:52; Joo et al., 2014:336; Khorshidi & Nimchahi, 2016:87; Peters et al., 2012:376) (See Addendum C). James (2012:52) states that transfer motivation "... is a combination of effort, desire and attitude that influence whether an individual will apply L2 learning from one context in a different context", and Joo et al. (2014:336) describe "motivation to transfer" as the "trainee's desire to apply the knowledge and skills that they have learned from the training programme". According to Khorshidi and Nimchahi (2016:87), learners need the following two characteristics to transfer knowledge, namely "... the learner must be motivated to do two things – firstly they must be able to recognise opportunities for transfer; secondly they need to possess the motivation to take advantage of these opportunities". Peters et al. (2012:376) state that "Motivation to transfer predicts the effort with which the trainee will try to apply to his job what he learned during training."

3.4.5.2 Factors influencing motivation to transfer learning

The researcher made use of inductive grouping of the included evidence based on the main features of the factors influencing motivation to transfer learning of the included eight articles (N = 8). Table 3.11 is a summary of the three broad elements that influence or has an impact on the motivation to transfer learning. These three broad elements are student characteristics (Belenky & Nokes-Malach, 2012; Belenky & Nokes-Malach, 2013; Gonzales, 2012:81; Joo et al., 2018:335-336; Peters et al., 2012:383), training design (James, 2012:62; Joo et al., 2018:335-336; Khorshidi & Nimchahi, 2013:87; Yurtseven & Altun, 2016:59), and external environment (Joo et al., 2014:335-336).

Table 3.11: Factors influencing motivation to transfer

Main features of factors influencing motivation to transfer learning	Author/s
Student characteristics <ul style="list-style-type: none"> • Internal value, • Self-efficacy, goal-orientation, self-regulation learning, • Intrinsic and extrinsic motivation • Satisfaction types, • Intellectual ability, satisfaction, and motivation, • Individual differences in student motivation operationalised as achievement goal on knowledge transfer, • Learning is perceived as meaningful or useful, • Personal beliefs about transfer, 	Belenky & Nokes-Malach (2012:399); Belenky & Nokes-Malach (2013:21); Gonzales (2012:81); James (2012:60-63); Joo et al. (2014:335-33); Peters et al. (2012:383).

Continue...

Main features of factors influencing motivation to transfer learning	Author/s
<ul style="list-style-type: none"> • Perceptions of opportunity for transfer, • Perceptions of competence, • Attitudes toward learning outcome, • Attitudes toward learning and transfer context/tasks, • Perception of resource availability, • Expected impact of transfer. 	
Training design <ul style="list-style-type: none"> • Context and diversity in educational activities, • Invention. 	James (2012:62); Khorshidi & Nimchahi (2013:87); Yurtseven & Altun (2016:59).
External environment <ul style="list-style-type: none"> • Workplace or learning environment, • Colleagues support, • Learning atmosphere. 	Joo et al. (2014:335-336); Belenky & Nokes-Malach (2013:21).

The identified student characteristics as a factors influencing motivation to transfer learning were individual differences in student motivation operationalised as achievement goal (Belenky & Nokes-Malach, 2012:399; Belenky & Nokes-Malach, 2013:21). James (2012:60-63) discuss the following student characteristics as factors that influenced motivation to transfer learning: personal beliefs about transfer; perceptions of opportunity for transfer; competence; resource availability; attitudes toward learning outcome; learning and transfer context/tasks; and the expected impact of transfer. Joo et al. (2014:335-336) discuss students' intellectual ability, self-efficacy, satisfaction, internal value and motivation, as student characteristics that will have an influence on transfer of learning. Gonzales (2012:81) cites self-efficacy, goal-orientation, and self-regulation learning's effect on motivation to transfer learning, and Peters et al. (2012:383) identified different satisfaction types as a student characteristic factor that influence motivation to transfer learning.

Training design include the context and diversity in educational activities (James, 2012:62; Yurtseven & Altun, 2016:59) and whether students should perceive learning as meaningful or useful (Joo et al., 2014:335-33; Khorshidi & Nimchahi, 2013:87).

Only two studies reported on the influence of workplace or learning (external) environment, colleagues support and learning atmosphere on motivation to transfer learning (Belenky & Nokes-Malach, 2013:21; Joo et al., 2014:335-33).

3.4.6 Outcome of the included studies

The following sub-headings will be discussed: the results of the studies, implications for practice, limitations of, and recommendations from the studies.

3.4.6.1 Results of the studies

The results of the included studies addressed the study questions or hypotheses, aim/s and the objective/s of the studies (N = 8). The researcher summarised the results of the included articles, according to the factors influencing motivation to transfer learning, namely; student characteristics, training design and external environment, as presented in Table 3.12.

The main features of student characteristics and the influence on motivation to transfer learning is summarised in Table 3.12.

Table 3.12: Main features of student characteristics

Main features of student characteristics	Author
High motivation to transfer	
Students high in mastery-approach goal orientation at the beginning of a course were more motivated to transfer from instruction to a target problem.	Belenky & Nokes-Malach (2012:423-426); Belenky & Nokes-Malach (2013:30).
The higher the relationship between motivation and self-regulated learning , the higher the level of transfer of learning.	Gonzalez (2012: 133-152).
Expected impact of transfer and perceptions of competence were both common reasons for participants desiring and having a favourable attitude toward transfer.	James (2012:60-64).
Therefore the higher the internal value , the higher the satisfaction; the higher the satisfaction the higher the motivation to transfer learning. Learning is perceived as useful then motivation to transfer increase.	Joo et al. (2014:341).
Integrative motivation increases the positive feelings and attitude of the student to learn a second language successful, and increase the motivation of the student to the pragmatic application of the language learned.	Khorshidi & Nimchahi (2013:89-90).
Motivation to transfer will increase with the utility satisfaction-type namely to transfer what was learned in one context to a professional working context .	Peters et al. (2012:383).

Continue...

Main features of student characteristics	Author
Low motivation to transfer	
The students believed learning and transfer were unrelated , but because they thought transfer should be automatic rather than intentional. Students did not think they had sufficient chances and time to transfer learning.	James (2012:60-64).
Motivation to transfer is negatively influenced by the students' perception of the difficulty of the instruction .	Peters et al. (2012:383).

3.4.6.2 Student characteristics

The results regarding student characteristics were further classified/themed as either high or low motivation to transfer. Accordingly, results classified as high motivation to transfer mention that students high in mastery-approach goal orientation at the beginning of a course were more motivated to transfer from instruction to a target problem (Belenky & Nokes-Malach, 2012:423-426; Belenky & Nokes-Malach, 2013:13). In addition, a model describing the role of motivational constructs, namely prior knowledge, knowledge transfer, self-regulated learning, and goal orientations' effect on motivation to transfer learning, mentions that the higher the relationship between motivation and self-regulated learning, the higher the level of transfer of learning (Gonzalez, 2012:133-152). The study by James (2012:60-63) mentions three components where students are motivated to transfer learning, namely the desire to transfer learning; a favourable attitude towards transfer of learning; and an effort made to transfer learning. Of the three individual components of L2² transfer the expected impact of transfer and perceptions of competence were both common reasons for participants desiring and having a favourable attitude toward learning transfer (James, 2012:64).

The relationship between internal value, satisfaction and transfer motivation were confirmed as significant (Joo et al., 2014:341). Therefore, the higher the internal value, the higher the satisfaction; the higher the satisfaction, the higher the motivation to transfer learning. Students who perceive training as useful and valuable are far more likely to be motivated to apply the new knowledge to the workplace, whereas student who are not assured of the importance of training will lack the motivation to learn and apply targeted skills (Joo et al., 2014:341). As students' integrative motivation increase, the positive feeling

² Second language

and attitude of the student to learn a second language successfully also increase, further increasing the motivation of the student to the pragmatic application of the language learned (Khorshidi & Nimchahi, 2013:89). Motivation to transfer learning will increase with utility type satisfaction, namely to transfer what was learned in one context to a professional working context. However, Yurtseven and Altun (2016:376) found that there is no relationship between enjoyment satisfaction and motivation to transfer learning.

Regarding low motivation to transfer, the students believed learning and transfer were unrelated, because they thought transfer should be automatic rather than intentional. Students did not make an effort to transfer learning as they did not think they had sufficient chances and time to transfer learning (James, 2012:63). Motivation to transfer was influenced negatively by the students' perception of the difficulty of the instruction. Therefore, the more difficult the perceived learning context, the less motivated the student will be to transfer the learning (Peters et al., 2012:383).

3.4.6.3 Training design

Context and diversity in educational activities, and invention as seen in Table 3.13 have been identified as training design elements that contribute to the motivation to transfer learning. According to Grossman and Salas (2011:111), the training design and delivery of training programmes significantly impact motivation to learn and, ultimately, transfer of learning.

Table 3.13: Main features of the training design

Main features in training design	Author
Existing achievement goal, invention activities and tell-and-practice activities will increase the motivation to transfer learning.	Belenky & Nokes-Malach (2012:423-426).
Existing mastery approach goal orientation, Invention activities and structure and performance framing increase motivation to transfer learning from instruction to target problem at test.	Belenky & Nokes-Malach (2013:30).
... audio video materials influenced students' motivation and achievement in a positive way. The implementation of the UbD ³ programme, including the educational activities of fun-, visuality and interest categories will increase motivation.	Yurtseven & Altun (2016:58-60).

³ Understanding by Design

Existing achievement goal orientation, invention activities and tell-and-practice activities, as a training design. increased motivation to transfer learning. Therefore, students' motivation to transfer learning will increase when they have high achievement goal orientation (Belenky & Nokes-Malach, 2012:423-426). The results of Belenky and Nokes-Malach (2013) contradicts with the results of Belenky and Nokes-Malach (2012), as the authors do not agree that tell-and-practice activities will increase motivation to transfer learning (Belenky & Nokes-Malach, 2013:30). However, existing mastery approach goal orientation, invention activities and structure and performance framing as training design will increase motivation to transfer learning from instruction to target problem (Belenky & Nokes-Malach, 2013:30). The implementation of the UbD programme as a training design that includes educational activities, including audio-visual material, fun, visuality and an interest category, increased motivation, achievement, and transfer of learning (Yurtseven & Altun 2016:58-60).

3.4.6.4 External environment

The main features of the external environment were grouped together by inductive reasoning as; workplace environment and personal interaction as seen in Table 3.14.

Table 3.14: Main features of the external environment

Main feature in external environment	Author
Workplace environment and not learning environment predicts motivation and affects motivation to transfer learning.	Joo et al. (2014:341).
Personal interaction that includes instructors support and colleagues' support is needed to motivate and transfer learning to another context.	Joo et al. (2014:337); Peters et al. (2012:383).

According to Joo et al. (2014:341), the workplace environment, as opposed to learning environment, predicts motivation and affects motivation to transfer learning. Students need personal interaction that includes instructor support and colleagues' support to be motivated to transfer learning to another context (Peters et al. 2012:383). The researcher also mentions that due to less personal interaction, training is perceived as difficult and enjoyment will decrease, that will affect the motivation of the student and the transfer of knowledge. This result supports the need to pay specific attention to opportunities for interaction with students, as these indirectly impact motivation to transfer. Joo et al. (2014:337) agree with Peters at al. (2012:383), as mentioned in their research that

instructors quality and support and motivation from the instructor prior to the training will affect learning achievement, and learning achievement affects motivation to transfer learning.

3.4.6.5 Implication for practice

The researcher made use of an inductive grouping of the included evidence-based on broad combined elements of the implication for practice, regarding the motivation to transfer learning.

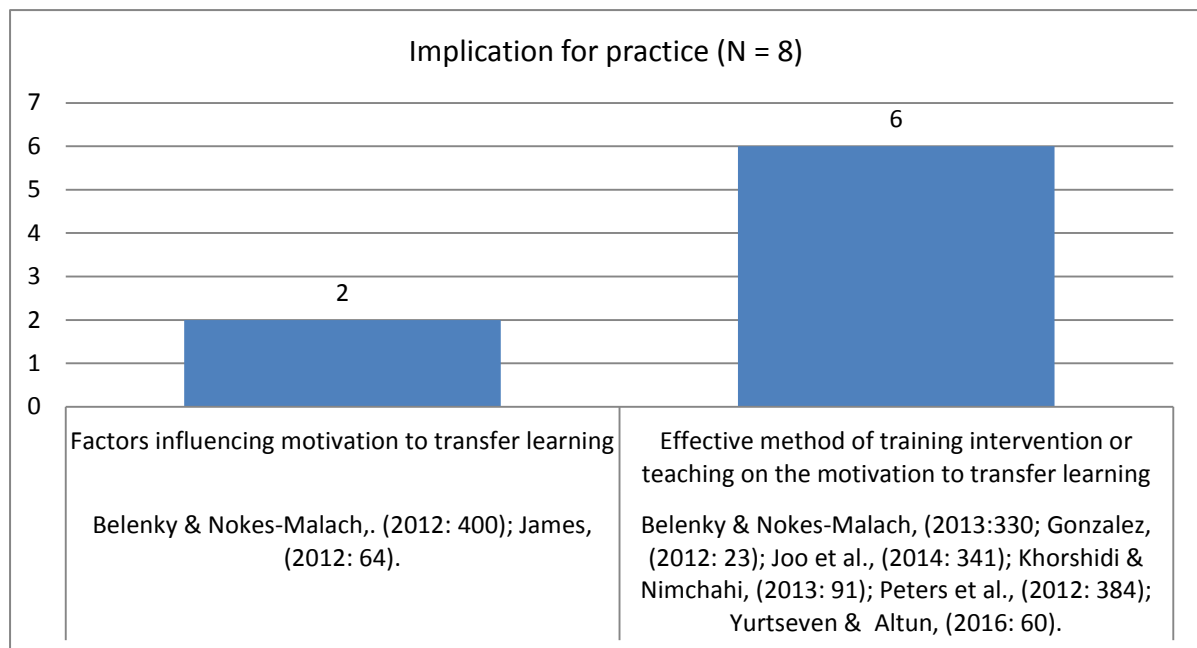


Figure 3.5: Broad elements of motivation to transfer learning for practice

These two broad elements presented in Figure 3.5 are: factors influencing motivation to transfer learning (Belenky & Nokes-Malach, 2012:400; James, 2012:64), and effective method of training intervention and teaching on the motivation to transfer learning (Belenky & Nokes-Malach, 2013:33; Gonzalez, 2012:23; Joo et al., 2014:341; Khorshidi & Nimchahi, 2013:91; Peters et al., 2012:384; Yurtseven & Altun, 2016:60).

