Empirical research on motivation in adult education and learning: A scoping review

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Abstract

This scoping review maps empirical research on motivation in adult education and learning, analysing 95 studies published between 1971 and 2024. Drawing on data from Web of Science and Scopus databases, it delineates key thematic areas, geographical patterns, and methodological orientations. The findings highlight a marked increase in publications since 2016, with a pronounced focus on specific learner populations – including non-traditional students, low-skilled adults, and second-chance learners in adult basic education. Research activity is heavily concentrated in European and Anglophone contexts, pointing to the need for broader cultural representation. While quantitative methods dominate, many studies employ instruments lacking validation. Notable gaps emerge in the use of mixed-methods and longitudinal designs. Overall, the review calls for more inclusive and methodologically robust inquiry to deepen our understanding of adult learner motivation across diverse educational landscapes.

Keywords: motivation, adult education and learning, lifelong learning, scoping review, methodology

Introduction

Rapid technological advancements, which drive disruptive changes in the labour market, generate increasing pressure for individuals to acquire new knowledge and skills to remain adaptable (Draghi, 2024; Şentürk & Duran, 2020). In this context, *adult education and learning* continue to be key tools for facilitating this resilience, playing a significant

role in reducing skill mismatches and fostering alignment between workforce competencies and evolving labour market demands (OECD, 2023, 2024), as well as enhancing the well-being and health outcomes of adults (Schuller & Desjardins, 2010).

For the purposes of this scoping review, adult education and learning is understood as encompassing a broad continuum of structured and unstructured learning activities undertaken by individuals after the completion of their initial formal education. Drawing on international frameworks (UNESCO, 2016; OECD, 2024), this includes formal, non-formal education, and informal learning that serves a variety of purposes – from enhancing employability through reskilling and upskilling to supporting personal development, civic engagement and lifelong curiosity.

Given the multifaceted nature of adult education and learning, it is essential to understand the factors that influence adults' engagement in learning. Among these, *motivation* is one of the key prerequisites for adult education and learning (Boeren, 2017; Coşkun & Demirel, 2010; Yamashita et al., 2019), which affects not only participation in adult education and learning but also the outcomes of learning process itself (Bukhori et al., 2019; Pont, 2004; Wlodkowski, 2008). Conversely, the lack of motivation for adult education and learning is sometimes considered one of the reasons why adults do not participate in this activity (Kalenda & Kočvarová, 2022). Similarly, a lower level of motivation towards specific learning content is considered to be a negative factor in the acquisition of the intended knowledge and skills (Rotgans & Schmidt, 2012).

Despite the prevalence of the term, motivation remains a concept that is not universally or firmly defined (Cook & Artino, 2016; Lazowski & Hulleman, 2016; Wlodkowski & Ginsberg, 2017). This construct is best understood as a hypothetical psychological state used to explain the initiation, maintenance, or cessation of action (Macey & Schneider, 2008; Miguel, 2013; Pincus, 2020), which is a general understanding of motivation adopted in this scoping review. Rather than being directly observable, we agree with other authors (e.g., Macey & Schneider, 2008) that motivation is constructed through theoretical frameworks and operationalised differently depending on the researchers' theoretical perspectives. In the context of adult education and learning, it is typically an individual's intention, desire, or reason for participating in learning (Aljohani & Alajlan, 2020; Knowles et al., 2012).

Although the significance of motivation in adult education and learning has long been acknowledged and widely discussed (Kondrup, 2015), some scholars (e.g., Boeren et al., 2012a; Boeren et al., 2012b; Boeren, 2016; Kalenda & Kočvarová, 2022) argue that the topic still lacks sufficient empirical attention. Moreover, it is noteworthy that motivation in adult education and learning has largely been overlooked in the recent comprehensive disciplinary monographs (e.g., Evans et al., 2023; Milana et al., 2018) and systematic mappings of research in adult education and learning (e.g., Fejes & Nylander, 2019; Holford et al., 2022). This absence underscores a gap in the literature, suggesting a need for a more focused and systematic assessment of research on motivation within this field.

In response to this identified gap, the present study aims to provide a comprehensive overview of empirical research on motivation in adult education and learning. This is achieved through a scoping review, utilising two leading scientific databases – Web of Science and Scopus – as primary sources of information. The study spans a temporal scope from the first indexed publication in 1971 to 2024. The starting point was deliberately selected based on an initial scoping phase, which identified 1971 as the publication year of the earliest empirical study meeting the inclusion criteria. Based on such delineation, this study not only provides a map of empirical research on this research

topic in the field of adult education and learning, but also helps to indicate where further research should be directed.

The following text begins by situating the mapping of empirical research on motivation in adult education and learning within the context of current meta-theoretical research on constructing the 'territory' (Rubenson, 1982) of adult education and learning. This approach enables the formulation of four research questions (RQ1-RQ4), which guide the analysis by focusing on specific aspects of empirical research on this topic. Subsequently, the methodology for conducting a scoping literature review is outlined. The results are then presented and organised according to the four research questions. The study concludes with a discussion of findings, outlines key limitations, and offers recommendations for advancing empirical research.

Mapping the field and empirical research on motivation

This study is part of a broader effort to map the field of adult education and learning, contributing to a systematic understanding of its key themes, trends, and research priorities (see, e.g., Boeren, 2018, 2019; Fejes & Nylander, 2014, 2015, 2019; Nylander et al., 2022; Nylander & Fejes, 2023; Rubenson & Elfert, 2015, 2019; Taylor, 2001). In particular, it shares with previous works an interest in analysing: (1) *research topics* (what is the subject of the research?), (2) the *geographical context* of the research (where is the research conducted?) and (3) the *methodological design* (how is the research conducted?). From a particular perspective, the analysis presented below can be seen as a narrowing of this research agenda to a much smaller and less general part of the field, namely the topic of motivation.

Research topics

In a recently published analysis of themes from six flagship journals in the field of adult education and learning from 1950 to 2020, or a narrower analysis since 1982, Nylander and Fejes (2023; see also Nylander et al., 2022) identified fifteen key areas that represent the most frequent foci of thematic interest for researchers. One such topic is 'research on motivation, participation, and attitudes among employees in different organizations' (Nylander & Fejes, 2023, p. 129), which includes motivation as a sub-theme. While this is considered a relatively minor area within the broader field of adult education and learning, Nylander and Fejes (2023) have demonstrated that interest in this sub-theme has been steadily growing since the early 1990s.

However, it remains unclear from their findings whether the conclusions about this trend apply uniformly across all sub-topics within this thematic group (i.e., attitudes, participation, motivation, etc.; see above), as identified by their large-scale text-mining analysis, or if they pertain specifically to motivation. Additionally, the aforementioned analysis does not sufficiently delve into the empirical sub-themes being investigated under the umbrella of motivation in adult education and learning. As a result, it does not offer enough 'zoom-in' needed to explore the nuanced aspects of motivation within this field.

This observation also applies to other papers addressing motivation in adult education and learning. Such studies are often more inclined to focus on reviewing theories or examining selected canonised studies, rather than conducting a systematic mapping of empirical research (see, e.g., Boeren, 2016; Gopalan et al., 2017; Ilie, 2019; Kondrup, 2015).

For these reasons, we are focusing on two complementary research questions:

- **RQ1**: *How has interest in the empirical investigation of motivation in adult education and learning evolved over time?*
- **RQ2**: *What specific topics have been explored in the area of motivation in adult education and learning?*

Geographical context

Another significant dimension considered when mapping the field of adult education and learning is the geographical context, which is frequently associated with the specific location where the research is conducted – most commonly with the nation-state. In this respect, it is typical that research in adult education and learning focuses predominantly on Anglophone countries such as the United States, the United Kingdom or Australia (Fejes & Nylander, 2014, 2015, 2019; Rubenson & Elfert, 2015, 2019; Taylor, 2001). However, this conclusion could be influenced by the sampling of previous studies that mainly focus on research published in a small set of disciplinary journals, primarily from Anglophone countries, and featuring studies published in English. Such a focus risks introducing systematics epistemological biases, as the research tends to concentrate on individuals in developed (post-)industrial democracies, particularly those with higher levels of education and socioeconomic status (Bourdieu & Wacquant, 1992).

