

Conceptual Metaphors as Facilitators of Transformative Learning: A PRISMA-Guided Systematic Review

Yongsic Cho *

Division of Non-Formal Education, Department of Lifelong Education
Faculty of Education, Chulalongkorn University, Thailand.

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Abstract

This PRISMA-guided systematic review examines how conceptual metaphors operate within transformative learning research and contribute to lifelong learning. Transformative learning involves shifts in adults' frames of reference through disruption, reflection, and identity reconstruction. Although metaphors are central meaning-making resources, their functional roles across transformative processes remain insufficiently synthesized. This review analyzes 31 peer-reviewed studies published between 2016 and 2025 that integrate Conceptual Metaphor Theory and Transformative Learning Theory.

The analysis identified 36 distinct conceptual metaphors functioning through three overlapping uses: Naming (45.2%), Imagining (45.2%), and Uncovering (32.3%). Naming and Imagining metaphors supported sense-making by clarifying complex learning experiences and projecting future identities, while Uncovering metaphors surfaced tacit assumptions and emotional tensions that initiated perspective transformation. These functions aligned closely with key phases of transformative learning: Uncovering metaphors were primarily associated with Critical Reflection (48.4%), Naming metaphors supported Critical Reflection and Reintegration (38.7%), and Imagining metaphors aligned most strongly with Exploration/Action (48.4%) as learners experimented with revised roles and possibilities.

Regarding lifelong learning outcomes, Identity Development (64.5%) and Reflective Enhancement (61.3%) were most frequent, followed by Adaptive Expertise (22.6%), Informal Lifelong Learning (19.4%), and Emotional Engagement (12.9%). Overall, conceptual metaphors function as cognitive-emotional scaffolds supporting reflection, identity reconstruction, and sustained meaning-making across lifelong learning contexts.

Keywords: transformative learning theory, conceptual metaphor theory, lifelong learning, PRISMA systematic review.

* Corresponding author; E-mail: indohasim@daum.net

Introduction

Transformative learning theory (TLT), originally developed by Jack Mezirow, has been widely used to explain how adults make sense of disruptive and challenging experiences. According to Mezirow, the central idea of transformative learning is the reassessment of previously unexamined frames of reference; this process is mediated through critical reflection, dialogue, and the reinterpretation of underlying assumptions and beliefs (Mezirow, 1991; Mezirow, 2000). Over the past four decades, the theory has evolved from a primarily rational and cognitive model into a more holistic metatheory that embraces emotion, imagination, embodiment, and relational dimensions of learning (Carter and Nicolaides, 2023; Dirkx, 2006; Hoggan and Finnegan, 2023).

Despite its theoretical richness, there are not many studies that systematically explored the specific mechanisms for making transformative learning more accessible and effective in real-world lifelong learning contexts. However, the functional use of conceptual metaphors, which is grounded in the principles of cognitive linguistics, remains a notable mechanism that has not been sufficiently synthesized. Conceptual metaphors are not only ornamental expressions but fundamental cognitive structures which shape how individuals understand abstract experiences such as learning, identity change, and personal transformation (Lakoff and Johnson, 1980). Recent emerging empirical evidence suggests that adult learners spontaneously employ metaphors to uncover tacit assumptions, name complex or unclear experiences, and imagine alternative possibilities, processes that closely parallel the core dynamics of transformative learning (Hoggan, 2014; Lawrence, 2022).

However, the literature on the functional use of conceptual metaphors in transformative learning remains fragmented. Existing scholarship has explored elements of these functional uses in isolation; however, their operation across studies, alignment with Mezirow's transformative learning stages, and implications for lifelong learning have yet to be examined in an integrated, systematic way. This PRISMA-guided systematic review addresses this gap by analyzing 31 peer-reviewed studies published between 2016 and 2025 that integrate conceptual metaphor theory with transformative learning in adult and lifelong education contexts.