3.4.6.6 Limitation of the study

Limitations or restrictions of the included studies are due to theoretical or methodological reasons (Grove et al., 2013:598). The researcher made use of inductive reasoning to thematically group the limitations under theoretical- and or methodological limitations, as illustrated in Figure 3.6.

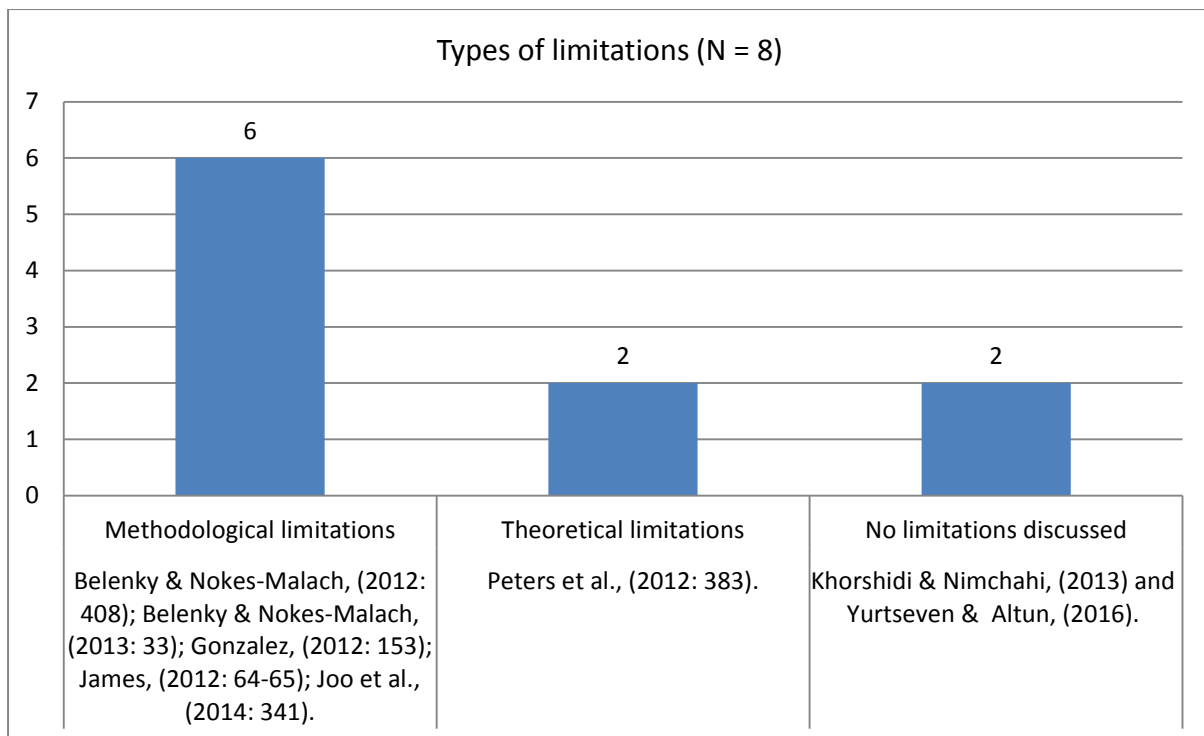


Figure 3.6: Limitations of the included studies

Regarding methodological limitations, three studies reported using a single setting (Belenky & Nokes-Malach, 2012: 408; Belenky & Nokes-Malach, 2013:33; James, 2012:64-65), while two studies reported a limitation related to insufficient sample size (Gonzalez, 2012:153; James, 2012:64-65; Joo et al., 2014:341). James (2012:64-65) mentions that the semi-structured interview perspective may not be able to describe all the reasons that influence their transfer motivation. The study by Belenky and Nokes-Malach (2013:33) reports methodological limitation as the study was conducted in a laboratory setting with classroom-like material. The researchers mention the need to replicate their study in a more authentic setting, for example, a controlled classroom setting, as some of the findings were inconsistent (Belenky & Nokes-Malach, 2013:33). Gonzalez (2012:153) reports generalisability of the results as a methodological limitation. As a theoretical limitation, Peters et al. (2012:383) reports that the outcome “motivation to transfer” was only tested at the end of the study to predict transfer. Khorshidi and Nimchahi (2013) and Yurtseven and Altun (2016) do not discuss any limitation of their research.

3.4.6.7 Recommendations of the studies

The researcher identified the following broad elements of the recommendations of the included studies (N = 8), as seen in Table 3.15.

Table 3.15: Broad elements of the recommendation of the included studies

Elements of the recommendations of the studies	Author/s
Examine the link between motivation to transfer and performance.	James (2012:65).
The role of motivational constructs perspectives on learning and transfer.	Belenky & Nokes-Malach (2012:426).
Measurement of effective transfer.	Peters et al. (2012:384).
Investigate the relationship between motivation and interlanguage pragmatics learning transfer.	Khorshidi & Nimchahi (2013:88).
Understanding student motivation in an academic setting by addressing the achievement goal theory.	Belenky & Nokes-Malach (2013:33).
Controlling different positions and job environments.	Joo et al. (2014:3410).
Focus more on the aspect of authentic usage of foreign language motivation and views.	Yurtseven & Altun (2016:60).
Future research needs to model, in unison, cognitive and motivational mechanisms that predict their positive effect on transfer.	Gonzalez (2012:160-161).

As summarised in Table 3.10, the collective elements are as follows: James (2012:65) recommends the need to examine the link between motivation to transfer performance, and Gonzalez (2012:161) mentions that future research needs to model, in unison, cognitive and motivational mechanisms that predict their positive effect on transfer. Other researchers recommend the need to explore the role of motivational constructs perspectives on learning and transfer (Belenky & Nokes-Malach, 2012:426), measurement of effective transfer (Peters et al., 2012:384). Khorshidi and Nimchahi (2013:88) recommend that the investigation of the relationship between motivation and interlanguage pragmatics learning transfer needs consideration in future research. Further recommendations from the included studies are: understanding student motivation in an academic setting by addressing the achievement goal theory (Belenky & Nokes-Malach, 2013:33); controlling different positions and job environments (Joo et al., 2014:341); and focus more on the aspect of authentic usage of foreign language motivation and views (Yurtseven & Altun, 2016:60).

3.5 Step 9: Summarising the evidence in relation to the purpose of the review, making conclusions and noting any implications of the findings

The results were collated under Step 8, and consideration was given to the conclusions drawn from each study included (N = 8). The conclusions are consistent with the objective and question of this scoping review. Following the conclusions drawn from the evidence, specific recommendations for future research, based on gaps in the knowledge identified from the results of this review will be presented. The sequence of discussion under Step 9 will be as follows: The characteristics of the included articles, design and research methodology, concept motivation to transfer learning, the aim and purpose, models and theories of the included evidence, data collection, results, recommendations and limitations of the main findings.

3.5.1 Characteristics of included articles

Seven of the included articles were older than five years, with only one article written in the last five years, which indicates that there is a need for more recent research to be conducted within the research area “motivation of student in higher education to transfer learning”. Recent recommendations in higher education emphasise the need for the development of a workforce that is able to engage competently with the society (WHO Workforce 2030:18). The development of competence, especially within the health professions education, is dependent on the ability of students and the workforce to transfer learning to various contexts or environments. Students within higher education are expected to integrate and transfer their learning to a practical environment. The applicability of learnt information beyond the walls of the classroom and the application of their knowledge to the real world setting enable students to make a difference and address societal needs. The literature demonstrates various advantages and positive outcomes for students who are able to or who are motivated to transfer learning (Kromydas, 2017:3).

This scoping review identified a limited number of articles or studies that met the inclusion criteria that focused on the motivation of students to transfer learning. Consequently, this identified gap is a challenge for higher education, as they are expected to design education programmes that capitalise on and build on students’ motivation to transfer learning

(Darling-Hammond et al., 2020:99). The lack of research on motivation to transfer learning in the higher education setting may be explained by various factors, including the inherent limitations of this scoping review, namely that the data were searched from specific databases accessed from the University of the Free State and only in the English language. Articles which may have focused on this subject area in other languages and from other databases may have been missed.

The majority of the research included in this scoping review was conducted in developed, high-income countries. This skew of research towards the developed and high-income countries may be explained from the fact that they have ample funding and resources to conduct research, as opposed to low-income countries (Acharya & Pathak, 2019:4). As demonstrated in some of the studies included in this scoping review, where research was conducted through experimental research, funding, resources, and expertise are essential for quality, meaningful research. Funding, resources and expertise may not always be present in low-income settings. However, research conducted in high-income countries is not transferrable to low-income countries, due to various contextual nuances. In addition, the outcomes of research conducted in higher-income settings may be different from those in low-income countries, where the limitation of resources and different education practices may affect motivation to transfer learning. This gap in the literature needs to be addressed through the replication of some of the studies related to the motivation to transfer learning within low-income countries and advance such research within these settings.

As a result, the body of work on motivation to transfer learning may be culture specific (Acharya & Pathak, 2019:6). The need to broaden the research to include more research articles from low-income countries will ensure that findings are not generalised and are culture specific. Culture is a significant differentiator in organisational behaviours across the education setting and will definitely impact the importance of various factors influencing motivation to transfer training (Donovan & Darcy, 2011:122; Harris et al., 2017:1).

3.5.2 Design and research methodology

The majority of the studies included in this review were conducted through quantitative research. Quantitative research aims to predict and control variables, and is viewed through the positivist lens as a gold standard for research and evidence generation (Daniel, 2016:96).

A larger sample size is normally included in quantitative research, with the aim to generalise findings from such research to a larger population. However, quantitative research does not explain or justify people's action or reactions, which are essential in understanding complex phenomena like "motivation to transfer learning".

According to the ASPAN (American Society of PeriAnesthesia Nurses) hierarchy of evidence, the majority of the included studies included quasi-experimental, observational descriptive, and qualitative designs to their research. The fact that a few studies are conducted through quasi-experimental research indicates that the quality of evidence in this field is commendable. However, a scoping review does not aim to evaluate the quality of the research, but in this review the CASP (Critical Appraisal Skills Programme) critical appraisal tool was used to evaluate the articles. All the studies included complied with the standards of the CASP Checklist.

3.5.3 Concept motivation to transfer learning

None of the studies included in this review had a conceptual definition of 'motivation to transfer learning'. The reason might be that there is not yet widespread theoretical agreement on the nature and scope of the concept 'motivation to transfer learning' in higher education (Pangaribuana et al., 2020:272). However, the studies included in this review describe various attributes of the concept 'motivation to transfer learning' without explicitly defining or describe the entire concept. 'Motivation to transfer learning' is explicitly defined or described by Gegenfurtner, Veermans et al. (2009:22); Machin and Fogarty (2004:99); Noe (1986:743); Pangaribuana et al. (2020:272); Pudjiarti et al. (2019:151); Brand-Gruwel, Testers and Gegenfurtner (2016:475), who all publish research within the field of staff development.

The definite parallels of the desires of individuals to utilise the knowledge and skills gained from training programmes in their workplaces (Gegenfurtner, Veermans et al., 2009:22), employees', subconscious intentions in applying training when a specific context in the workplace is encountered (Machin & Fogarty, 2004:99), and the drive or inspiration of an individual to reassign knowledge gained from formal or informal learning to a job-specific context (Pangaribuana et al., 2020: 272), as seen in Table 3.16, can be drawn between the various attributes of the concept "motivation to transfer learning", as described by the

articles included in this review, and key elements of the concept, as described by the literature in staff development. Therefore, inasmuch as the entire concept was not defined, there is agreement among various authors in staff development and higher education on key elements and components of motivation to transfer learning.

Table 3.16: Various attributes of the concept of motivation to transfer learning

Concept	Author/s
'Motivation to transfer' refers to the desires of individuals who utilise the knowledge and skills gained from training programs in their workplaces.	Gegenfurtner, Veermans et al. (2009:22).
'Motivation to transfer' is analysed as transfer implementation intentions, a construct aimed to assess employees' subconscious intentions in applying training when a specific context in the workplace is encountered.	Machin & Fogarty (2004:99).
'Motivation to transfer' involves the <i>drive or inspiration</i> of an individual to reassign knowledge gained from formal or informal learning to a job-specific context.	Pangaribuan et al. (2020:272).

However, the lack of theoretical clarity of the concept in higher education literature on the subject remains a problem for researchers, educators, and students (Szadkowski, 2019:243). Educators and researchers in higher education should be able to characterise and understand what motivates students to transfer learning to improve the quality of education. Therefore, a concept analysis exploring the attributes, antecedents, characteristics and outcomes of the concept 'motivation to transfer learning' within the context of higher education would be necessary to advance the science on motivation to transfer learning.