Due to the absence of findings on the geographical distribution of research into motivation in adult education and learning, we aim to address this gap. In contrast to previous approaches in the field, we do not confine our scope to studies published solely in English. By including research in other languages, we seek to develop a more comprehensive understanding of where motivation in adult education and learning is being studied. This consideration leads us to formulate our third research question:

- **RQ3**: *In which countries has the topic of motivation in adult education and learning been the subject of empirical investigation?*

Methodological design

Moreover, the researchers also discuss the methodological direction of research in the field of adult education and learning. After a phase of early inspiration by quantitative methodology, symptomatic of the 1950s and 1960s (Rubenson, 1982), the 1990s brought a phase of renewed interest in qualitative-oriented research and an equalisation of the share of both methodologies during the 1990s (Taylor, 2001). The methodological developments of the last two decades are characterised by an overwhelming turn to qualitative research design, which currently dominates empirical research in the field (e.g., Boeren, 2018, 2019; Rubenson & Elfert, 2015, 2019).

With this in mind, it is noteworthy that the theme of 'research on motivation, participation and attitudes among employees in different organisations', as identified by Nylander and Fejes (2023, p. 129), systematically uses quantitative research methods. However, as with this broader thematic focus (see above), it remains unclear whether such a conclusion applies equally to empirical studies investigating motivation in adult education and learning only. Moreover, there is a notable lack of detailed knowledge about the specific research procedures employed in studies on motivation in adult education and learning. Key aspects such as sample sizes, methods of data collection, and

research instruments remain insufficiently explored. This gap limits our ability to assess how advanced research in this sub-field truly is and whether it continues to be a methodological underdog (Boeren, 2018), as is often the case with many quantitatively oriented studies in the broader field of adult education and learning.

To address this gap, we have formulated our final research question:

- **RQ4:** *What methodological designs are employed in empirical studies focusing on motivation in adult education and learning?*
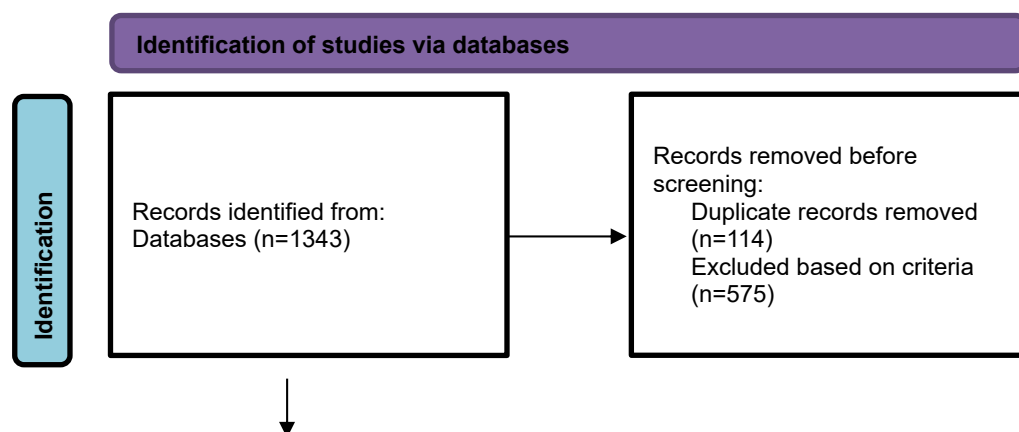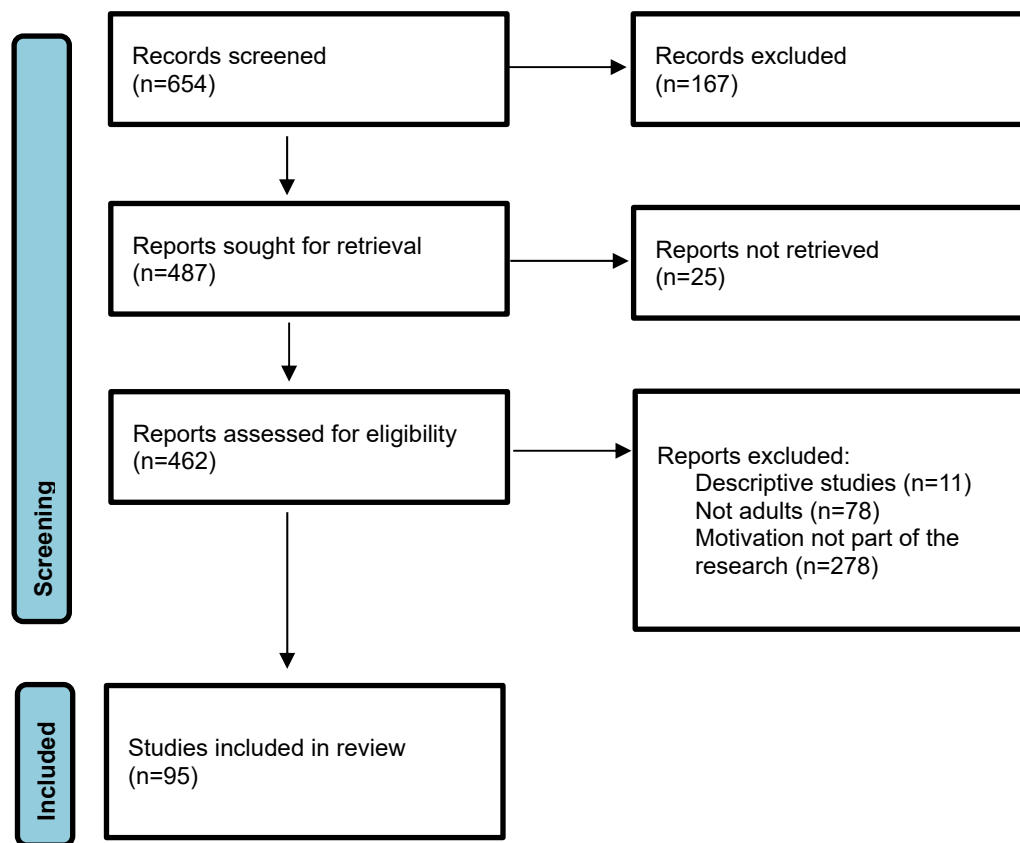
Methods

Scoping review

In order to systematically map and explore the scope and characteristics of empirical research on motivation in adult education and learning, we employed a scoping review methodology. Scoping reviews have become increasingly popular in recent years, being employed effectively to review research in higher education and related fields (Li et al., 2021). This approach is particularly well-suited to identifying the scope, nature, and extent of evidence in emerging or complex research fields, as well as to clarifying key concepts and knowledge gaps (Arksey & O'Malley, 2005; Levac et al., 2010). Unlike systematic reviews, which aim to narrowly synthesise results, scoping reviews seek to map how a topic has been approached across studies, disciplines and contexts. This makes it especially relevant for our research subject, which spans multiple theoretical and methodological traditions.

The review process adhered to the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines, which aim to ensure the transparent and comprehensive reporting of scoping reviews (Tricco et al., 2018; Page et al., 2021). These guidelines provide a structured framework for documenting the identification, screening, eligibility and inclusion of studies, thereby enhancing transparency and reproducibility. When designing the review, we were guided by Arksey and O'Malley's (2005). Figure 1 below illustrates the procedure used for study selection and exclusion, presenting the PRISMA-ScR flow diagram adapted to the scoping review process.