The review is guided by three research questions; 1) How do conceptual metaphors facilitate transformative learning processes through their functional uses? 2) How do the functional uses of conceptual metaphors align with specific stages in Mezirow's transformative learning model? 3) What are the implications of the functional uses of conceptual metaphors for lifelong learning practices and program development?

Literature Review

Transformative Learning Theory (TLT)

Transformative learning theory, one of the most widely cited and influential theories in lifelong education, provides a useful lens for understanding how adults reflect on and reconfigure their own ways of seeing the world. In adult education, this perspective is most closely associated with the work of Jack Mezirow, who conceptualized transformative learning as a process of perspective transformation, a fundamental shift in frames of reference that alters how individuals interpret experience, understand themselves, and act in the world (Mezirow, 1997, 2000). Drawing on earlier critical-theory traditions, Mezirow argued that this kind of learning is not simply about adding new information, but about disrupting and reconstructing the deep-seated assumptions that support everyday behavior (Hoggan and Finnegan, 2023; Taylor, 2018).

Mezirow's original work, drawn from studies of adult women returning to education in mid-life, observed that significant life events often triggered a re-examination of beliefs that had previously gone unchallenged (Mezirow, 1991; Taylor, 2007). These "disorienting dilemmas" did not always lead to change on their own; what distinguished transformative learning was the presence of critical reflection, dialogue, and new experiences that helped learners test alternative perspectives (Mezirow, 1997; Stuckey et al., 2022). The theory has substantially evolved over more than four decades, with Mezirow continuously refining and expanding the framework in response to scholarly critique and empirical research (Kitchenham, 2008). Kitchenham (2008) describes how Mezirow's work built upon critical theory, particularly Habermas's domains of learning and communicative action, while also incorporating constructivist and developmental perspectives.

In his later works, Mezirow articulated this insight into a 10-stage model that diagrams the trajectory of transformation from initial disruption through reintegration with a revised worldview (Cranton and Taylor, 2012). These stages are summarized in Table 1

Table 1 Mezirow's Ten Phases of Transformative Learning (Mezirow, 1997)

Phase	Stage Name	Description
1	Disorienting Dilemma	A triggering event that challenges existing frames of reference
2	Self-Examination	Feelings of fear, guilt, or shame associated with the dilemma
3	Critical Assessment of Assumptions	Recognizing that assumptions are socially constructed and changeable
4	Recognition of Discontent	Realizing others have shared similar experiences of transformation
5	Exploration of Options	Exploring new roles, relationships, and possible courses of action

Table 2 (continue)

Phase	Stage Name	Description
6	Planning a Course of Action	Formulating a plan to enact change
7	Acquiring Knowledge and Skills	Building competence required to implement new roles
8	Provisional Trying of New Roles	Experimenting with new behaviors and perspectives
9	Building Competence and Confidence	Developing confidence through practicing new roles
10	Reintegration	Integrating new perspectives into one's life on the basis of conditions dictated by one's new perspective

The model is intentionally non-linear in practice; learners may loop back to earlier stages, revisit past experiences, or progress at different rates depending on the context and support (Taylor, 2007; Taylor and Cranton, 2012). What remains central to all stages is the role of critical reflection, emotional engagement, and interaction with others, which together help learners make sense of disorienting experiences and shape new ways of being (Dirkx, 2006; Mezirow, 2000).

As shown in Table 1, Mezirow's ten phases represent a developmental trajectory from initial disruption to the reintegration of a revised worldview. For the purposes of analysis in this review, these ten phases were consolidated into five higher-order analytic stages Disorienting Dilemma (Phase 1), Self-Examination (Phase 2), Critical Reflection (Phases 3–4), Exploration/Action (Phases 5–8), and Reintegration (Phases 9–10). This consolidation enabled more tractable coding across the included studies while preserving fidelity to Mezirow's original theoretical framework.