3.5.4 Purpose of the included studies

The included studies had diverse aims and or purposes. Motivation to transfer learning is a complex process that requires an interrelationship of a number of variables (Iqbal & AlSheikh, 2018:553). These variables are linked to the factors influencing motivation to transfer learning, namely student characteristics, learning design and external environment. The multiplicity in the variables linked to the motivation to transfer learning justifies why the studies included in this review had different aims or purpose. A limitation of the included studies is that the researchers mostly investigated only one element, namely student characteristics, instead of looking at the spectrum of factors that influence

motivation to transfer learning. A possible reason for the diversity of the study aims may be that none of the studies was nested in a common model that focuses on the transfer of learning model. The diversity in aims may mean that none of these studies has been replicated in other settings – which may be a recommendation for further research.

Further research should investigate research into all the following elements of the transfer of learning model, namely student characteristics, educational design, learning climate that includes support, and the workplace environment (Botma et al., 2013:3), adopted and adapted from Donovan and Darcy (2011). Research should progress towards conceptual clarity on the same concept and training to transfer models to give direction in the research regarding the motivation to transfer learning.

3.5.5 Models and theories

In the included studies, there was no consistent model or theory applied. Models and theories allow for structuring of research and for the conceptual interpretation of research outcomes. Studies that engage in models or theories can easily be replicated in various settings (Collins & Stockton, 2018:2). With research conducted within motivation to transfer learning it would be prudent for most of the studies to have used similar models or theories. However, the fact that the focus or purpose of the included research was diverse could explain their non-consistency in the models or theories used in these studies. Similar or the same models could have been engaged in structuring the results and interpretation of the results to enhance comparison of results across the included studies. Although the models and theories in the include articles offer useful strategies for predicting motivation to transfer learning, each category adopts a specialised focus, and thus affords snapshots only into the complex process involved in transfer training. In the literature, popular models related to motivation to transfer learning include the conventional transfer of training model (Kontoghiorghes, 2002); the Integrative model of motivation to transfer learning (Colquitt & LePine, 2000: 679); the Systematic model of training transfer (Kontoghiorghes, 2004), adapted by Donovan and Darcy (2011), adopted and adapted by Botma et al. (2013); the Conceptual model for motivation to transfer training (Arefin & Islam, 2018); and the unified model of motivation to training transfer (Quesada-Pallares & Gergenfurtner, 2015). These models could be used as proximal alternatives in grounding research in motivation to

transfer learning in higher education. Although these models and their revision are useful, they are limited in explaining enough variance of the motivation to transfer measures. According to Gegenfurter et al. (2010:453) motivation to transfer lacked from the start, and still lacks a solid foundation in motivation theories.

3.5.6 Data collection methods

Data were predominantly collected through questionnaires aligned with the overarching research approach, which were quantitative by nature. Some of the questionnaires used in the included studies have been validated and used in previous research, while some authors had to develop their own tools, which were further validated by a panel of experts. The use of validated tools in research enhances the rigor of research and the quality of the data. In addition, other researchers may replicate the studies in difference settings.

Various data collection tools measuring various aspects of the variables were reported as being used. The lack of the conceptual clarity, diverse aims, and different models used justified this diversity of the data collection tools and methods. Only two studies measured the same variable, attitude/motivation, but with different measuring instruments. However, no single unifying data collection tool that showed how all of the individual variables that affect learning transfer relate to or interact with one another was included in this study. It is essential that similar tools that measure the same concepts, variables and test the multidimensionality of the motivation to transfer learning must be developed.

3.5.7 Results and outcomes

The results of the studies included in this review were divergent, but aligned to their overall study aims and purposes. The researcher categorised and themed these study outcomes based on the three main factors influencing motivation to transfer learning, namely student characteristics, the educational design and the environment for transfer. Based on the outcomes of the included studies, it seemed as if inherent student characteristics such as mastery approach to learning, goal orientation, a higher internal value and perceptions when matched with well-designed educational activities increased the motivation to transfer learning. The high motivation to transfer learning as a student characteristic also includes their own perception of self and task. In a study on the influence of perception on

performance, Smith (2019) reflects on the value of individual perception and its correlation with self-efficacy. Inasmuch as self-efficacy may not always be an accurate predictor of actual performance, Matthews (2018) basing his argument on Bandura's self-efficacy theory, underscores the overall value of self-efficacy in performance. In this review, it was demonstrated that several studies revealed the role of perception, including how it influences motivation to transfer learning. Students who perceived their learning task as difficult were inadvertently classified as having low motivation to transfer learning.

This scoping review also revealed the role of educational design and the external environment where transfer has to take place as fundamental in enhancing the motivation to transfer learning. Educational design, including specific interventions such as inventions, had a positive effect on the motivation to transfer learning. Inasmuch as motivation is an internal characteristic, the literature explains that a variety of approaches can be used for the educational design to enhance this motivation. In this review, educational activities designed to be fun, visual and interactive appeared to enhance the motivation to transfer learning. Quintessential for the design of activities the literature needs to explain the need to integrate active learning, various teaching approaches and scaffolding learning as approaches that enhance educational alignment, transforming students' perceptions of tasks from being perceived as difficult to being perceived as easy. Studies included in this review revealed that poorly designed educational activities result in a negative perception by the students who eventually are not motivated to transfer learning. Investment into integrative self-directedness among students within an educational programme through appropriate scaffolding may enhance students' attitude and perception and increase their ability to transfer learning.

Health sciences integrate theory and practice through work-integrated learning. Authentic work environments are reported in this review as empowering and supporting the transfer of learning. Therefore, teaching and limiting learning only to the classroom and/or a simulated environment may not be sufficient to enhance the motivation to transfer. Health sciences institutions must ensure that learning is aligned and that the learning environment allows opportunities for students to transfer any learning. The detail on the specificity of how the workplace, especially in health sciences, enhances transfer of learning may be a proximal area for further research.

The findings of this review also highlight the significant role of personal interactions in enhancing the motivation of to transfer learning. Past research has expressed the role of clinical preceptors and clinical teachers in health professions education, especially in nursing, where their role has been to support students in integrating theory into practice. The formalisation of online teaching and learning in many higher education institutions secondary to the COVID-19 pandemic brings questions on the need for personal interaction in teaching and learning. Further research should engage with the complexity around personal interaction, and motivation to transfer learning within an online climate.

3.5.8 Recommendation for future research

The majority of the articles recommend that future research must be done on the effect of motivational constructs on transfer of learning. Only two of the articles suggest that effective transfer and the link between motivation to transfer and performance must be researched further. The recommendations for future research to be conducted are further divided into the development of further research, research that will improve education and practice:

3.5.8.1 Research

Reliable and valid Instrumentation must be developed to measure the effect of motivation or motivational mechanisms in various environments on distinct processes and perceptions that predict their positive effect on transfer of learning.

3.5.8.2 Education

Future work should provide a fine-grained analysis of exactly how motivation orientations impact the underlying cognitive processes to improve transfer of learning. A substantive theory is needed to develop learning interventions and activities that will increase interest and self-efficacy, altering self-regulated behaviours, which in will turn increase transfer performance.

3.5.8.3 Practice

Further research to improve motivation to transfer learning in practice must include controlling different positions and job environments as perceived usefulness and transfer motivation will differ according to the learners' respective job and work cultures.

3.5.9 Limitations of the current studies

Only two of the included studies gave a meaningful presentation of the study limitations. The authors explain the implications of the limitation and provide possible alternative approaches. By doing so the authors place the research findings within their right context to ensure readers do not exaggerate or minimize the findings. However, the majority of the included studies' methodological limitations were reduced to simplistic and minimal relevant themes, for example, single institution study, or small sample size. Two studies omitted to report any limitations. By reporting these generic limitations or omitting them altogether, researchers miss opportunities to fully communicate the relevance of their work, illustrate how their work advances a larger field under study, and suggest potential areas for further investigation. As Ross and Bibler-Zaidi (2019:261) note, there may be prevailing reasons why researchers do not sufficiently report the limitations of their study. For example, authors may not fully understand the importance and implications of their study's limitations, or assume that not discussing them may increase the likelihood of publication. Still another possible reason for excluding limitations is a dispersal of responsibility in which some authors may incorrectly assume that the journal editor is responsible for identifying limitations. Regardless of reason or intent, researchers have an obligation to the academic community to present complete, meaningful and honest limitations of a presented study to enrich the reader' understanding of the study's limitations and support future investigation (Ross & Bibler-Zaidi, 2019:262).

3.6 Summary of the chapter

This chapter contains the results of the scoping review methodology conducted to answer the research question. Steps 6–9 of the scoping review process as described by Peters et al. (2020:413) were discussed in detail, as the researcher referred to the extraction of the data, analysis of the data, presenting of the results of the extracted data and the summarised evidence. The data extracting process of this scoping review was discussed and executed in detail. The researcher justified, and clearly reported on the analysis process, by using a collaborative, inductive approach to cluster the extracted data into themes, ensuring a transparent and explicit approach. The results of the scoping review were presented in diagrammatic or tabular form, and a descriptive format that aligns with the objective of this

scoping review. In Step 9, the evidence in relation to the purpose of the review was reported. Conclusions and any implications of the findings for research, education and practice were reported on.

In the following chapter the findings, conclusions and recommendations based on the data analysis in Chapter 3 will be summarised.

CHAPTER 4: FINDINGS, CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

4.1 Introduction

This chapter summarises the findings, conclusions, and recommendations based on the data analysed in the previous chapter to provide a view of the current research studies on students' motivation in higher education to transfer learning. The recommendations and limitations of this scoping review conclude the study.

4.2 The research approach

The researcher used the nine-step descriptive, analytical method of conducting a scoping review described by Peters et al. (2020:413) to explore the existing scientific evidence regarding students' motivation in higher education to transfer learning. The review question complied with the PCC format, namely population, concept, and context (Peters et al., 2020:416), namely,

What is the existing state of the scientific evidence regarding the motivation of students in higher education to transfer learning?

The search terms and the Boolean operators and modifiers were used in combination to formulate an initial search string. A final literature search was conducted on the 13th of March 2020 by a UFS librarian on the EBSCOhost interface using the search string. The final search extracted 114 hits. After the automatic system deduplication, 89 hits remained, and 84 hits were left after manual deduplication. The inclusion and exclusion criteria were applied: on the 84 titles, 60 irrelevant titles were excluded, with 24 titles remaining. From the 24 remain titles, four (4) abstracts that did not meet the inclusion and exclusion criteria were eliminated, leaving 20 abstracts for full-text evaluation. The full-text articles were screened individually and discussions among the researchers assisted in drawing the final list of included articles. Eventually, eight (8) full-text articles were included in this scoping review. Ancestry search was conducted on the included full-text articles, but yielded no additional full-text articles. The Critical Appraisal Skills Programme (CASP) checklist for qualitative and quantitative studies were used to review the methodological integrity of the

included full-text articles. However, none of the articles were excluded based on the appraisal outcomes (Hanneke et al., 2017:6; Peters et al., 2020:419).

The researcher charted the data in a data extraction table on Microsoft Excel™. The data extraction table was aligned with the aim and question of the scoping review (Peters et al., 2020:421). The extracted data were analysed and reported through a narrative descriptive approach.

4.3 Summary of the findings, gaps and recommendations

The purpose of this scoping review was to describe and summarise the existing literature on the motivation of students in higher education to transfer learning (see Section 1.3). Motivation is considered to be an important factor associated with the transfer of training. Chang and Chiang (2013:16) and Celestin and Yufen (2018:14) mention that motivation is a critical factor in students’ performance, productivity, and transfer of learning. Even when students have the right skills, clear work objectives, and a supportive work environment, they would not be able to transfer learning without motivation (Raza & Shah, 2017:2). The main findings, gaps identified in the literature and recommendations regarding these gaps identified are summarised in Table 4.1.

Table 4.1: Main finding identified gaps in the literature and recommendations

Findings	Gap	Recommendations
Study characteristics		
All except one study was done in developed countries and were older than five years.	Research on motivation to transfer learning in higher education is dormant.	Conduct research on the motivation of students in higher education to transfer learning in developed and low-and middle-income countries.
Concept		
None of the studies had a conceptual definition of ‘motivation to transfer learning’.	Conceptual definition of ‘motivation to transfer learning’ in higher education.	A concept analysis of motivation to transfer learning.
Theory/model		
None of the studies used a transfer of learning model/theory.	Transfer of learning model/theory for higher education.	Develop new or test feasibility of existing transfer of learning models/theories in higher education.

Continue...

Findings	Gap	Recommendations
Methodology		
Predominantly quantitative research with diverse aims, small sample sizes and different measurements were done.	A uniform definition of motivation to transfer learning Multi-site studies have not been done. Standardised measurement tools are needed for comparability.	Conduct multi-method studies at multiple sites. Develop standardised validated tools to measure the multidimensionality of motivation to transfer learning in higher education.
Results of included studies		
Student characteristics, educational design and the external work environment influences the motivation to transfer learning.	Studies did not address the multiple factors that influence the motivation to transfer learning.	The factors that influence the motivation to transfer learning are most likely interdependent; therefore studies should examine the complete set of factors instead of focusing on a single student characteristic.

Research on motivation to transfer of training is vibrant in human resource development where they view motivation as a dynamic force that constantly changes over time (Ma et al., 2018:2). Motivation to transfer learning is dynamic because it is affected by numerous factors for example; learner's characteristics that include self-efficacy, motivation and external factors, including supervisor and peer support, and instructional design factors, for example, well-designed learning material, learning environment and theories that support motivation to transfer learning (Abdullah & Suring, 2011:337; Ma et al., 2018:2). Therefore, studies done in human resource development could be duplicated in higher education to explore the transferability of the findings.

In chapter one, intrinsic and extrinsic motivation were reported as two main types of motivation (Taylor & Hamdy 2013:1562). Only one of the included studies in this review hypothesises that intrinsic and extrinsic motivation to train impact positively on learning (Peters et al., 2012:383). However, only intrinsic motivation had a single significance on the influence on enjoyment-satisfaction and positively linked to learning (Peters et al., 2012:383). Perhaps the influence of such intrinsic motivation among learners must be investigated within higher education. Intrinsic motivation is demonstrated by personal enjoyment, interest, or pleasure (Adamma et al., 2018:56; Rzayeva, 2020:204).