Figure 1. PRISMA-ScR model of the study selection procedure. Source: Authors' own figure

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┌──────────────────┐        ┌──────────────────┐
│ Records screened │───────▶│ Records excluded │
│ (n=654)          │        │ (n=167)          │
└──────────────────┘        └──────────────────┘
         │
         ▼
┌──────────────────┐        ┌──────────────────┐
│ Reports sought   │───────▶│ Reports not      │
│ for retrieval    │        │ retrieved        │
│ (n=487)          │        │ (n=25)           │
└──────────────────┘        └──────────────────┘
         │
         ▼
┌──────────────────┐        ┌──────────────────────────────┐
│ Reports assessed │───────▶│ Reports excluded:            │
│ for eligibility  │        │   Descriptive studies (n=11) │
│ (n=462)          │        │   Not adults (n=78)          │
└──────────────────┘        │   Motivation not part of the │
         │                  │   research (n=278)           │
         ▼                  └──────────────────────────────┘
┌──────────────────┐
│ Studies included │
│ in review        │
│ (n=95)           │
└──────────────────┘
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Screening (sidebar)
Included (sidebar)

Identification, screening, and study inclusion

The identification of relevant literature was conducted in two phases. The initial search, conducted in January 2024, used two major multidisciplinary databases: Web of Science and Scopus. These platforms were chosen because of their extensive coverage of peer-reviewed academic journals, and because of their well-established role in facilitating transparent and reproducible literature searches in evidence mapping studies (Gusenbauer & Haddaway, 2021; Martín-Martín et al., 2018). Subsequently, the search strategy was refined and expanded using additional keywords to ensure broader coverage of relevant studies. The second phase of the search was conducted in March 2025. This extended search included records published up to 2024, which were then applied retrospectively to the original databases.

The search strategy was built around the keyword *motivation*, combined with one of the following terms: *adult education*, *adult learning*, or *continuous education*. This combination was chosen to capture a broad yet thematically coherent body of literature focused on motivational aspects in adult education and learning contexts. The intention was to include diverse conceptualisations of adult education and learning while maintaining a clear thematic link to motivation. The search terms were simultaneously applied to titles, abstracts, and keywords in both databases to ensure the relevance and consistency of retrieved studies.

A total of 1 343 studies were identified and screened based on the following inclusion criteria: (1) publication in a peer-reviewed journal with full-text availability (publication type); (2) classification in the field of Psychology or Social Sciences, where the subcategory Education is most frequently assigned (field of study); (3) publication in any language (language); and (4) empirical research design. Studies that presented purely

theoretical discussions of motivation without empirical data were excluded. As a result of this process, 654 studies were identified.

Contrary to previous studies in the field (e.g., Fejes & Nylander, 2014; Nylander et al., 2022; Rubenson & Elfert, 2015; Taylor, 2001), our criteria differ, particularly regarding the *field of study* and *language*. Most prior research focused on systematically mapping studies within a narrow range of journals (typically five to six) specifically related to adult education and learning. In contrast, we adopted much broader inclusion criteria, allowing us to identify empirical research on motivation beyond this limited subset of journals. Furthermore, we included studies not published in English to broaden our scope, as the previously identified anglophone orientation might stem from an overly narrow focus on a limited set of journals published in English by anglophone publishing houses. This inclusion strategy has a direct connection to our RQ2 and RQ3.

The initial screening of the 654 retrieved records was based solely on the content of their abstracts. Each abstract was evaluated for its relevance to the topic and for evidence of an empirical investigation of motivation in the context of adult education and learning. Studies were excluded at this stage only if the abstract clearly indicated that the paper did not involve empirical research on motivation or was unrelated to adult learning contexts. In cases where the abstract was ambiguous or lacked sufficient detail to determine its empirical focus, the full text was obtained and reviewed to ensure accurate inclusion or exclusion. This screening process let to the exclusion of 167 studies.

The remaining 487 studies underwent a comprehensive full-text review. This phase involved a secondary assessment of relevance, with prior attention given to each study's empirical dimension. To enable their assessment, full texts of non-English articles (n=13) were translated into English using large language models.

Papers were excluded if they were purely theoretical, involved respondents under the age of 16, or referred to motivation only within the theoretical framework without incorporating it into the empirical investigation – this latter criterion accounted for the majority of exclusions. The minimum age threshold for participants in our review was set at 16, aligning with the standard used by the PIAAC survey (OECD, 2024), which includes individuals aged 16 and above. This age represents the lowest reasonable limit.

Furthermore, to ensure the reliability of the inclusion process, the screening was conducted jointly by two reviewers. Any discrepancies or borderline cases were discussed and resolved through consensus. Ultimately, 95 studies were selected for content analysis, guided by the four research questions (RQ1-RQ4) (see also Fig. 1 above). Although our analysis was not confined to English-language texts, 82 of the 95 studies examined were published in English. Spanish appeared in six studies, while Hungarian and German were each represented in two. Czech, French, and Serbian featured in one study each, underscoring the relatively limited linguistic diversity within the published literature.

The content analysis was conducted by two researchers. The categorisation of the included studies was developed inductively during the coding process, with the recurring thematic foci serving as the basis for identifying categories related to RQ2 and RQ4. The initial phase involved a comprehensive review of all articles, followed by the refinement of a preliminary set of categories through the comparison and grouping of thematically similar topics. When assigning individual studies to specific categories, particular attention was paid to the primary analytical focus of each article. In cases where a study addressed multiple overlapping domains, classification was determined by the dominant research objective, as articulated through the study's research questions, stated aims, or analytical framework.

Results

This section presents the results of the analysis of the selected studies, organised according to the research questions. Particular attention is given to the evolution of research on the topic, the identification of key areas, the geographical distribution of studies, and methodological approach adopted. A comprehensive overview and classification of the individual studies are provided in the Appendices (Tables 4-7).

RQ1: How has interest in the empirical investigation of motivation in adult education and learning evolved over time?

The first key area of analysis focused on the evolution of empirical research on motivation in adult education and learning. The earliest study included in this scoping review was published in 1971 (Boshier, 1971). This publication was the first empirical study identified through our search strategy that met all inclusion criteria. As a result, the review covers the period from 1971 to 2024 (see Fig. 2).

Figure 2. Trends in the empirical research on motivation in adult education and learning since 1971. Source: Authors' own figure
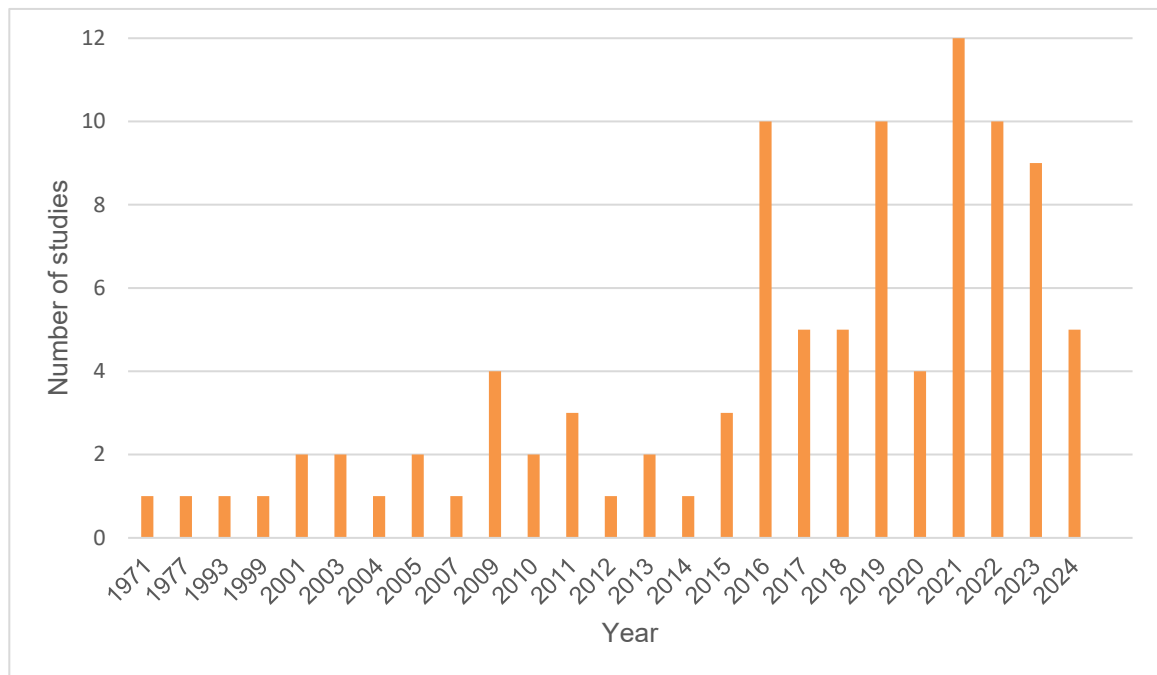
The temporal distribution of studies reveals that empirical research on this topic remained sporadic until 2015, with typically no more than one or two studies published per year. A more noticeable and sustained increase began around 2016, with distinct peaks in 2016, 2019, 2021, and 2022. Notably, 2021 emerged as the most prolific, with a total of 12 studies included. Over 85% of the studies were published within the past two decades, indicating a significant rise in scholarly interest in recent years.

RQ2: What specific topics have been explored in the area of motivation in adult education and learning?

The second key area of analysis examined the themes explored by researchers. The content analysis revealed that studies on motivation exhibit considerable thematic diversity and a marked degree of fragmentation (see Table 1). Within this framework, five primary thematic categories emerged: (1) motivation of educators, (2) motivation as an aspect of work motivation, (3) motivation in relation to self-regulation and learning strategies, (4) motivation within national populations, and (5) motivation among specific target groups in adult education and learning.

Table 1. Overview of research topics. Source: Authors' own table

General Topic	Subtopic	Number of studies (n)
Motivation of educators		5
Motivation as an aspect of work motivation		5
Motivation in relation to self-regulation and learning strategies		11
Motivation within national populations		12
Motivation among specific target groups in adult education and learning	Course participants	21
	Non-traditional students	13
	Second-chance learners	10
	Low-skilled adults	7
	Elderly adults	6
	Migrants	3
	Prisoners	2

In the thematic categories, *the motivation among specific target groups in adult education and learning* was identified as a particularly prominent area (n=62), with further subdivision into several subtopics (see also Table 1). Among these subtopics, a notable concentration of research focused on the motivation of course participants (n=21), specifically, learners in longer education courses regarding the acquisition of language, digital, or entrepreneurial skills. For instance, Gondim and Mutti (2011) investigated the impact of affective experiences on the motivation of adult learners in a training course aimed at developing entrepreneurial competencies.

   Other significantly represented subgroups included *non-traditional students* (n=13), who returned to secondary or higher education after a prolonged absence, *second-chance learners* (n=10), who resumed primary education to complete their basic education, and *low-skilled adults* (n=7), defined by low levels of formal education and basic skills. For instance, Justice and Dornan's (2001) study investigated metacognitive differences, including motivation to learn, between traditional college students (18-23-year-olds) and non-traditional students (24-64-year-olds). Other specific target groups – thought less frequently addressed – included *elderly adults* (n=6), *migrants* (n=3), and *prisoners* (n=2).

   In addition to studies focusing on specific target groups, several papers explored motivation in relation to broader cognitive and metacognitive constructs – like self-

regulation. *Motivation in relation to self-regulation and learning strategies* featured in 11 studies, often examining how adult learners manage their engagement, time, and learning environments – particularly in online and blended learning contexts. For example, Vanslambrouck et al. (2019) identified key motivational self-regulation strategies employed by adult learners in blended settings, including goal setting, time management, and proactive help-seeking.

Moreover, another prominent thematic category was *motivation within national populations* (n=12; see Table 1). The present studies specifically examined features of motivation for adult education and learning at the population level, either within individual countries or across multiple national contexts. For instance, Boeren and Holford's (2016) study examined motivation across a total of 12 European countries, utilising a quota sample of participants in formal adult education. The study revealed that motivation for participation in formal education is influenced not only by personal factors, such as age and gender, but also by broader national context.

Five studies investigated *motivation as an aspect of work motivation,* primarily addressing the motivational drivers of professionals working in the adult education sector. For example, Chen and Aryadoust (2023) developed and validated a scale to assess work motivation, including lifelong learning, within Singapore's adult education sector, offering insights into the specific factors that influence professionals in this field. In contrast, the final category, *motivation of educators* (n=5), focused directly on educators' motivation for the provision of learning.

RQ3: In which countries has the topic of motivation in adult education and learning been the subject of empirical investigation?

Within the geographical context, the analysis explored the regional distribution of empirical studies on motivation in adult education and learning (see Fig. 3). A detailed breakdown by individual countries is provided in Table 5 of the Appendices. The findings indicate a strong concentration of research in North America, particularly in the United States (n=22) and Canada (n=4). Nonetheless, Europe emerged as the principal geographical hub, accounting for the majority of studies. Research activity is especially prominent across Western and Southern Europe, with substantial contributions also from Central Europe. The most frequently represented European countries include Spain (n=8), Germany (n=7), Czechia (n=6), the UK (n=5), and Greece (n=5). By contrast, significantly lower levels of research were identified in Asia, Africa, South America, and Oceania.

Figure 3. Overview of the countries where the research was conducted. Source: Authors' own figure
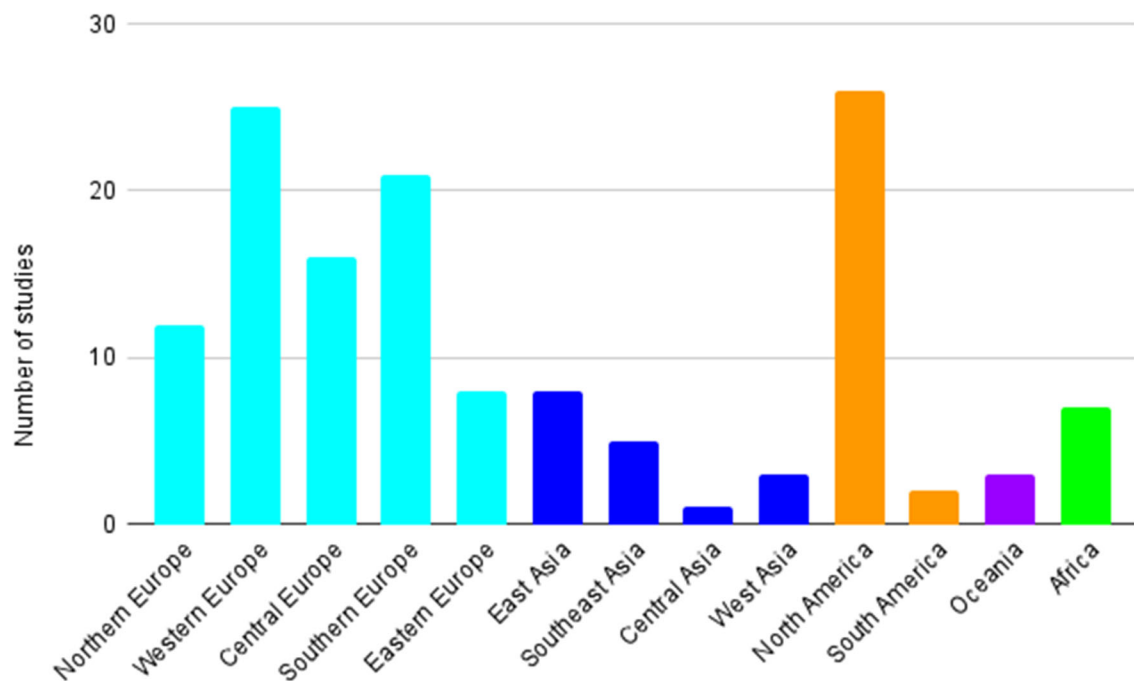
Note: Results are not cumulative

RQ4: What methodological designs are employed in empirical studies focusing on motivation in adult education and learning?

The final area of our analysis focused on the methodological design of the studies. As shown in Figure 4, quantitative methodologies clearly dominate the research on motivation in adult education and learning, especially in recent years. Out of the total number of studies, nearly two-thirds employed a quantitative approach (n=62). Qualitative methodologies were used in 24 studies, while mixed-method designs appeared in 9 cases (e.g., Gondim & Mutti, 2011; Leow et al., 2022).