According to researchers, intrinsic motivation manifests in behaviours such as high educational achievement and enjoyment of mastering a topic, spontaneous satisfaction and inherent in effective volitional actions rather than rote-learning to achieve good results (Di Domenico & Ryan, 2017:2; Rzaeva, 2020:204). Researchers often compare intrinsic motivation with extrinsic motivation, which is directed by strengthening contingencies (Rzaeva, 2020:204; Tohidi & Jabbari, 2012:823). Traditionally, educators consider intrinsic motivation to be required and to result in better learning outcomes than extrinsic motivation (Adamma et al., 2018:53).

4.3.1 Study characteristics

The majority of the research included in this scoping review was conducted in developed, high-income countries. Research conducted in high-income countries may lack insight into lower-income countries' infrastructure, and make any improvements ineffective or even impossible to be implemented (Chetwood, Ladep & Taylor-Robinson, 2015:2). Academically driven research in high-income countries are published in peer-reviewed journals, but the countries in which it may make the most impact may not have access to these journals or speak the same language, despite the rise in open-access journals, free online-access networks and international journal partnerships (Aronson, 2004:996, Smith et al., 2007:2). The researcher reckons that literature needs to be addressed through the replication of some of the studies related to the motivation to transfer learning within low-income countries.

Research on motivation to transfer learning in higher education is dormant, as most of the included articles were older than five years, which indicates that there is a need for more recent research to be conducted within the research area 'motivation of student in higher education to transfer learning'. The development of knowledge, skills and attitude, especially within the health professions education, is dependent on the capability of students to transfer learning to the practical environment (WHO Workforce, 2016:18). The literature demonstrates various advantages and positive outcomes for students who are able to, or who are motivated to transfer learning (Kromydas, 2017:3).

4.3.2 Conceptual definition

None of the studies had a conceptual or operational definition of 'motivation to transfer learning'. Although the entire concept was not defined in the higher education studies, there are overlaps with definitions from staff development. According to the most recent research in the human resource development, motivation to transfer learning is defined as: motivation to transfer learning oversees concentrated efforts and performance energy (motivation) indicative of prediction outcome actualisations (Matthews, Daigle & Cooper, 2020:309). According to Islam (2019:275), motivation to transfer learning is operationalised as "the employees' willingness to learn through training programs and then share the acquired knowledge". Pangaribuan et al. (2020:272) define motivation to transfer learning as follows. Motivation to transfer involves the *drive or inspiration* of an individual to reassign knowledge gained from formal or informal learning to a job-specific context. A concept analysis of motivation to transfer learning must be done in higher education as part of health sciences to ensure that educators and researchers in higher education are able to characterise and understand what motivate students to transfer learning to improve the quality of education and healthcare delivered (Ma et al., 2018:2).

4.3.3 Models and theories

Various motivation related theories explain the intricate relationship between students and motivation to learn, which include *self-determination theory* (SDT), *expectancy theory*, *attention, relevance, confidence and satisfaction model* (ARCS), and *social cognitive learning theory* (SCLT) (Gopalen et al., 2017:1893-1895; Taylor & Hamdy, 2013:1562-1563). However, the studies included in this review did not reflect any theoretical underpinning. According to Gegenfurtner et al. (2010:453), motivation to transfer learning lacked a solid foundation in motivation theories. The included studies only afford snapshots into the complex process involved in transfer training. In the literature, popular models related to motivation to transfer learning include the conventional transfer of training model (Kontoghiorghes, 2002), Integrative model of motivation to transfer learning (Colquitt & LePine 2000: 681), Systemic model of training transfer (Kontoghiorghes 2004), adapted by Donovan and Darcy (2011), adapted by Botma et al. (2013), conceptual model for motivation to transfer training (Arefin & Islam, 2018), and the unified model of motivation to training transfer (Quesada-Pallares &

Gegenfurtner, 2015). Although these models and their revision are useful, they are limited in explaining enough variance of the motivation to transfer measures. Higher education may benefit from adopting a multidisciplinary and multilevel perspective on factors that may influence transfer of learning. Models or theories on transfer of learning in human resource development may be adopted and/or adapted for higher education.

4.3.4 Methodology

The majority of the included studies used quantitative methodological approaches. Data were primarily collected through questionnaires aligned with the overarching quantitative research approach. According to Tonhäuser and Bükler (2016:153), and supported by Matthews et al. (2020:304), it can be assumed that quantitative research designs reach their limitations with regard to the extent of learning determinants related to motivation to transfer learning. Qualitative research may reach differentiated conclusions, in this regard (Tonhäuser & Bükler, 2016:153). The researcher proposed that in the future, it should thus be examined what conclusions qualitative research designs reach regarding determinants and their dimensions of motivation to transfer learning. Subconscious processes of desire, human will, and goal striving can be studied with projective tests, priming, or introspection to understand how they affect transfer motivation, are just a few examples of new avenues for higher education research that aim to understand how conditions within the training intervention shape transfer motivation (Braver et al., 2016:6).

The focus in past research on factors during training that affects transfer motivation was on training-related designs, interventions and learner characteristics while other factors besides learning and instruction are worth studying (Bhatti et al., 2014:54-56). Therefore, it is recommended that motivation to transfer learning be understood from a temporal perspective as part of the multidimensionality of motivation to transfer learning (Steel et al., 2018:2). The included studies have no unifying data collection tool. Various data collection tools, measuring various aspects of the variables were used. The lack of the conceptual clarity, diverse aims and different models used justified this diversity of the data collection tools and methods. Tonhäuser and Bükler (2016:153-154) distinguishes motivation to transfer, transfer conditions (environment), and transfer design (ability). The Learning Transfer System Inventory (LTSI) as developed and tested by Holton et al. (2002) can be

used as a diagnostic instrument to describe the factors that influence the training transfer processes. The LTSI displays the complete transfer system including the elements in the person, training, and organization (Chatterjee, Pereira & Sarkar, 2018:6; Noorizan et al., 2016:159). According to Tonhäuser and Büker (2016:152), the LTSI is the only existing valid instrument containing transfer-relevant scales, but they are also of the opinion that the quantitative LTSI measuring instrument is not sufficient to cope with the complexity of the transfer process (Tonhäuser & Büker, 2016:152). The LTSI is mostly used in the human resources departments. The researcher proposed that future research might combine the LTSI with other or newly developed instruments to assess the same concepts and variables, test the multidimensionality of the motivation to transfer learning more completely, and apply it to motivation to transfer learning in higher education

4.3.5 Results of the included studies

The results of the included studies indicate that student characteristics, educational design and the external work environment influence the motivation to transfer learning. However, the studies did not address the multiple factors that influence the motivation to transfer learning, and motivation to transfer learning is only measured once; then conclusions are drawn as to how factors such as motivation, support, satisfaction and learning interventions impact motivation to transfer learning outcomes. The research bulk of motivation to transfer learning is done in human research development where they view motivation as a dynamic force that constantly changes over time (Ma et al., 2018:2). Motivation to transfer training is dynamic, because it is affected by numerous factors, for example, learners' characteristics, which include self-efficacy, motivation, and external factors, including supervisor and peer support, as well as instructional design factors, for example, well-designed learning material, learning environment and theories that support motivation to transfer learning (Ma et al., 2018:2). Although the limited number of studies examining transfer motivation offer initial explanations for understanding why trainees become motivated to apply their learning, a critical review of the transfer motivation literature reveals certain neglected areas. Research on emotion, volition, subconscious motivation, and sensitivity to context is needed to measure motivational forces affecting the transfer process. In the past, the focus in research on factors during training that affects transfer motivation was on training-related designs, interventions and learner characteristics, while

other factors besides learning and instruction are worth studying (Bhatti et al., 2014:54-56). More specifically, affective experiences during training, for example, the satisfaction of basic psychological needs, have been found to explain motivation (Vansteenkiste, Ryan & Soenens, 2020:4). The need to feel related to the training group or to feel competent during training is likely to affect transfer motivation as well (Ntoumanis et al., 2017: 1026). After training, the development of transfer motivation continues to be determined by various factors. Focusing on individual antecedents, the literature indicates that transfer motivation interacts with performance, self-efficacy, expectations, and training reactions (Zimmerman, 2000:84). Therefore, research on motivation to transfer learning must look at the spectrum of factors on the transfer of learning model

4.4 Limitations of this scoping review

The librarian used university databases for the search for articles for this review, which may have omitted other databases that could have rendered more sources. The researcher is conversant in English, and Afrikaans ; therefore, studies in other languages were excluded. The concept “knowledge transfer” was not added to the search string and therefore the researcher and co-researchers could have miss pertinent articles by not including the concept as the concept was used interchangeable with “learning transfer”. Therefore whether the perspectives included in this review are reflective of the majority of the research that was done remains a question.

4.5 Motivation to transfer learning in the Nursing Profession

Motivation to transfer learning have troubled health care organisations for a long time, as learning and transfer of learning has long been held as the cornerstone of organisational development. Effective motivation to transfer learning produces clear benefits for individuals, teams, organisations, and society. Motivation to transfer learning can facilitate the improvement of human capital which means, the promotion of nurses’ competency in the nursing profession and links to the safety of patients and the ultimate goal of improving delivery of health care (Babkina, 2014:1). On the contrary, de-motivated nurses can lead to errors, injuries and even legal issues, all of which can be extremely costly (Nduka, 2016: online). Baldwin and Ford (1988) presented a classic model of the transfer process which

indicates the training-inputs factors of characteristics, design and environmental factors to have direct and indirect effects on the conditions of transfer (Ma et al., 2018:2). After which the majority of research on the motivation to transfer learning subsequently fall within these broad categories; of trainee characteristics, training design, and work environment factors. As for trainee characteristics aspect, cognitive ability, self-efficacy, motivation, personality, perceived utility, career/job variables and locus of control have been identified to affect learning transfer (Babkina, 2014: 25; Ma et al., 2018: 19-20). In training design area, factors such as content relevance, error management, behavioural modelling, and technological support were reported to have effects on learning transfer (Babkina, 2014: 96; Ma et al., 2018: 20) In the work environment area, transfer climate, supervisor/peer support, opportunity to perform, accountability, and follow-up have been identified to affect the transfer of learning (Babkina, 2014: 39; Ma et al., 2018: 19). Researchers have revealed the factors that influence learning transfer, yet studies pertinent to transfer learning in nursing profession are scarce (Ma et al., 2018:19). This may in part be attributed to the fact that many of these researches were conducted in business and industry. These findings alert us that previous identified variables may not be applicable for studying the training transfer process in nursing profession

Despite this growing body of variables identified on the motivation to transfer learning, as discussed in chapter 3 whether they are applicable to the nursing profession remains questionable. Therefore the researcher proposed that a qualitative study must be conducted with, the purpose to explore nursing professionals' perspectives on the factors that influence training transfer, which will aid the understanding of the transfer process in nursing profession and gain insight into the way to improve training transfer.

4.6 Conclusion of the review

The purpose of this scoping review was to describe and summarise the literature on motivation to transfer learning in higher education and to identify the gaps regarding the research topic. Table 4.1 is a summary of the results of this study, the identified gaps and specific recommendations. The researcher proposes that higher education may benefit from adopting a multidisciplinary and multilevel perspective on factors that may influence transfer of learning. Models or theories on transfer of learning in human resource

development may be adopted or adapted for higher education. Higher education, especially professional degrees with a work-integrated learning component, may benefit from borrowing from human resources. Educational researchers in higher education have a vast field to explore regarding motivation to transfer learning.

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Addendum A: Ethical clearance



Health Sciences Research Ethics Committee

23-Apr-2020

Dear Mrs Doreen Van Rooyen

Ethics Clearance: **MOTIVATION OF STUDENTS TO TRANSFER LEARNING: A SCOPING REVIEW**

Principal Investigator: Mrs Doreen Van Rooyen

Department: School of Nursing Department (Bloemfontein Campus)

APPLICATION APPROVED

Please ensure that you read the whole document

With reference to your application for ethical clearance with the Faculty of Health Sciences, I am pleased to inform you on behalf of the Health Sciences Research Ethics Committee that you have been granted ethical clearance for your project.

Your ethical clearance number, to be used in all correspondence is: UFS-HSD2020/0421/2605

The ethical clearance number is valid for research conducted for one year from issuance. Should you require more time to complete this research, please apply for an extension.

We request that any changes that may take place during the course of your research project be submitted to the HSREC for approval to ensure we are kept up to date with your progress and any ethical implications that may arise. This includes any serious adverse events and/or termination of the study.

A progress report should be submitted within one year of approval, and annually for long term studies. A final report should be submitted at the completion of the study.

The HSREC functions in compliance with, but not limited to, the following documents and guidelines: The SA National Health Act. No. 61 of 2003; Ethics in Health Research: Principles, Structures and Processes (2015); SA GCP(2006); Declaration of Helsinki; The Belmont Report; The US Office of Human Research Protections 45 CFR 461 (for non-exempt research with human participants conducted or supported by the US Department of Health and Human Services- (HHS), 21 CFR 50, 21 CFR 56; CIOMS; ICH-GCP-E6 Sections 1-4; The International Conference on Harmonization and Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH Tripartite). Guidelines of the SA Medicines Control Council as well as Laws and Regulations with regard to the Control of Medicines, Constitution of the HSREC of the Faculty of Health Sciences.

For any questions or concerns, please feel free to contact HSREC Administration: 051-4017794/5 or email EthicsFHS@ufs.ac.za.

Thank you for submitting this proposal for ethical clearance and we wish you every success with your research.