We also examined the evolution of methodological orientations over time (see Fig. 4). Up to 2014, the field was clearly dominated by quantitative research, with relatively few studies employing qualitative or mixed-methods approaches during this early phase. However, this trend began to shift around 2016, marked by a noticeable increase in the use of quantiative methods.

Between 2017 and 2023, a more balanced distribution emerged between qualitative and quantitative approaches, although quantitative methods continued to predominate, reaching peaks in 2019 and 2021. Mixed-methods studies, while present as early as 2005, remained consistently infrequent throughout the period, never surpassing two instances in any given year.

Figure 4. The evolution of the research methodology since 1971. Source: Authors' own figure
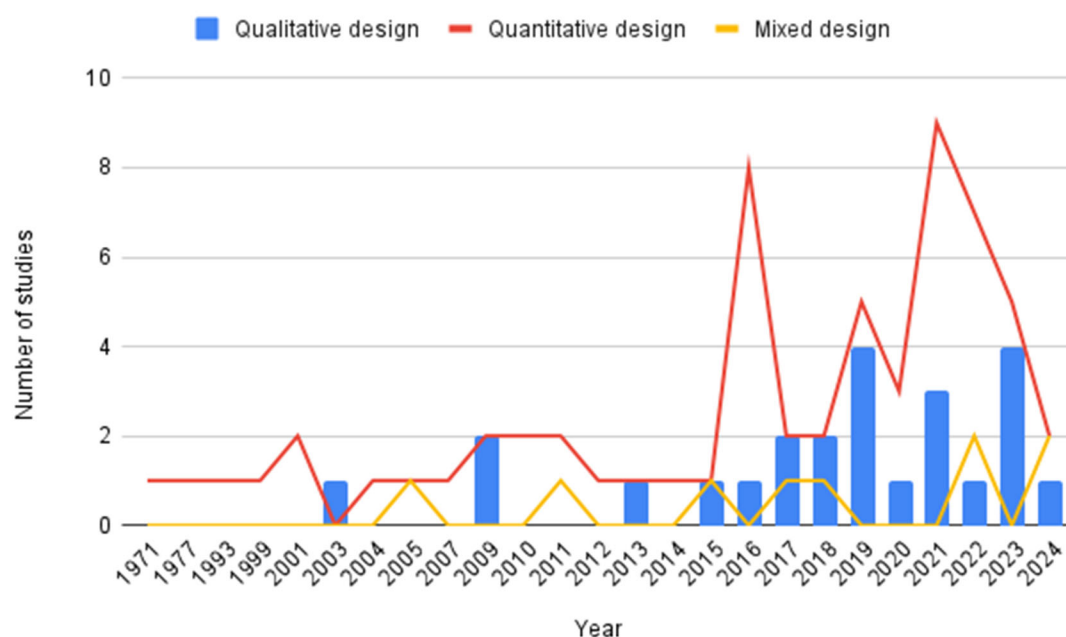
The analysis also highlighted the variety of research instruments employed in studies (see Tables 2 and 3). The most frequently used instruments in quantitative research were surveys that could be divided into two types. First, non-validated questionnaires designed specifically to meet the needs of individual studies (n=33). Second, international comparative surveys, such as PIAAC, focused on adult education and learning that also included items for measuring motivation for participation in organised adult learning (n=9).

A second significant category of research tools consisted of *validated instruments*, primarily designed to measure motivation to participate in adult education or to engage in learning among adult learners. For a detailed overview of the various types of scales used in research on motivation in adult education, see Table 3 below. Among these scales, two prominent examples stand out. First, the Education Participation Scale (EPS), developed by Boshier (1971), which is a currently well-established psychometric tool designed to measure the motivational orientation of adult learners. Constructed in the early 1970s, the EPS has undergone multiple modifications and validations. It is widely recognised for its ability to categorise adult learners' motivations into distinctive factors that provide valuable insights into reasons adults engage in educational programs (Liodaki & Karalis, 2023). A second example is the Motivated Strategies for Learning Questionnaire (MSLQ), developed by Pintrich and de Groot (1990). It is a self-assessment instrument designed to evaluate university students' motivational orientations and their use of various learning strategies.

Table 2. Summary of quantitative research instruments utilised in studies on motivation in adult education and learning. Source: authors' own table

Non-validated Research instruments			
Research Instrument	**Number**	**Type**	**Number**
Surveys	42	Authors inventory/questionnaire	33
		International comparative survey (PIAAC; LLL; AES)	9

Validated Psychometrics Scales			
Research Instrument	**Number**	**Type**	**Number**
Scales with a focus on attitudes to Adult Education	4	Adult Attitudes Toward Adult Education Scale (AACES)	1
		Lifelong Learning Tendencies Scale	3
Scales with a focus on motivation to Adult Education	18	Education Participation Scale (EPS)	7
		Academic Motivation Scale (AMS)	3
		Prison Education Motivation Scale (PEMS)	1
		Mergener's Education Participation Scale (M-EPS)	1
		Motivation to Nonparticipation Scale (MNP-S)	1
		Deterrence to Participation Scale (DPS-G)	2
		Global Motivation Scale (GMS)	1
		Learning and Motivation Questionnaire (LEMO)	1
		Personal Achievement Goal Orientations Scale	1
Scales with a focus on work-related behavior	5	Utrecht Work Engagement Scale (UWES-9)	3
		Multidimensional Work Motivation Scale (MWMS)	1
		Characteristics of Lifelong Learning in the Professions	1
Scales with a focus on self-efficacy	4	General Self-Efficacy Scale (GSE)	1
		Academic Self-Efficacy Scale	1
		Self-concept of ability (SCA)	1
		Online Learning Value and Self-Efficacy Scale (OLVSES)	1
Scales with a focus on self-regulation	25	Motivated Strategies for Learning Questionnaire (MSLQ)	4
		Learning Self-Regulation Questionnaire (SLQ-R)	3
		Online Self-Regulated Learning Questionnaire (OSLQ)	1
		Deeper Learning Self-Assessment Scale (DLSS)	1
		Academic Self-Description Questionnaire-III	1
		University of California Undergraduate Experience Survey (UCUES)	1
		Self-report Measure of Routine Study Behaviors (SAS-R)	1

		Elicits students' self-reports of their memory abilities and capacities (IME)	1
		Self-Reported Engagement Scale	1
		Adult Learning Strategies Evaluation Scale	2
		Intrinsic task value (ITV)	1
		Need for cognition scale (NFC)	1
		Transfer Interest Questionnaire (TIQ)	1
		Mature Student Experience Survey (MSES)	1
		Differential Emotions Scale IV-A (DES)	1
		Positive and Negative Affect Schedule (PANAS)	1
		Immersion Experience Scale	1
		Gamification for Adults Questionnaires (GAQ)	1
		Behavioral Engagement Questionnaire	1
Teacher related questionnaires	1	Teacher-Rated Student Engagement Scale	1

Note: Results are not cumulative

The qualitative studies predominantly utilised semi-structured interviews as data collection procedures, which were employed in 26 cases (see Table 3). One illustrative study examined the experiences of senior students participating in a reduced tuition programme at a large university in the southeastern United States. Using semi-structured interviews, the researchers explored the participants' motivations for returning to formal education and the challenges they encountered in adapting to a traditional campus environment (Parks et al., 2013). Other qualitative methods – such as observations or focus groups – were employed less frequently.

Table 3. Summary of qualitative research procedures used by studies on motivation in adult education and learning. Source: Authors' own table

Data collection	Number	Merged categories
Focus groups	7	Focus groups interviews
Semi-structured interview	26	Interviews, semi-structured interviews, semi-structured protocol
Observation and ethnography	5	Observation, field notes

Note: results are not cumulative

Discussion

This scoping review mapped empirical research on motivation in adult education and learning by analysing studies published between 1971 and 2024. The study aimed to identify the *key research themes*, the *geographical distribution* of research, and the *methodological approaches* employed in this subfield.