Yours Sincerely

Dr. SM Le Grange

Chair : Health Sciences Research Ethics Committee

Health Sciences Research Ethics Committee

Office of the Dean: Health Sciences

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Addendum B: Amendments to Ethical Clearance



Health Sciences Research Ethics Committee

15-Sep-2020

Dear Mrs Doreen Van Rooyen

Ethics Number: UFS-HSD2020/0421/260501

Ethics Clearance: **MOTIVATION OF STUDENTS IN HIGHER EDUCATION TO TRANSFER LEARNING: A SCOPING REVIEW**

Principal Investigator: Mrs Doreen Van Rooyen

Department: School of Nursing Department (Bloemfontein Campus)

SUBSEQUENT SUBMISSION APPROVED

With reference to your recent submission for ethical clearance from the Health Sciences Research Ethics Committee, I am pleased to inform you on behalf of the HSREC that you have been granted ethical clearance for your request as stipulated below:

- ◆ **Minor Amendment:**
 - o Title change from "student" to "higher education" students.
 - o Review question was changed adding "higher education" p15.
 - o Objective 1 of the review "higher education" students was added p15.
 - o Inclusion criteria "higher education" was added p 16.
 - o Exclusion criteria "scholar" and "further education" was added p 16.
 - o Search string "higher education" was added to the context p17.
 - o Changes were made to the original study, as with the data search sources included scholars and student from further education. Students in this review were defined as students diploma or degree at a higher education institution.

The HSREC functions in compliance with, but not limited to, the following documents and guidelines: The SA National Health Act, No. 61 of 2003; Ethics in Health Research: Principles, Structures and Processes (2015); SA GCP(2006); Declaration of Helsinki; The Belmont Report; The US Office of Human Research Protections: 45 CFR 461 (for non-exempt research with human participants conducted or supported by the US Department of Health and Human Services- (HHS), 21 CFR 50, 21 CFR 56; CIOMS; ICH-GCP-E6 Sections 1-4; The International Conference on Harmonization and Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH Tripartite), Guidelines of the SA Medicines Control Council as well as Laws and Regulations with regard to the Control of Medicines, Constitution of the HSREC of the Faculty of Health Sciences.

For any questions or concerns, please feel free to contact HSREC Administration: 051-4017794/5 or email EthicsFHS@ufs.ac.za.

Thank you for submitting this request for ethical clearance and we wish you continued success with your research.

Yours Sincerely

Dr. SM Le Grange

Chair : Health Sciences Research Ethics Committee

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Addendum C: Data extraction sheet

Title	Motivation and transfer: The role of mastery-approach goals in preparation for future learning
Reference (Author, year, volume, issue, pages)	Belenky, D.M. & Nokes-Malach, T.J. 2012. Journal of Learning Sciences (21) 3, pp 399-432
Country where the study was conducted	University of Pittsburgh, pp 399.
Definition of “motivation to transfer learning”	None described
Study questions	1) How will existing mastery-approached orientations impact learning and transfer. Lead to the first hypothesis of Existing mastery-approach orientation will lead to better transfer, pp 406. 2). How will different instructional activities influence goal adoption and learning behaviour, leads to the second hypothesis of intervention activities will lead to more mastery-related goal adoption than tell-and-practice activities and to more attention to import conceptual features of the learning problems, pp. 406. The third hypothesis was there will be a moderation effect on invention activities on the beneficial effect of mastery approach orientation for transfer, such that the effect of mastery approach orientation will be stronger predictor of the likelihood of transfer for the tell-and-practice activities than for invention, pp 407.
Aim/purpose of the study	The first aim of the study is to explore the role of motivation in knowledge transfer, specifically focusing on how students` achievement goals impact transfer, pp.400. The second aim of this work is to examine the effect of instruction on the adoption of master-related goals within a task, pp 401 and the third aim is to examine how existing mastery approach goal orientations interact with different types of instructions, pp 401.
Objectives of the study/Hypothesis	1) H1 Existing mastery-approach orientation will lead to better transfer. 2) H2 Invention activities will lead to more mastery-related goal adoption than tell-and practice activities as well as more attention to import conceptual features of learning problems. 3) H3 There will be a moderate effect of Invention activities on the beneficial effect of mastery-approach orientation on transfer, pp 418-419.

Belenky & Nokes-Malach 2012 continue ...

Methodology and study design	Quantitative 2x2 pre- and post-test study design, pp. 408. We used a two ("learning activity" invention vs "tell and practice") by two (Learning resource: Present vs Not) between subjects, pre-/post-test design.
Related models/ theories of motivation to transfer	The material and procedure in this study were modelled on the Schwartz and Martin (2004) double transfer paradigm, pp 407. The model of achievement goal of Eliot & McGregor (2001), pp 404.
Factors influencing motivation to transfer	Together these findings show that invention activities facilitate mastery-approach goal adoption in participants while they engage in that learning environment as well as lead them to produce more conceptually advanced attempts to complete the standardisation activity pp 425
Study population (age/gender and numbers)	College students 104 Undergraduate from an Introduction to Psychology course at the University of Pittsburgh participate in return for course credits (M age = 18.5 years old, SD = 0.8 Years Age range from 18-22 years, 42% = males, 45% = females, 13% = did not report gender. p 408.
Data collection and data analysis method	Material was presented in packets binders containing in order an initial questionnaire, a pre-test, consisted of three items adapted from Schwartz and Martin (2004) study, the pre-test materials assessed basic procedural ability, data representative skills, and a transfer item a learning activity on variables, and activity questionnaire, an instructional video, a learning activity on standardisation, a post-test, a final questionnaire and demographic sheet, pp 408-411. The students were run individually in one laboratory session. The procedure consisted of an initial Achievement goal questionnaire, followed by a pre-test, the variability activity, the activity questionnaire, a video, the standardisation activity, a post test, a final Achievement questionnaire and a demographic sheet. The participants took as long as they needed to complete the questionnaires, with no one taking longer than 3-minutes. The pre-test took 5-minutes per problem, for a total of 15-minutes. The two learning activities and the video took 15-minutes each with a total of 45 minutes. In the post test each problem took 5-minutes for a total of 35 minutes for the participants given the worked example and 30-minutes for participants without the worked example. The experiment took 2-hours in total to complete, pp 415-416 Cronbach alpha was used to test the reliability of the instrument, p 416. The results was presented according to the hypothesis. For the first hypothesis a binary logistic regression was used, p 418. Coding rubric adopted from Schwartz and Martin (2004) with three categories was used to analyse the second hypothesis, p 420. To evaluate the third hypothesis a binary logic regression was conducted, p 422.

Belenky & Nokes-Malach 2012 continue ...

Instrument use to measure motivation to transfer	Motivation measures were assessed using the 12-item validated Achievement goal questionnaire, which had three items for each four constructs (mastery-approach, mastery-avoidance, performance-approach, performance-avoidance), from Elliot & McGregor (2001), pp 413-414. The measuring scale consists on a 7-point Likert scale, measure was adapted to be about goals in math classes rather than a global assessment about academics. Two forms were created with all 12 items in randomised order, pp 414. We also developed a short questionnaire to measure participants goals during the initial learning activity. The goals adoption within a particular task can be considered as "instantiated" achievement goal, which is what we aimed to capture with this activity questionnaire. This was measured within a five point Likert scale, pp 415. Cronbach's alpha was calculated to measure the reliability for the achievement goal constructs on the Achievement Goal Questionnaire. Cronbach's alpha values greater than .8 are considered to indicate good reliability.
Measured Outcome related to motivation to transfer	The current work provides a demonstration that students motivation can have a large impact on knowledge transfer. Specifically students' achievement goal orientation towards math, the reason why they engage in and how they view achievement activities in that domain, had implications for whether they transferred their knowledge, pp 426.
Results of the studies	As expected, we found evidence that more endorsement of a mastery-approach orientation predicted better transfer (H1), We also predicted that invention activities would lead to more focus on the conceptual features of the learning activities as well as more mastery-related goal adoption in the learning activities (H2), Finally, we had predicted that the benefits of mastery-approach orientation would be moderated by invention activities, as these would produce some level of mastery related goals in the students as well (H3). Participants who entered the experiment very high in mastery-approach orientation were likely to transfer regardless of the type of instruction.
Implication for practice	The role of mastery-approach goals led researcher to examine the role of sociocultural factors and context in transfer to consider transfer as preparation for future learning, pp. 400.
Limitations of the study	In addition, our study was conducted in only one laboratory session as opposed to multiple classroom sessions, pp 408.
Recommendation of the study	1) Further work should investigate goal adoption and transfer interaction and examine the robustness of the effect in terms of how long such effect lasts and to what domains they can be extended. 2) Research that focuses on developing reliable and valid measures of goal adoption within a task. This work could combine students' self-reports, behavioural observation and possibly even physiological signals to form a more complete assessment 3) The role of motivational constructs may provide a new way to bridge research on simulative perspectives on learning and transfer, pp 426. Future work should look into whether assessment distinction between performance approach goals and mastery approach goals applies in classrooms, pp 427. Future work should provide a fine-grained analysis of exactly how motivation orientations and goals impact the underlying cognitive processes during the initial and subsequent learning activities. pp 426.

Title	Mastery Approach goals and knowledge transfer: An investigation into the effect of task structure and framing instructions
Reference (Author, year, volume, issue, pages)	Belenky, D.M. & Nokes-Malach, T.J. 2013. <i>Learning and Individual Differences</i> (25), pp 21-34
Country where the study was conducted	Pittsburgh, United States. University of Pittsburgh, p 21.
Definition of "motivation to transfer learning"	None described
Study questions	1) What is the relationship between achievement goals orientations and transfer? 2) How do the factors of structure (invention of tell and practice) and framing (mastery vs performance) affect mastery related goal adoption during the task? 3) How does the structure and framing interact with a student's initial mastery-approach goal orientation to affect transfer? p 24.
Aim/purpose of the study	1) One aim of the current work is to begin to bridge these two literatures by examining the effect of individual differences in student motivation operationalised as achievement goal on knowledge transfer, p 21. 2) We aim to provide a further test of the hypothesis that higher mastery-approach goal orientation lead to better transfer instruction whereas the other goals do not, p 2. 3) We aim to test the role of the instructional activities in the adoption of task based goals to see how these effects interact with existing motivation to influence transfer we extend our past work by examining the effect of training instructions for the learning activity (invention vs tell and practice) and framings (mastery vs performance) on goal adoption and transfer, p 21-22
Objectives of the study/Hypothesis	To investigate how achievement goals influence and are influenced by different activity structures (interventions versus tell-and-practice) and framings (mastery versus performance) to support or inhibit knowledge transfer, p 24. H1 Existing mastery-approach orientations would predict transfer. H2 The second set of hypotheses concern the effect of the manipulation on mastery goal adoption during the learning activity, p 28
Methodology and study design	This study had a 2 (structure: invention or tell-and-practice) × 2 (framing: mastery or performance instructions) between-subjects design. Participants were randomly assigned to one of the four conditions; Tell-and-Practice/Performance (n=25), Tell-and-Practice/Mastery (n=24), Invention/Performance (n=24), and Invention/Mastery (n= 25). Materials were presented as packets in binders, which contained questionnaires, a pre-test, learning activities, a post-test, and a demographic sheet, pp. 24. The reliability was high for the mastery-approach, mastery-avoidance, and performance-approach constructs ($\alpha > .7$). The performance-avoidance construct was somewhat lower ($\alpha = .60$), The four affect items assessed the participant's affective state and had low reliability ($\alpha = .34$). As such, they could not be combined into a scale, and are omitted from the results, p 28.

Belenky & Nokes-Malach 2013 continue ...

Related models/ theories of motivation to transfer	Achievement Goal theory, p 32.
Factors influencing motivation to transfer	... including predispositions, prior experience and environmental variables. It is clear that there are many potential sources of mastery goals, such as classroom grading structure, the types of learning activities used, and the amount of authority given to students. Individual differences such as theories of intelligence and need for cognition are most likely to influence mastery goal adoption, p 33.
Study population (age/gender and numbers)	98 - Undergraduates from University of Pittsburgh. (M=19.4 years SD=2.5 y) exchange for course credits in their introduction of Psychology. Voluntary participation and scheduled experimental session online. 40% = Male, 33% = Female, 27% did not indicate their gender. 88% = English their first language, p 24.
Data collection and data analysis method	Study had 2x structures intervention and tell-and-practice x2. Participants were randomly assigned to one of four conditions. Tell-and-practice (n= 25) tell-and=practice/mastery (n=24) Intervention/performance (n=25). Motivational measures: Existing achievement goals were assessed by the Achievement Goal questionnaire-12-item scale with 3-items for each 4-achievement constructs, assessed 7-point Likert scale, pp.27 Test problems (pre-test 3 items: a procedural skill measure, a data representation problem, and transfer problem). Post-test contained isomorphic versions of the problems as well as an adaptive use and a qualitative reasoning problem groups of 6 participants in a 2-hour laboratory session with all the individuals working independently on provided packets, p 25. The results were presented according to the hypotheses. For the first hypotheses the measure was scored dichotomously and logic regressions were used to analyse the data, pp 28. For the second hypotheses an exploratory analysis was used, p 28.
Instrument use to measure motivation to transfer	Motivational measures: Existing achievement goals were assessed by the Achievement Goal questionnaire-12-item scale with 3-items for each 4-achievement constructs, assessed 7-point Likert scale (Elliot and McGregor, 2001, pp 27). Task based mastery goals were measured with an 8 item activity questionnaire administered during the learning phase (Author developed)- four items were on task based mastery goals and the other four were on the participants' effective experience. The first four of the task based mastery goals had a Cronbach alpha of 0.4 and the last four that focused on effective experience had a Cronbach alpha of .4 and as such cannot be combined and was omitted due to low Cronbach alpha score, p 29.
Measured Outcome related to motivation to transfer	None described

Belenky & Nokes-Malach 2013, continue ...