Regarding the evolution of the *thematic focus* (RQ1), the analysis revealed a steady increase in research on motivation since 1971. While Fejes and Nylander (2023) observed a rise in research on motivation, participation and attitudes among employees in different organisations starting in the 1990s, our findings suggest that the boom in interest in empirical research on motivation comes almost two decades later. Although a modest increase in research activity can be observed around 2009, this rise was short-lived and followed by a temporary decline. A more consistent and sustained growth began only after 2016, culminating in 2021 – the most prolific year, with 12 studies included.

Contrary to the assumptions of some scholars (e.g., Boeren, 2016; Kalenda & Kočvarová, 2022), motivation in adult education and learning is currently a frequently researched topic. However, it remains underrepresented in the field's leading journals and is marked by considerable heterogeneity (see discussion related to RQ2 below).

This upward trend may reflect the growing influence of international organisations such as the OECD, whose policy frameworks have increasingly highlighted learner motivation as a critical factor in fostering adult participation in lifelong learning (OECD, 2023). Additionally, the availability of large-scale international surveys, like the PIAAC from 2012 and the Adult Education Survey from 2011 and 2016, which also included items for measuring motivation, has become accessible for researchers.

The analysis of specific empirical research themes on motivation within adult education and learning (RQ2) revealed its complexity, encompassing a broad range of subtopics. The most extensively examined thematic category focused on specific motivation among specific target groups, such as course participants, non-traditional students, or second-chance learners. The interest aligns closely with the evolving nature of formal education systems in late modern society as they continue to adapt to the dynamic of higher demands for adult education. Over the last decades, participation in formal education across many European countries has expanded (Eurostat, 2024), accompanied by a rise in the proportion of non-traditional students (Shillingford & Karlin, 2013). This development is further marked by an increased focus on previously overlooked target groups, such as low-skilled individuals historically marginalised by education policy and institutions (Boeren, 2016; Kondrup, 2015). This shift highlights a growing recognition of the need for education for all population groups – not only from a perspective of social justice perspective but also in terms of economic and social sustainability (Gesthuizen & Scheepers, 2010). The second most prominent theme was motivation for learning at the national population level, which may indicate increasing efforts by governments and international organisations to enhance adult participation in learning (Desjardins, 2017; Dæhlen & Ure, 2009; Kondrup, 2015), as well as the growing presence of international comparative data on motivation that was mentioned above.

The third research question (RQ3) explored the geographical context framing the empirical studies. Our findings only partially align with previous research (Fejes & Nylander, 2014, 2015, 2019; Rubenson & Elfert, 2015, 2019). Anglophone countries continue to dominate the field of motivation research, contributing 39 of the 95 studies reviewed. However, when viewed from a geographical perspective, the majority of motivation-related research originates in Europe, with a marked concentration across the

continent. In contrast, non-Western countries account for only a small fraction of the overall research corpus.

Although studies published in languages other than English were included, they represent less than 14% of the total. This limited representation is likely influenced by the nature of the databases utilised, which tend to privilege publications in English (Mongeon & Paul-Hus, 2016).

The final research question (RQ4) examined methodological approaches used in studying motivation in adult education. Although qualitative methodologies have traditionally been favoured in adult education research (Boeren, 2019; Rubenson & Elfert, 2019), quantitative methods have consistently dominated this specific area of study from its inception. Over time, qualitative and mixed-methods approaches have also emerged, broadening the methodological spectrum. However, quantitative research continues to prevail, reflecting the research´s historical emphasis on measurable outcomes and statistical analysis. The dominance of quantitative methods in this context can probably be attributed to the psychometric tradition. Motivation, as a concept, originates in psychology, where it has historically been examined using quantitative approaches (Lamb et al., 2019). While quantitative methods are powerful tools for data analysis, their application does not automatically guarantee high-quality results. Identified weaknesses in methodological rigour – such as the frequent use of unvalidated research instruments in the research (n=33) – highlighted the need for improved design and application of measurement instruments. These limitations can compromise the validity and reliability of the findings, restricting the generalisability of results to a broader population. Moreover, this research subfield demonstrates a notable lack of mixed-methods research and studies with longitudinal design, which could provide a deeper insight into the evolution of motivational factors over time (Field, 2011; Yamashita et al., 2022). Addressing these gaps is essential for advancing the methodological robustness and comprehensiveness of research on motivation in adult education.

Limits of the study

This scoping review is subject to several methodological limitations. Firstly, the exclusive use of Web of Science and Scopus may have restricted the range of included studies, potentially overlooking valuable contributions found in grey literature, lesser-known regional journals, or specialised disciplinary databases. Secondly, despite efforts to incorporate non-English studies, the final dataset is heavily weighted towards English-language publications – a reflection of both inherent database biases and prevailing norms in academic publishing (Mongeon & Paul-Hus, 2016). Thirdly, the deliberate exclusion of purely theoretical papers, while methodologically consistent, may have inadvertently omitted significant conceptual work that informs and shapes empirical research in the field.

Future directions

Based on our findings, several key directions for advancing research on motivation in adult education and learning can be identified. Despite its importance and the growing interest of scholars, motivation research remains highly fragmented in the field.

In this context, it is important to further investigate the roots of this fragmentation, which may stem from the varying disciplinary frameworks that shape research and differing publication strategies. This includes an analysis of the disciplinary backgrounds

of researchers focusing on motivation in adult education and learning. Additionally, this fragmentation may be driven by divergent conceptualisations and theoretical approaches to motivation. These must be examined in order to better understand the theoretical framing underpinning this body of research. Both of these directions are well-suited for the future scoping research.

Beyond that, future empirical research should prioritise investigating the motivation of different subpopulations of adult learners even more. These groups may include: (1) individuals pursuing (non-formal) education not only for career development but also outside the world of work; (2) adults returning to (formal) education after an extended break, especially with a specific demographic background, like migrants or the first-generation-university-students; and (3) adults with specific learning needs. Each of these subpopulations has distinct motivational drivers, influenced by intrinsic factors like personal interest and self-fulfilment and extrinsic factors such as labour market demands and social pressures. A nuanced understanding of these groups would help tailor both national and local (regional) educational strategies to their unique contexts.

The motivation of educators warrants greater attention, as their motivation significantly impacts the quality of learning and participants' engagement. Understanding what drives educators could lead to strategies that enhance teaching effectiveness and learner outcomes.

Improving the methodological quality of research is essential for producing reliable results and deepening our understanding of motivation in adult education. Future studies should: (1) use more validated tools in quantitative research to ensure the reliability and accuracy of findings; (2) embrace more mixed-method approaches, combining quantitative and qualitative methods to provide a more comprehensive view of motivational phenomena in adult education; (3) employ new innovative methodologies, such as card-sorting method (Broek et al., 2024) or panel surveys (dos Santos et al., 2024) to explore long-term changes in motivation and the contextual factors shaping adult learning trajectories.

By addressing these directions, future research can significantly contribute to understanding motivation in adult education.