Results of the studies	<p>1. This study found an effect of existing mastery-approach orientation on transfer, replicating a main finding of Belenky and Nokes- Malach (2012). Overall, students high in mastery-approach goal orientation at the beginning of the experiment were more likely to transfer from instruction to a target problem at test p 30 2) However, the results of this study also suggest that certain combinations of tasks framings and structures may influence the relationship between mastery-approach goals orientation and transfer, p 30. 3) We did not observe an effect on invention promoting transfer relative to tell- and-practice, p 30. 4) Invention activities led to more task based mastery goal adoption than tell- and practice activities, pp 31 4) The way in which a task is framed seems to matter more for some types of activities than others, p 31. 5) A complex interaction between students' existing mastery approach achievement goal orientation, structure, framing, and transfer was observed in the current study, p 31. 6) This study also contributes the novel result that the relationship between mastery-approach orientation and the likelihood of transfer was flat for the condition that received invention with performance framing, p 31. Although self-reported task based mastery goals did not predict transfer, existing mastery approach goal orientation did, p 32. 7) We did not observe a main effect framing of goal adoption, even though one framing was designed to promote task-based adoption, p 32.</p>
Implication for practice	<p>Practically educators need precisely this type of information to understand how to structure their classrooms and individual learning activities to maximise student motivation and learning. For theory to advance researchers will need to increase the specificity of the predictions achievement goal theory makes, and to clarify exactly how different achievement goals are selected and used in any given setting, p 33.</p>
Limitations of the study	<p>The study was conducted in a laboratory setting, with class room like materials, however it will be important to replicate these results in in-vivo classroom studies, especially given the lack of consistent findings of a benefit for mastery-approach goals in the academic settings, p 33.</p>
Recommendation of the study	<p>1) Future research is needed to systematically analyse the relationship between different type of measures, because it is critical to determine how achievement goals influence learning and performance. 2) Researchers need to address the achievement goal theory as this is a dominant way to understanding student motivation in an academic setting, pp. 33. 3)More research is necessary to see which goals are more salient in given setting in how they coalesce or interfere with each other, pp. 32.</p>

Title	Mechanisms of Transfer: Modelling Motivational and Self-Regulatory processes that promote transfer of learning.
Reference (Author, year, volume, issue, pages)	Gonzalez, J.A., "Mechanisms of Transfer: Modelling Motivational and Self-Regulatory Processes that Promote Transfer of Learning" (2012). Instructional Design, Development and Evaluation – Dissertations. p 54.
Country where the study was conducted	Syracuse University, New York, p V.
Definition of “motivation to transfer learning”	None described
Study questions	1) Does prior knowledge significantly increase transfer performance? What is the magnitude of the relationship? 2) Does self-regulation significantly increase transfer performance? What is the magnitude of the relationship? 3) Does self-regulation significantly mediate the relationship between prior knowledge? 4) Does self-regulation significantly mediate the relationship between prior knowledge and transfer of learning? What is the magnitude of the relationship? As this study employs SEM to model the relationships among construct, a number of questions about model fit must also be addressed (Bollen & Long, 1993) 5) Does the specified model reasonably fit the data according to fit standards (χ^2 , CFI, RMSEA, AIC, etc.)? 6) Which of the specified models (M1, M2, M3, M4, M5) best fit the data? 7) What modifications, if any, are proposed to improve the model’s data fit? pp. 24. Additional research questions R8: Is the proposed measurement model consistent across the two samples of subjects? R9: Is the proposed structural model consistent across the two samples of subjects? pp 85.
Aim/purpose of the study	The purpose of this dissertation is to identify and validate a model that describes the role motivational constructs play in promoting transfer of learning, p 2.
Objectives of the study/Hypothesis	1) The study seeks to validate the direction of the relationship among the specified variables. This includes validating a measurement model consistent with theoretical specifications as well as providing support for mediating relationship among prior knowledge, motivation, self-regulation and transfer of learning. 2) To identify the magnitude (effect sizes) of the relationships among the outlined variables and transfer of learning. 3) The study seeks to systematically compare a series of competing models to identify the model that best adheres to the sampled data. To accomplish these goals, the study employs a structural equation modelling (SEM) technique, p 83. H1. Motivation—composed of a learner’s goal orientation, learner’s self-efficacy, and learner’s interest—indirectly affects transfer of learning through self-regulated learning. H2. Prior knowledge—composed of strategic and domain knowledge—affects transfer directly and indirectly through self-regulated learning. H3. Self-regulated learning directly affects transfer of learning. H4. Motivation and prior knowledge are significantly correlated. That is, motivated learners are typically learners with high prior knowledge. (Model assumptions) p 22

Gonzales, 2012 continue ...

Methodology and study design	Quantitative, correlational, descriptive and explanatory approach design, p 98.
Related models/ theories of motivation to transfer	Bandura self-efficacy theory. According to Bandura (1993) There is a close link of self-efficacy to self-regulated/ directed learning-motivation and Self-efficacy is a strong predictor of transfer, p 16.
Factors influencing motivation to transfer	Self-efficacy, goal-orientation, and interest prior knowledge, Self-regulation learning - motivation indirectly influence transfer through prior knowledge and self-directed learning (SDL), p 81.
Study population (age/gender and numbers)	Graduated and undergraduate student population at Syracuse University for the 2009-10 and 2010-2011 academic years. This population consists of approximately 20,336 undergraduate students and 5,682 graduate and law students (Syracuse University Office of Institutional Research & Assessment, 2010). The sampling frame for this population included all members of the Syracuse University Facebook and Twitter social networking sites, and individual students targeted through flyers posted in all academic campus buildings, class announcements, and departmental e-mail announcements. A sample size of 90 was included in this study. Average age and gender was not mentioned, p 119.
Data collection and data analysis method	Online survey with a total of 10 sessions were conducted. Sessions took approximately 90 minutes. Upon arriving subjects were asked to complete a consent form and received verbal instructions about the study. Learners were asked to complete the instruments in the following order: a. Prior domain knowledge instrument (Prior knowledge is operationalized in this study as a latent variable made up two indicator variables capturing prior knowledge of strategies and prior knowledge of content).b. Near and far transfer performance tasks.c. Prior strategic knowledge instrument.d. Motivation instrument.e. Self-regulation instrument.The survey was hosted in the Survey Monkey website. All instruments were identified by a unique ID assigned to each participant. No personal or identifying information linking the ID to a participant's identity was collected, pp 105-107. Data were collected over a span of ten months beginning in March 2011 and concluding in January 2012, p 118.As multiple sampling is a matter of empirical reality, steps were taken to ensure the equivalence of the samples. First, descriptive statistics were computed individually for each sample in order to compare across all observed variables, p 123.
Instrument use to measure motivation to transfer	1) Motivation Instrument (Goal orientation, interest, self-efficacy): 2) Prior knowledge instrument (Strategic ad content/domain) (Author generated). 3) Self-regulated learning instrument (Motivational and cognitive), pp 90-92. 4)Transfer of learning tasks (Near and Far Transfer) (author generated), p 98.

Measured Outcome related to motivation to transfer	Multiple sources of evidence point to self-regulation as a mediating factor between motivation and transfer, p 17. Empirical evidence shows a direct relationship between motivation and self-regulated learning as well as a direct relationship between self-regulated learning and transfer, p 17.
Results of the studies	1) A direct and indirect relationship between prior knowledge and transfer. The direct effects show a modest effect of prior knowledge on transfer ($\beta = .22, p < .05$) that is not statistically significant. 2) Given that prior knowledge is likely to be normally distributed, we can assume that students who are two standard deviations above the mean on prior knowledge (the top 5% of the population) would see an increase of .44 standard deviations on a transfer score given average motivation. In such context, the magnitude of the effect is consistent with the literature demonstrating a stronger effect between prior knowledge and transfer, p 133. 3) A slightly stronger relationship as found between motivation and self-regulated learning. 4) Both goal-orientation and interest load weakly on the motivation factor. This suggests that perhaps self-efficacy forms a unique factor different from motivation, p 144. 5) As a learner's levels of motivation increase we can expect increased self-regulated behaviours such as more error checking, questioning materials, and focusing on critical parts of the problem being solved even for learners with average levels of prior knowledge. This in turn increases performance on transfer problems so motivation is effectively able to compensate for lower levels of prior knowledge, p 145. 6) Motivation's effect on transfer and self-regulated learning appears to be moderate, p 152. The conclusion that prior knowledge as operationalised does not directly or indirectly influence transfer of learning, p 145.
Implication for practice	Capture the complexity of the phenomenon, and in turn create more targeted interventions to change it. Educators can design learning interventions that better address the process, derive a set of instructional principles that target motivational factors and mediating causes to improve transfer of learning, p 23.
Limitations of the study	Small sample size as the logistics was impossible to recruit a class large enough to support such a study successfully, p 25. Generalisability of the findings, confirmation bias, difficulty establishing the temporal order of the variables posited in the model which seriously limits causality inferences, p 24. There is an omitted construct or set of constructs that explain transfer- statistically this would explain the large error residuals that cause the chi-square test to be significant deficient existing instruments, p 153. Unfortunately, the logistics of a study of this type proved impossible. Efforts to recruit a class large enough to support such a study were unsuccessful resulting in settling for a more artificial study and to the selection of an arbitrary topic thought to be accessible to the population of interest and of interest to the research, p 152. Deficiency in existing instruments, p 153.

Gonzales, 2012 continue ...

Recommendation of the study	<p>A substantive theory is needed to develop interventions that address underlying processes rather than symptomatic surface features. If we can show that increased interest and self-efficacy are the key to indirectly altering self-regulated behaviours, which in turn increase transfer performance then we would know that we must provide sound instructional strategies and design opportunities for students to engage their interest, build their confidence, and set proper goals for their learning. Of course, these are practices teachers and curriculum designers already follow based on instincts but learning scientists cannot follow instinct alone. A robust theory of transfer, validated under multiple setting would be the first step in providing guidance for instructional scientists to derive and test combinations of instructional strategies and tools to help curriculum designers and teachers create meaningful activities that support and promote successful transfer practices, p 163.1). Future empirical work must use better and more sensitive instrumentation to measure the motivational and psychological processes. 2) Future research need to model, in unison, cognitive and motivational mechanisms to answer questions about the intertwined nature of these mediating processes and the distinctive processes that predict their positive effect on transfer. 3) Finally, the strength of this work should be based on observations derived in natural settings under circumstances that replicate the type of conditions that learners will be exposed to when they are called upon to transfer, p 161. 4) Future research using SIM as a theory validation tool, should employ a more throughout power analysis approach, p 159.</p>
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Title	An investigation of motivation to transfer second language learning
Reference (Author, year, volume, issue, pages)	James, M.A. 2012. <i>Modern language journal</i> , 96 (1), pp 51-60
Country where the study was conducted	Arizona Sate University, America, p 51.
Definition of “motivation to transfer learning”	...transfer motivation is a combination of effort, desire and attitude that influence whether an individual will apply L2 learning from one context in a different context, p 52.
Study questions	1) Are students in an EAP writing course motivated to transfer learning to the intended target context? 2) What factors influence these students` motivation to transfer learning? p 54.
Aim/purpose of the study	The study investigated motivation to transfer second language learning (L2) or L2 transfer motivation, p 51.
Objectives of the study/Hypothesis	Not applicable
Methodology and study design	A qualitative research descriptive study design, involving semi-structured interviews, p 54.
Related models/ theories of motivation to transfer	None described
Factors influencing motivation to transfer	Perception of resource availability; Perceptions of opportunity for transfer; Personal beliefs about transfer; Expected impact of transfer; Perceptions of competence; Attitudes toward learning outcome; Attitudes toward learning and transfer context/task
Study population (age/gender and numbers)	40 students that was enrolled in several section of the university English for academic purposes (EAP)writing course and who were concurrently taking other academic courses in various disciplines. For participating students were given 2% bonus towards their final grades. Average age = 20.95 years, 67.5% = males, 32.55 = females. 77.5% of the participants were in their sophomore year, and their average age was 20.95. The students represented 19 different nationalities, the most common being Saudi Arabian (17.5%), South Korean (17.5%), Chinese (10%), and Taiwanese (10%). The participants' major areas of study represented a wire range of disciplines, the most common being business (35%), engineering (20%), natural sciences (12.5%), and design (10%) p 55.
Data collection and data analysis method	40 students that was enrolled in several section of the university English for academic purposes (EAP) writing course and who were concurrently taking other academic courses in various disciplines. For participating students were given 2% bonus towards their final grades. Average age = 20.95 years, 67.5% = males, 32.55 = females. 77.5% of the participants were in their sophomore year, and their average age was 20.95. The students represented 19 different nationalities, the most common being Saudi Arabian (17.5%), South Korean (17.5%), Chinese (10%), and Taiwanese (10%). The participants' major areas of study represented a wide range of disciplines, the most common being business (35%), engineering (20%), natural sciences (12.5%), and design (10%) p 55.

James, 2012 continue ...