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Appendices

Table 4. Overview of research topics with references. Source: Authors' own table

General Topic	Subtopic	Number of studies (n)	References
Motivation of educators		5	Livneh & Livneh (1999); Karoulis (2011); Heystek & Terhoven (2015); Şentürk & Duran (2020); Tzafilkou et al. (2022)
Motivation as an aspect of work motivation		5	Renta-Davids et al. (2016); Zavodchikov et al. (2016); Leow et al. (2022); Bellare et al. (2023); Chen & Aryadoust (2023)
Motivation in relation to self-regulation and learning strategies		11	Prenzel (1993); Hammond & Feinstein (2005); Kalenda & Vávrová (2017); Gravani (2019); Vanslambrouck et al. (2019a); Vanslambrouck et al. (2019b); Chukwuedo et al. (2021); Rothes et al. (2022); Sánchez-Doménech et al. (2023); Đorđić et al. (2024); Zainuddin et al. (2024)
Motivation within national populations		12	Boshier (1971); Boshier (1977); Gorges & Hollmann (2015); Boeren & Holford (2016); Gorges et al. (2016); Pikturnaitė et al. (2017); Kalenda & Kočvarová (2021); Koludrovic & Ercegovac (2021); Sahoo et al. (2021); Gorges & Schmidt (2022); Kalenda & Kočvarová (2022); Yamashita et al. (2022)
Motivation among specific target groups in adult education and learning	Course participants	21	Isaac et al. (2001); Wright & McGrory (2005); Van Den Berg et al. (2009); Baker et al. (2010); Delialioglu et al. (2010); Strong & Harder (2010); Gondim & Mutti (2011); Gorges & Kandler (2011); Cui et al. (2016); Rothes et al. (2016); Duguine (2017); Aittola & Ursin (2018); Gegenfurtner et al. (2019); Kallinikou & Nicolaidou (2019); Lee (2019); Magos & Georgopapadakou (2021); Mavropoulos et al. (2021); Ali et al. (2022); Niksadat et al. (2022); Chen et al. (2023); Nguyen & Nguyen (2024)
	Non-traditional students	13	Justice & Dornan (2001); Coker (2003); Bye et al. (2007); Shillingford & Karlin (2013); Francois (2014); Abbas (2016); Iñiguez-Berrozpe & Marcaletti (2016); van Rhijn et al. (2016); Amponsah et al (2018); Ho & Kember (2018); Gardner et al. (2021);Wang et al. (2022); Szalkowicz & Andrewartha (2024)

General Topic	Subtopic	Number of studies (n)	References
	Second-chance learners	0	Goto & Martin (2009); De Oña Cots et al. (2018); Randevåg & Boström (2019); Aljohani & Alajlan (2020); Keita & Lee (2022); Okwuduba et al. (2022); Cavallo-Bertelet (2023); Gutiérrez-De-Rozas et al. (2023a); Gutiérrez-De-Rozas et al. (2023b); Mertens et al. (2024)
	Low-skilled adults	7	Dæhlen & Ure (2009); Prins & Schafft (2009); Mariager-Anderson et al. (2016); Tikkanen & Nissinen (2018); Liu (2019); Hajdú & Koncz (2021); Hajdú et al. (2022)
	Elderly adults	6	Kim & Merriam (2004); Parks et al. (2013); Carragher & Golding (2015); Helterbran (2016); Lin (2020); Hachem (2023)
	Migrants	3	Kisiara (2020); Jõgi & Karu (2021); Kamisli (2023)
	Prisoners	2	Panitsides & Moussiou (2019); Héctor-Moreira et al. (2020)

Table 5. Overview of research countries included in the studies with references. Source: Authors' own table

Linguistic group	Region	Number of cases in studies	Country	Number of cases in studies	References
Anglophone countries			Canada	4	Boshier (1977); Bye et al. (2007); Gorges et al. (2016); van Rhijn et al. (2016)
	North America	26	United States	22	Livneh & Livneh (1999); Isaac et al. (2001); Justice & Dornan (2001); Coker (2003); Kim & Merriam (2004); Goto & Martin (2009); Prins & Schafft (2009); van Den Berg et al. (2009); Delialioglu et al. (2010); Strong & Harder (2010); Parks et al. (2013); Shillingford & Karlin (2013); Francois (2014); Helterbran (2016); Gorges et al. (2016); Liu (2019); Kisiara (2020); Gardner et al. (2021); Sahoo et al. (2021); Yamashita et al. (2022); Bellare et al. (2023); Kamisli (2023)
	Europe	10	Ireland	4	Wright & McGrory (2005); Carragher & Golding (2015); Boeren & Holford (2016); Gorges et al. (2016)
			Scotland	1	Boeren & Holford (2016)
			United Kingdom	5	Hammond & Feinstein (2005); Baker et al. (2010); Abbas (2016); Boeren & Holford (2016); Gorges et al. (2016)
	Oceania	3	Australia	2	Gorges et al. (2016); Szalkowicz & Andrewartha (2024)
			New Zealand	1	Boshier (1971)

Linguistic group	Region	Number of cases in studies	Country	Number of cases in studies	References
Non-Anglophone countries	Northern Europe	17	Denmark	3	Gorges et al. (2016); Mariager-Anderson et al. (2016); Tikkanen & Nissinen (2018)
			Finland	3	Gorges et al. (2016); Aittola & Ursin (2018); Tikkanen & Nissinen (2018)
			Norway	3	Dæhlen & Ure (2009); Gorges et al. (2016); Tikkanen & Nissinen (2018)
			Sweden	3	Gorges et al. (2016); Tikkanen & Nissinen (2018); Randevåg & Boström (2019)
	Western Europe	15	Belgium	4	Boeren & Holford (2016); Vanslambrouck et al. (2019a); Vanslambrouck et al. (2019b); Mertens et al. (2024)
			France	2	Gorges et al. (2016); Duguine (2017)
			Germany	7	Prenzel (1993); Gorges & Kandler (2011); Karoulis (2011); Gorges & Hollmann (2015); Gorges et al. (2016); Gegenfurtner et al. (2019); Liu (2019); Gorges & Schmidt (2022)
			Netherlands	1	Gorges et al. (2016)
	Central Europe	16	Austria	2	Boeren & Holford (2016); Gorges et al. (2016)
			Czech Republic	6	Boeren & Holford (2016); Gorges et al. (2016); Kalenda & Vávrová (2017); Kalenda & Kočvarová (2021); Kalenda & Kočvarová (2022); Đorđić et al. (2024)
			Hungary	3	Boeren & Holford (2016); Hajdú & Koncz (2021); Hajdú et al. (2022)
			Slovak Republic	2	Gorges et al. (2016); Đorđić et al. (2024)
			Slovenia	1	Boeren & Holford (2016)
			Poland	2	Đorđić et al. (2024); Gorges et al. (2016)
	Eastern Europe	3	Bulgaria	1	Boeren & Holford (2016)
			Estonia	3	Boeren & Holford (2016); Gorges et al. (2016); Jõgi & Karu (2021)
			Lithuania	2	Boeren & Holford (2016); Rothes et al. (2016)
			Russia	2	Boeren & Holford (2016); Zavodchikov et al. (2016)
	Southern Europe	21	Croatia	1	Koludrovic & Ercegovac (2021)
			Cyprus	2	Gravani (2019); Kallinikou & Nicolaidou (2019)
			Greece	5	Gravani (2019); Panitsides & Moussiou (2019); Magos & Georgopapadakou (2021); Mavropoulos et al. (2021); Tzafilkou et al. (2022)

Linguistic group	Region	Number of cases in studies	Country	Number of cases in studies	References
			Italy	2	Gorges et al. (2016); Iñiguez-Berrozpe & Marcaletti (2016)
			Portugal	2	Rothes et al. (2016); Rothes et al. (2022)
			Serbia	1	Đorđić et al. (2024)
			Spain	8	Héctor-Moreira et al. (2020); Gorges et al. (2016); Iñiguez-Berrozpe & Marcaletti (2016); Renta-Davids et al. (2016); De Oña Cots et al. (2018); Gutiérrez-De-Rozas et al. (2022); Gutiérrez-De-Rozas et al. (2023); Sánchez-Doménech et al. (2023)
	East Asia	8	China	2	Cui et al. (2016); Wang et al. (2022)
			Hong Kong	1	Ho & Kember (2018)
			Korea	2	Gorges et al. (2016); Liu (2019)
			Taiwan	2	Lin (2020); Chen et al. (2023)
			Japan	1	Gorges et al. (2016)
	Southeast Asia	5	Singapore	2	Chen & Aryadoust (2023); Leow et al. (2022)
			Thailand	1	Lee (2019)
			Vietnam	1	Nguyen & Nguyen (2024)
			Indonesia	1	Zainuddin et al. (2024)
	Central Asia	1	Iran	1	Niksadat et al. (2022)
	West Asia	3	Lebanon	1	Hachem (2023)
			Saudi Arabia	1	Aljohani & Alajlan (2020)
			Turkey	1	Şentürk & Duran (2020)
	Africa	7	Nigeria	2	Chukwuedo et al. (2021); Okwuduba et al. (2022)
			Ghana	1	Amponsah et al (2018)
			South Africa	1	Heystek & Terhoven (2015)
			Morocco	1	Ali et al. (2022)
			Egypt	1	Abbas (2016)
			Gambia	1	Keita & Lee (2022)
	South America	2	Brazil	1	Gondim & Mutti (2011)
			Chile	1	Cavallo-Bertelet (2023)

Note: Results are not cumulative

Table 6. Summary of quantitative research instruments used in adult education studies with references. Source: Authors' own table

Non-validated Research instruments				
Research Instrument	Number	Type	Number	References
Surveys	42	Authors inventory/questionnaire	33	Prenzel (1993); Isaac et al. (2001); Wright & McGrory (2005); Van Den Berg et al. (2009); Baker et al. (2010); Delialioglu et al. (2010); Gondim & Mutti (2011); Gorges & Kandler (2011); Karoulis (2011); Carragher &

| | | | | Golding (2015); Abbas (2016); Boeren & Holford (2016); Iñiguez-Berrozpe & Marcaletti (2016); Renta-Davids et al. (2016); Zavodchikov et al. (2016); Duguine (2017); Pikturnaitė et al. (2017); Aittola & Ursin (2018); Amponsah et al (2018); Gegenfurther et al. (2019); Lee (2019); Héctor-Moreira et al. (2020); Gardner et al. (2021); Hajdú & Koncz (2021); Ali et al. (2022); Hajdú et al. (2022); Leow et al. (2022); Niksadat et al. (2022); Tzafilkou et al. (2022); Wang et al. (2022); Gutiérrez-De-Rozas et al. (2023); Sánchez-Doménech et al. (2023); Nguyen & Nguyen (2024) |
| | | International comparative survey (PIAAC; LLL; AES) | 9 | Hammond & Feinstein (2005); Dæhlen & Ure (2009); Gorges & Hollmann (2015); Gorges et al. (2016); Tikkanen & Nissinen (2018); Liu (2019); Sahoo et al. (2021); Kalenda & Kočvarová (2022); Yamashita et al. (2022) |

Validated Psychometrics Scales

Research Instrument	Number	Type	Number	References
Scales with a focus on attitudes to Adult Education	4	Adult Attitudes Toward Adult Education Scale (AACES)	1	Koludrovic & Ercegovac (2021)
		Lifelong Learning Tendencies Scale	3	Şentürk & Duran (2020); Chukwuedo et al. (2021); Okwuduba et al. (2022)
Scales with a focus on motivation to Adult Education	18	Education Participation Scale (EPS)	7	Boshier (1971); Boshier (1977); Kim & Merriam (2004); Francois (2014); Cui et al. (2016); Aljohani & Alajlan (2020); Mavropoulos et al. (2021)
		Academic Motivation Scale (AMS)	3	Shillingford & Karlin (2013); Koludrovic & Ercegovac (2021); Đorđić et al. (2024)
		Prison Education Motivation Scale (PEMS)	1	Panitsides & Moussiou (2019)
		Mergener's Education Participation Scale (M-EPS)	1	Strong & Harder (2010)
		Motivation to Nonparticipation Scale (MNP-S)	1	Kalenda & Kočvarová (2022)
		Deterrence to Participation Scale (DPS-G)	2	Cui et al. (2016); Wang et al. (2022)
		Global Motivation Scale (GMS)	1	Lin (2020)
		Learning	1	Mertens et al. (2024)

	and Motivation Questionnaire (LEMO)		
	Personal Achievement Goal Orientations Scale	1	Rothes et al. (2022)
Scales with a focus on work-related behavior	5		
	Utrecht Work Engagement Scale (UWES-9)	3	Cui et al. (2016); Chukwuedo et al. (2021); Okwubuda et al. (2022)
	Multidimensional Work Motivation Scale (MWMS)	1	Chen & Aryadoust (2023)
	Characteristics of Lifelong Learning in the Professions	1	Livneh & Livneh (1999)
Scales with a focus on self-efficacy	4		
	General Self-Efficacy Scale (GSE)	1	Koludrovic & Ercegovac (2021)
	Academic Self-Efficacy Scale	1	Rothes et al. (2016)
	Self-concept of ability (SCA)	1	Gorges & Schmidt (2022)
	Online Learning Value and Self-Efficacy Scale (OLVSES)	1	Vanslambrouck et al. (2019a)
Scales with a focus on self-regulation	25		
	Motivated Strategies for Learning Questionnaire (MSLQ)	4	Justice & Dornan (2001); Bye et al. (2007); Kallinikou & Nicolaidou (2019); Chen et al. (2023)
	Learning Self-Regulation Questionnaire (SLQ-R)	3	Rothes et al. (2016); Rothes et al. (2022); Đorđić et al. (2024)
	Online Self-Regulated Learning Questionnaire (OSLQ)	1	Vanslambrouck et al. (2019b)
	Deeper Learning Self-Assessment Scale (DLSS)	1	Wang et al. (2022)
	Academic Self-Description Questionnaire-III	1	Rothes et al. (2016)
	University of California Undergraduate Experience Survey (UCUES)	1	Okwubuda et al. (2022)
	Self-report Measure of Routine Study Behaviors (SAS-R)	1	Justice & Dornan (2001)
	Elicits students' self-reports of their memory abilities and capacities (IME)	1	Justice & Dornan (2001)
	Self-Reported Engagement Scale	1	Rothes et al. (2016)
	Adult Learning Strategies Evaluation Scale	2	Rothes et al. (2016); Rothes et al. (2022)
	Intrinsic task value (ITV)	1	Gorges & Schmidt (2022)
	Need for cognition scale (NFC)	1	Gorges & Schmidt (2022)

		Transfer Interest Questionnaire (TIQ)	1	Gegenfurtner et al. (2019)
		Mature Student Experience Survey (MSES)	1	van Rhijn et al. (2016)
		Differential Emotions Scale IV-A (DES)	1	Bye et al. (2007)
		Positive and Negative Affect Schedule (PANAS)	1	Bye et al. (2007)
		Immersion Experience Scale	1	Chen et al. (2023)
		Gamification for Adults Questionnaires (GAQ)	1	Zainuddin et al. (2024)
		Behavioral Engagement Questionnaire	1	Rothes et al. (2022)
Teacher related questionnaires	1	Teacher-Rated Student Engagement Scale	1	Rothes et al. (2016)

Note: Results are not cumulative

Table 7. Summary of qualitative research instruments and data analysis methods in adult education studies with references. Source: Authors' own table

Data collection	Number	Merged categories	References
Focus groups	7	Focus groups interviews	Coker (2003); Carragher & Golding (2015); Kalenda & Vávrová (2017); De Oña Cots et al. (2018); Randevåg & Boström (2019); Kisiara (2020); Bellare et al. (2023)
Semi-structured interview	26	Interviews, semi-structured interviews, semi-structured protocol	Hammond & Feinstein (2005); Goto & Martin (2009); Prins & Schafft (2009); Gondim & Mutti (2011); Parks et al. (2013); Heystek & Terhoven (2015); Helterbran (2016); Mariager-Anderson et al. (2016); Duguine (2017); Aittola & Ursin (2018); Ho & Kember (2018); Gravani (2019); Lee (2019); Randevåg & Boström (2019); Vanslambrouck et al. (2019b); Jõgi & Karu (2021); Magos & Georgopapadakou (2021); Gutiérrez-De-Rozas et al. (2022); Keita & Lee (2022); Leow et al. (2022); Wang et al. (2022); Cavallo-Bertelet (2023); Hachem (2023); Kamisli (2023); Nguyen & Nguyen (2024); Szalkowicz & Andrewartha (2024); Zainuddin et al. (2024)
Observation and etnography	5	Observation, field notes	Gondim & Mutti (2011); Lee (2019); Randevåg & Boström (2019); Jõgi & Karu (2021); Zainuddin et al. (2024)

Note: Results are not cumulative

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