Instrument use to measure motivation to transfer	not applicable
Measured Outcome related to motivation to transfer	1) Assuming that transfer motivation is a combination of desire, favourable attitude and effort, few participants were truly motivated to transfer learning, p 58.
Results of the studies	1) Findings:1) Most of the participants (85%) reported that, to at least some degree (i.e., “yes” and “mixed”), their attitudes toward transfer of learning from EAP108 to other courses were favourable. 2) Over 70% reported that, to at least some degree, they desired transfer of learning from EAP108 to other courses. 3) Less than 30% said they made any kind of conscious effort to transfer learning from EAP108 to their other courses. Looking at all three components together, of the 40 participants, only 7 (17.5%) reported that, to at least some degree, they desired and had a favourable attitude toward and made an effort to transfer learning from EAP108 to their other courses, pp 58-61. 2) Findings Perception of resource availability; Perceptions of opportunity for transfer; Personal beliefs about transfer; Expected impact of transfer; Perceptions of competence; Attitudes toward learning outcome; Attitudes toward learning and transfer context/tasks, p 60-63
Implication for practice	The present study may also be useful in this sense having helped expose to educators the roots of the students motivation to transfer L2 learning p 64. The study also has highlighted a variety factors that appears to influence L2 transfer motivation, p 64.
Limitations of the study	1) Study was conducted in only one L2 education context- uncertain how broadly these findings would apply. 2) L2 transfer motivation was not common and was influenced by a range of factors. Participants was recruited by offering them a bonus grade to participate in the study. Thus, it is possible that students who chose to participate were those who felt most in need of extra grades.3) The sample size was insufficient for an examination of transfer motivation between so groups. Second, the sample size, although the number of participants in this study was appropriate for the research design, the sample was insufficient for an examination of transfer motivation between sub-groups 4). The study relied on self-reports data, such data is difficult to know how close participants description are to their actual experiences. 5) The semi-structured interview perspective is not the only perspective that may be relevant as students may not be able to describe all the reasons that influence their transfer motivation, pp 64-65.
Recommendation of the study	1) Future research should examining students` perceptions of the causes of success and future in L2 learning transfer. 2) Examine L2 transfer motivation in terms of phases e.g. What leads a student to attempt L2 learning transfer in the first place? 3) To examine the link between L2 transfer motivation and performance, p 65. 4) In light of such similarities, research and theory on transfer motivation in other domains may be a useful source of information for future research on L2 transfer motivation, p 63. 4) future research on transfer motivation might include surveys of larger samples of students so comparisons can be made between various relevant sub-groups, p 64. 5) Therefore, future research might build on these findings by adopting other perspectives (e.g. incorporating classroom observation or interviews/surveys of instructors) and investigating factors beyond those cited by student's p 65.

Title	Structural relationships among effective factors on e-learners` motivation for skill transfer.
Reference (Author, year, volume, issue, pages)	Joo, Y.J.; Sunyoung, J. & Son, H.S. 2014. Computers in Human Behaviour, 32, pp 335-342
Country where the study was conducted	S-cyber university of the Republic of Korea, p 338.
Definition of “motivation to transfer learning”	As the trainee's desire to apply the knowledge and skills that they have learned from the training programme, p 336.
Study questions	1) Do e-learners' internal value, learning usefulness and learning environment effect learner satisfaction? 2) Do e-learners' internal value, learner usefulness, learning environment, and learner satisfaction after learner achievement? 3) Do e-learners' internal usefulness, learning environment, leader satisfaction and learner achievement effect the motivation for skill transfer? p 336.
Aim/purpose of the study	To investigate the effect of internal values as a personal characteristics of learners. It includes internal value as a motivational variable learning usefulness as learning content variable, and learning environment as an external environmental variable possible affecting learner achievement, learner satisfaction and motivation to transfer, pp. 336.
Objectives of the study/Hypothesis	1) H1 e-learners' internal value learning usefulness and learning environment affect satisfaction. 2) H2 e-learners' internal value. Learning usefulness , learning environment and satisfaction affect achievement. 3) H3 e-learners' internal value, learning usefulness , learning environment , satisfaction affect the motivation to skill transfer, p 337.
Methodology and study design	Quantitative, descriptive study design, using survey, p 338.
Related models/ theories of motivation to transfer	Adopt an Integrative model and the structural reliable among variables was confirmed, p 336.
Factors influencing motivation to transfer	The factors affecting transfer or motivation to learning transfer can be classified in three main types learner characteristics, training design and external environment. Learning, expected usefulness of training, job attitude, learners satisfaction and transfer environment directly affect motivation to transfer, pp 335-336. E-learners internal value, learning usefulness and learning environment on satisfaction were statistically significant. The effect of internal value on achievement was statistically significant internal value , learning usefulness, satisfaction with learning environment, achievement, internal value, learning usefulness and satisfaction on transfer motivation were significant. Internal value and transfer motivation confirmed in the current study are meaningful, pp 339-341.

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Study population (age/gender and numbers)	<p>599 responses receive of which 15 were incomplete and hence excluded. Therefore data from 584 surveys responses were considered in the final analysis, p 338. 48.5% (283) held a job and studied simultaneously. Teens 0.3%(2) 20s = 26.4%(154), 30s = 31.3%(183), 40s = 32% (187), 50s = 9.6% (56), 60s = 0.3%(2). Participants in their 40s constituted the largest age group students enrolled on two online courses (conflict management and negation and communication skills, pp.338. 584 -survey responses received. Average age range = 19=62-years. 33.9% = Male, 60.1% = Females. 48.5% (283) held a job and studied simultaneously. Teens 0.3%(2) 20s = 26.4%(154), 30s = 31.3%(183), 40s = 32% (187), 50s = 9.6% (56), 60s = 0.3%(2). Participants in their 40s constituted the largest age group. The participants is a homogenous group as they use the same registration system, learning management systems, learning service, grade evaluation method and grading system, p 338.</p>
Data collection and data analysis method	<p>Two week online survey for students enrolled on two online courses (conflict management and negation and communication skills). SPSS and AMOS were used for the data analysis to establish multivariate distribution of the collected data, secondly the correlation to investigate the relevance among the main variables at each learner level was examined, thirdly the structural relationship among the learners` internal values, learning usefulness, learning environment, learners` satisfaction, learners achievements, and motivation to transfer learning was examined. fourth conducted multi-level analysis to examine differences in the path coefficient for structural relationships among internal value learning usefulness, learning environment, satisfaction ,and motivation to transfer learning according to the learners employment status, p 338.</p>
Instrument use to measure motivation to transfer	<p>Researchers created a measuring instrument adapting the previously existing one for a cyber university environment. The motivation to transfer was measured by Noe and Schmidts (1986) instrument develop for the corporate environment and adapted to the cyber university environment. To measure the learners internal value, we adapted the "internal value" part of the Pintrich and DeGroot (1990) measurement instrument. Warr & Bunce (1995) instrument of learning usefulness was adapted. The instrument consist of 8-items. Kim's (2009) instrument to measure learning environment. the measuring instrument consisted of 6-items. Shin's (2003) instrument to measure satisfaction. Midterm and final examination scores to measure achievement was used, p 338. First, we examined average and standard deviation, skewness, and Kurtosis to confirm the normalization of multivariate distribution of the collected data. Second, we examined correlation to investigate the relevance among the main variables at each learner level. We also evaluated the validity of the measurement model through confirmatory factor analysis. Third, we examined the fitness of the measurement model and corrected model for explaining the structural relationships among e-learners` internal value, learning usefulness, learning environment, learner satisfaction, learner achievement, and motivation to skill transfer. Fourth, we conducted multi-level analysis to examine differences in the path coefficient for structural relationships among internal value, learning usefulness, learning environment, satisfaction, achievement, and motivation to transfer learning, according to the learner`s employment status, p 338.</p>

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Measured Outcome related to motivation to transfer	There is a significant relationship between internal values and transfer motivation, p 341.
Results of the studies	The effects of e-learners internal value, learning usefulness, satisfaction with learning environment, achievement internal value, learning usefulness, and satisfaction on transfer motivation were significant. However, the effects of learning environment and achievement on transfer motivation were not significant, which is inconsistent with previous studies, the significant relationships between internal value and transfer motivation confirmed in the current study are meaningful. They suggest that some subjects in this study, who wanted to complete the study for self-participation and pleasure, had high intentionality toward practical application of learned knowledge and skills to a job. No effect of learning environment on transfer motivation has been reported in previous studies, which have agreed that job environment as opposed to learning environment predicts motivation and affects transfer motivation. In contrast, we find motivation stemming from different learning environment in this study. Also, the subjects of this study had various majors, p 341.
Implication for practice	1) Instructors needs to consider learners' focus (job, tasks and goal) in planning classes. 2) to increase the effect of learning usefulness on satisfaction the educators should comprehend these learners' future career needs and connect learning usefulness to the situation by adding practical material e.g. case studies. 3) Unemployed learners needs to be supported to develop specific career goals by systematically provide specifics information about various jobs to give them a sense of the usefulness of the content to transfer motivation, p 341.
Limitations of the study	1) The sample was from students from two courses and there may be some differences between these courses in terms of learning usefulness, learning environment and satisfaction, achievement and transfer motivation. 2) Current data are a little out of date, since they were collected almost five year ago. 3) Perceived usefulness and transfer motivation will differ according to the subjects various jobs and work cultures. 4) To investigate the effects of employment status on learning various learning achievement variables need to be considered, p 341.
Recommendation of the study	1) Data needs to be re-collected from students taking the same course to increase the credibility. 2) The perceived usefulness and transfer motivation will differ according to the learners` various job and work culture, therefore controlling different positions and job environments in future studies. To examine the variables affecting learning achievement variables but also sense of social belonging and sense of psychological happiness, p 341.

Title	Motivation and interlanguage pragmatic in Iranian English Language learners
Reference (Author, year, volume, issue, pages)	Khorshidi, H.R. & Nimchahi, A.B. 2013. English Language Teaching 6 (6), pp 86-96.
Country where the study was conducted	University Neka, Iran, p 86.
Definition of “motivation to transfer learning”	none described
Study questions	1) Does the type of motivation effect the development of language learners` interlanguage pragmatic competence? 2) Does the type of motivation affect negative pragmatic transfer? p 88.
Aim/purpose of the study	The major purpose of this study was to investigate the impact of integrative and instrumental motivation on the development of interlanguage pragmatics in Iranian English language learners, p 86. A secondary goal of this study was to assess the effect of the type of motivation on pragmatic transfer, p 86.
Objectives of the study/Hypothesis	To address the important issue of pragmatic development with regard to the type of motivation of Iranian EFL learners, p 90.
Methodology and study design	Quantitative, descriptive study design. Structured questionnaires, p 86
Related models/ theories of motivation to transfer	None described
Factors influencing motivation to transfer	Research suggest that transfer and motivation seems to be mutually supportive in creating an optimal learning environment. For transfer to take place the learners must be motivated to recognise opportunities for transfer and they need to possess the motivation to take advantage of these opportunities. Learners must perceive what they are learning as relevant and transferable to other situations, they find learning as meaningful, and their motivation to acquire the skill or knowledge will increase, p 87
Study population (age/gender and numbers)	40-integrated and 40-instrumentally motivated learners with highest scores in each group was selected as participants., p89. Age and gender not mentioned.
Data collection and data analysis method	Attitude/Motivation test battery (AMTB) and DCT on pragmatic transfer. Data analysis SPSS software for statistical analysis. Using the independent sample T-test the output consisted pertaining each research question. Researchers own DCT reliability and validity was testified by research at the language institution in Iran. After a week a Discovery completion task (DCT) on pragmatic transfer (researchers own) was administered to students. Two weeks later another DCT develop by Jianda (2006) on inter language pragmatics was given to both groups of participants. The papers was scored by two native speakers and an experience EFL teacher from Iran, pp 89-90. More than 30 researchers at the language institute help the researchers to develop the test. The reliability and validity of the test was testified by the researchers at the language institute of Iran, p 89.

Khorshidi & Nimchahi, 2013 continue ...

Instrument use to measure motivation to transfer	Attitude/Motivation test battery (AMTB) designed by Gardner (1985), p 86. DCT was researcher developed
Measured Outcome related to motivation to transfer	Learners with integrative motivation perform better on the test of pragmatics than instrumentally motivated ones. Since integrative motivated learners are more willing to integrate with the target culture and community, p 90.
Results of the studies	1) The obtained results indicate that learners with integrative motivation performed better on the test of pragmatics than instrumentally motivated ones. This may be due to the profound effects of their intention to integrate in learning a language. Since integrative motivated learners are more willing to integrate with the target culture and community, this may help them make more progress in pragmatic competence, p 90. 2) The study can be concluded that, the learners with integrative motivation performed better than the learners with instrumental motivation. In other words, the learners with integrative motivation showed less negative transfer. Again, the fact behind this can be because of the nature of integration in the target culture and community. Based on the findings, this research study supports the belief that integrative motivation is an asset to learners for successful language learning, p 90-91.
Implication for practice	1) Teachers are responsible for providing the student with the necessary tools to help them make the appropriate pragmatic linguistic and socio-pragmatic decisions in the target language. 2) the study will enable applied linguist curriculum developers and teachers to incorporate effective methods of teaching pragmatics in the classroom base on type of motivation, p 91.
Limitations of the study	None describe
Recommendation of the study	More research studies are required to investigate the relationship between motivation and interlanguage pragmatics to see which type of motivation is more effective in training, more pragmatically proficient L2 learners, p 88. The present researchers would like to suggest that one way in which teachers can help students become pragmatically aware and improve their pragmatic knowledge is by providing them with pragmatic input, p 91.

Title	Learning and motivation to transfer an e-learning programme: impact of trainees` motivation to train personal interaction and satisfaction.
Reference (Author, year, volume, issue, pages)	Peters, S., Barbieri, M., Faulx, D. & Hansez, I. 2012. Innovations in Education and Teaching International. 49 (4), pp 375-387.
Country where the study was conducted	University of Liege, Belgium, p 375.
Definition of “motivation to transfer learning”	Motivation to transfer predicts the effort with which the trainee will try to apply to his job what he learned during training, p 376.
Study questions	non-described
Aim/purpose of the study	To determine the mediating role of satisfaction between motivation to train, and personal interactions on the one hand and learning and motivation to transfer on the other hand, p 375.
Objectives of the study/Hypothesis	To determine in an e-learning programme the impact of learner satisfaction on learning and motivation to transfer. p 375. H1: Motivation to train (intrinsic and extrinsic) impact positively learning. H2 Motivation to train (intrinsic and extrinsic) impacts positively motivation to transfer H3:Lack of personal interaction impacts negatively satisfaction; H4 Difficulty satisfaction (H4a) impacts negatively learning, while enjoyment-satisfaction (H4b) and utility satisfaction (H4c) impact positively learning. H5 Difficultly satisfaction (H5a) impacts negatively motivation to transfer, while enjoyment satisfaction (H5b) and utility satisfaction (H5c) impact positively motivation to transfer.H6 Motivation to train (intrinsic and extrinsic) impacts negatively difficultly satisfaction (H6a) and impacts positively enjoyment satisfaction (H6b) and utility satisfaction (H6c). H7 Learning impacts positively motivation to transfer, pp 376-378.
Methodology and study design	Quantitative, pre- and post-test design using pre and post training questionnaires, pp.379.
Related models/ theories of motivation to transfer	Flawed four-level evaluation model by Holten (1996, p 378). This theoretical model outline three training outcomes: learning, individual performance (or transfer) and organisational results, pp. 378.
Factors influencing motivation to transfer	1) Difficulty-satisfaction impacts negatively on motivation to transfer. 2) Enjoyment-satisfaction impacts positively on motivation to transfer. 3) Utility-satisfaction impacts positively on motivation to transfer, pp 383
Study population (age/gender and numbers)	Master`s and compulsory master`s courses in Psychology. Voluntary 140 completed pre-training questionnaire, 138 complete post-training questionnaire. Complete set of 119 students Average age 25-years (Age varied between 20-60-years). Sample composed of 28 = male and 86 = female, Data was missing for 5-participants, p 379.
Data collection and data analysis method	Pre training,-post training test questionnaires. (Authors own). Preliminary regression analysis. Instrument reliability and validity was done with factor analysis cut-off point .30 and Cronbach`s alpha for inter correlations, all was below .9.Logic regression was used for data analysis. Structural Equation model was used to develop the final model p 380.

Peters et al., 2012 continue ...

Instrument use to measure motivation to transfer	Authors created own measuring instrument. Motivation to transfer was measured with items inspired by Delobbe (2007) and Warr et al. (1999) and motivation to transfer was regressed on motivation to train, satisfaction and learning, p .380.
Measured Outcome related to motivation to transfer	1) Extrinsic motivation does not predicts utility satisfaction or motivation to transfer. 2) Enjoyment satisfaction does not influence motivation to transfer. 3) motivation to transfer is not predicted by motivation to train (intrinsic or extrinsic) nor is it predicted by learning. This variable is influenced only by difficult- and utility satisfaction, pp 383-384.
Results of the studies	1) Extrinsic motivation does not predict utility-satisfaction or motivation to transfer. 2) Only intrinsic motivation has a single influence on enjoyment-satisfaction. 3) Lack of personal interaction increase perceived training difficulties and less enjoyment. 4) Enjoyment-satisfaction does not influence motivation to transfer. 5) No significant relationship between learning and motivation to transfer learning, 6) Enjoyment satisfaction predicts the learning outcome 7) Motivation to transfer is predicted by a utility type reaction and negatively by the perception of difficulty, p 383. The tool used for data collection was acceptable, p .380.
Implication for practice	1)the enjoyment factor that directly impact positively on satisfaction should encourage creators of training programmes to design training programmes that focus on the enjoyment dimension context. 2) Attention must be paid to opportunities for interaction as lack of personal interaction effects perceived difficulty and enjoyment and has an indirectly impact on motivation to transfer, p 384.
Limitations of the study	The study use the outcome "motivation to transfer" as an indicator measured at the end of training to predict transfer, p 384.
Recommendation of the study	In future research t, one further step needs to be taken, i.e. the measurement of effective transfer, p 384.

Title	Understanding by design (UbD) in EFL teaching: The investigation of students' foreign language learning motivation and views
Reference (Author, year, volume, issue, pages)	Yurtseven,N. & Altun, S. 2016. <i>Journal of Education and Training Studies</i> , (4) 3, pp 51-62
Country where the study was conducted	Yildiz Technical University, Istanbul, Turkey, p 53.
Definition of "motivation to transfer learning"	None describe
Study questions	1) Is there a significant difference between instrumental motivation post-test scores in favour of the treatment group according to the levels of students? 2) Is there a significant difference between integrative motivation post-test scores in favour of the treatment group according to the levels of the students? 3) What are the views of students about UbD implementation? p 52.
Aim/purpose of the study	The purpose of this study is to investigate students` foreign language learning motivation and views about integration of Understanding by design (UbD) into their lessons, p 52.
Objectives of the study/Hypothesis	The study investigates what contributions the implementation of UbD had on students` foreign language learning motivation within the framework of an experiment and action plan, p 52.
Methodology and study design	Mixed Method Quantitative part pre-test post-test experimental, study design and qualitative part action research, Focus groups, p 52-53.
Related models/ theories of motivation to transfer	None described.
Factors influencing motivation to transfer	Instruction by design had a positive influence on students foreign language learning motivation - diversity in educational activities increased student motivation, p 59.
Study population (age/gender and numbers)	10-instructors and 436 students. 225 = treatment group and 211 = control group. Age and gender was not mentioned. Through the action research the 10-instructors who were trained regarding UbD was divided into four groups, each of which designed three different action plans to implement in class. The students attended three different levels: A level = students starting preparation class with the highest placement score, B level = medium level scores and C level had the lowest placement scores, p 53.

Yurtseven & Altun, 2016 continue ...

<p>Data collection and data analysis method</p>	<p>The quantitative data collection instrument was the, Motivation/ attitude Scale (MAS) which was develop by Dornyei (1998) and adapted to Turkish. It measure two sub-dimensions namely, instrumental- and integrative motivation. It is a 5-point Likert scale consisting of 30 items. The qualitative data collection was focus group interviews to find out students view about UbD implementation. Two focus group interviews were conducted with the same group a week after the other. Group interview were carried out to find out students views about UbD implementation. Data Analysis for the quantitative data of the study where descriptive statistics and independent sample t-test in order to determine the significance of foreign language learning motivation between the treatment and control groups. The qualitative data of the study where analysed and transcribed via content analysis to define data, facts and form patterns, pp 53-54. Through the action research the 10-instructors who were trained regarding UbD was divided into four groups, each of which designed three different action plans to implement in class, p 53. For the integrative motivation sub-dimension, the Cronbach's Alpha coefficient was .92 while it was .89 for the instrumental motivation sub-dimension, which meant that the scale was reliable, p 53. Qualitative :Initially, the transcript forms were created for the collected qualitative data. Three experts and focus group interview participants confirmed the accuracy of the forms. Besides, focus group interviews were repeated twice, to check whether the participants' answers were the same as the questions asked. In addition, three different experts examined the transcripts carefully to reach at codes, categories, and themes. Although some discrepancies occurred, experts and the researcher came together and reached a consensus about the last form of categories and themes. After the consensus, the participants also confirmed those codes, categories, and themes, p 53.</p>
<p>Instrument use to measure motivation to transfer</p>	<p>Motivation/attitude scale (MAS) develops by Dornyei (1998) as adapted to Turkish by Mendi (2009). MAS is a scale that has two sub-dimensions namely instrumental and integrative motivation. It is a 5-point Likert scale consisting of 30 items, p 53. For the focus groups three different experts examine the transcripts carefully to reach at codes, categories and themes, p 53.</p>
<p>Measured Outcome related to motivation to transfer</p>	<p>Two main themes emerged when the data gathering from the focus group interview were analysed. These themes are motivation and knowledge transfer. When the motivation theme is examined it can be concluded that the theme is made up of three categories, namely fun, attractiveness and clarity, pp. 56-57. Another theme emerged after the analysis is knowledge transfer. Under this theme, there are two main categories namely real life and speaking, pp58.</p>

Yurtseven & Altun, 2016 continu e...

Results of the studies	The integration of UbD in EFL teaching requires deep internalisation of the authentic and original use of the language rather than word for word translation or text analysis p 60. The study findings showed that used audio video materials influenced students out of motivation and achievement in a positive way p 59. Two main themes emerged when the data gathering from the focus group interview were analysed. These themes are motivation and knowledge transfer. When the motivation theme is examined it can be concluded that the theme is made up of three categories, namely fun, attractiveness and clarity, pp 56-57. Another theme emerged after the analysis is knowledge transfer. Under this theme, there are two main categories namely real life and speaking, p 58. The theme knowledge was directly related to real life, pp. 60. It was concluded that UbD could be an effective tool to raise student academic achievement, p 60.
Implication for practice	1) Learning a foreign language is affected by a wide range of variables and motivation is the leading one. It is therefore important that any activity used in a learning environment should have qualities that will increase student motivation. 2) UbD could be an effective tool to raise students` academic achievements, p 60.
Limitations of the study	None described
Recommendation of the study	1) Contributions of UbD to the teachers professional development can be research. 2) UbD`s effect on school culture can be researched. 3) A longitudinal study can be carried out to examine the participants` grades in vocational English lessons at undergraduate level. 4) Future studies can be carried out for different subject areas in English first language teaching. 5)Future research can focus more on the aspect of authentic usage of foreign language. 6) Further studies can be conducted within a wider period and population. p 60

Addendum D: Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	Title page
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	Page vii
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	Page 1
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	Page 8
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	Page 10
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	Page 9
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	Page 23-30
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Addendum F
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Page 30-34
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	Page 38-39
Data items	11	List and define all variables for which data were	Page 31

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
		sought and any assumptions and simplifications made.	
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	Page 71
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Page 38-77
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	Page 31-33
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Page 69-70
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	Page 71
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	Page 42-68
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Page 80-86
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	Page 68-76
Limitations	20	Discuss the limitations of the scoping review process.	Page 76-77
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	Page 77
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	N/A

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: [10.7326/M18-0850](https://doi.org/10.7326/M18-0850).

Addendum E: Turn-it-in plagiarism report

Turnitin Originality Report

MOTIVATION OF STUDENTS IN HIGHER EDUCATION TO TRANSFER LEARNING: A
SCOPING REVIEW by Doreen Van Rooyen



From Dissertation/Thesis submission (NVRT8900 MAIN On eng _7970_1)

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Addendum F: Supporting letter for high Turn-it-in plagiarism report



28 January 2021

RE: TURNIT IN REPORT: DOREEN BREDEKAMP

We, the undersigned, have acknowledged the turn-it in report which has reported a relatively high similarity index in this research report. All efforts have been made to reduce plagiarism and enhance the academic integrity of the report and the entire research process as expected by the Rules and Regulations of the University of the Free State and standard academic practice.

The fact that the candidate had to directly extract verbatim quotes from the included literature, true to the nature of scoping review methodology, would justify the rather high similarity index. These quotes should not be paraphrased as it will influence the rigour of the study negatively.

Regards

Doreen Bredenkamp

A handwritten signature in black ink, appearing to be 'DB', is shown.

Prof Yvonne Botma

A handwritten signature in black ink, appearing to be 'Y Botma', is shown on a light blue background.

Dr Champion N. Nyoni

A handwritten signature in black ink, appearing to be 'Nyoni', is shown on a light grey background.

Addendum G: Full electronic search strategy of four (4) databases

Database/ platform	MEDLINE (with full-text)
Date coverage	1986 – March 2020
Library	University of the Free State
Date of Search	13 March 2020
Limits	pre-, primary or high school education Literature where English versions could not be accessed or retrieved Literature published before the 01st of January 1986 or after the 31st of July 2020.
Boolean string	motivat* and (transfer* n2 (train* or learn*)) and (classroom* or student* or undergrad* or "higher educat*") and (motivat* n3 transfer*)
Number of hits	N = 4

Database/ platform	ERIC
Date coverage	1986 – March 2020
Library	University of the Free State
Date of Search	13 March 2020
Limits	pre-, primary or high school education Literature where English versions could not be accessed or retrieved Literature published before the 01st of January 1986 or after the 31st of July 2020.
Boolean string	motivat* and (transfer* n2 (train* or learn*)) and (classroom* or student* or undergrad* or "higher educat*") and (motivat* n3 transfer*)
Number of hits	N = 42

Database/ platform	APA PsycInfo
Date coverage	1986 – March 2020
Library	University of the Free State
Date of Search	13 March 2020
Limits	pre-, primary or high school education Literature where English versions could not be accessed or retrieved Literature published before the 01st of January 1986 or after the 31st of July 2020.
Boolean string	motivat* and (transfer* n2 (train* or learn*)) and (classroom* or student* or undergrad* or "higher educat*") and (motivat* n3 transfer*)
Number of hits	N = 41

Database/ platform	CINAHL (with full-text)
Date coverage	1986 – March 2020
Library	University of the Free State
Date of Search	13 March 2020
Limits	pre-, primary or high school education Literature where English versions could not be accessed or retrieved Literature published before the 01st of January 1986 or after the 31st of July 2020.
Boolean string	motivat* and (transfer* n2 (train* or learn*)) and (classroom* or student* or undergrad* or "higher educat*") and (motivat* n3 transfer*)
Number of hits	N = 3

Addendum H: Declaration of Editing

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26 January 2021

TO WHOM IT MAY CONCERN

Herewith I, Cornelia Geldenhuys (ID 521114 0083 088) declare that I am a qualified, accredited language practitioner and that I have edited the following master's dissertation research:

MOTIVATION OF STUDENTS IN HIGHER EDUCATION TO TRANSFER LEARNING: A SCOPING REVIEW

Doreen van Rooyen
(1990101816)

All changes were indicated by track changes and comments for the author to verify, clarify aspects that are unclear and finalise. The editor takes no responsibility in the instance of this not being done. The document remains the final responsibility of the student.



.....
C GELDENHUYS
MA (LIN – *cum laude*), MA (Mus), HED, Postgraduate Dipl, Library Science, UTLM

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