In recent years, scholars have reconceptualized transformative learning as a metatheory rather than a closed, prescriptive model. Hoggan (2016) defines transformative learning as “processes that result in significant and irreversible changes in the way a person experiences, conceptualizes, and interacts with the world” (p. 138), emphasizing that transformation is not only cognitive but also experiential, embodied, and relational. This broader view allows researchers to integrate insights from sociocultural, phenomenological, and narrative traditions, thereby expanding the understanding of transformation across contexts such as formal education, workplace learning, health-care settings, and community development (Hoggan, 2016; Taylor and Cranton, 2012).

Conceptual Metaphor Theory (CMT)

Conceptual metaphor, as articulated by cognitive linguists George Lakoff and Mark Johnson in 1980, proposes that much of human thought is organized through systematic mappings between concrete, embodied domains (e.g., physical movement, spatial orientation, bodily sensations) and more abstract domains such as time, knowledge, and emotion (Lakoff and Johnson, 1980). In this framework, metaphors are not simply decorative language; they are cognitive structures that shape how people conceptualize and respond to their experiences. For example, expressions such as “climbing the ladder of success,” “feeling weighed down by responsibilities,” or “grasping an idea” reflect underlying conceptual metaphors such as SUCCESS IS UPWARD MOVEMENT, HEAVINESS IS DIFFICULTY, or UNDERSTANDING IS GRASPING, which provide a coherent framework for interpreting complex phenomena (Lakoff and Johnson, 1980; Pölda et al., 2021).

In adult-learning research, conceptual metaphors have increasingly been framed as “levers for learning” tools that help learners make sense of abstract, disorienting, or emotionally charged experiences (Hoggan, 2014). Drawing on this view, Hoggan (2014) conducted a qualitative study of adult learners facing significant life transitions, including breast-cancer survivors, and found that participants spontaneously used “similes, metaphors, and analogies” to navigate disorienting dilemmas. These metaphorical expressions helped them (a) uncover tacit ways of meaning making, (b) name experiences that might otherwise feel fragmented or inchoate, and (c) imagine new possibilities for being and acting in the world (Hoggan, 2014, p. 137). Thus, in these learning contexts, metaphorical meaning-making served not only as a linguistic resource but also as a cognitive and emotional mechanism through which learners reorganized their experiences and supported transformative change (Hoggan, 2014; Stuckey et al., 2022). Therefore, these mechanisms-uncovering tacit meaning, naming experience, and imagining alternatives-illustrate how conceptual metaphors operate as transformative tools that reorganize cognition, emotion, and identity, supporting the deep structural shifts central to Mezirow’s theory of perspective transformation (Hoggan, 2014, p. 137).

Method

This study employs a systematic literature review (SLR) guided by PRISMA 2020 framework (Page et al., 2021) to examine conceptual metaphors within transformative learning studies. A predefined specific search protocol was applied to database searching, inclusion/exclusion criteria, data extraction procedures, and synthesis method according to PRISMA check list.

Identification, Screening and Inclusion

The search was confined to publications released between 2016 and 2025, composed in English only, and published as peer-reviewed journal articles within the area of education and social

sciences across five prominent academic databases Scopus, JSTOR, ERIC, ProQuest, and Google Scholar using Boolean operators and keywords variations such as “transformative learning” and “conceptual metaphor(s). Additionally, only open-access (OA) articles were included to ensure the availability of full texts and to foster transparency throughout the review process. The initial database search yielded 1,579 records. After applying database-level filters for publication year ($n = 648$), language ($n = 60$), and journal article type ($n = 484$), and removing seven duplicate records, 14 additional records were identified through other sources. These steps resulted in 408 records being retained for the PRISMA retrieval and screening stages. During the screening phase, 347 records were excluded for reasons including non-journal publication formats (76), not accessible full text (5), and not sufficient engagement with either TLT or CM (266). Subsequently, 61 studies were assessed for full-text eligibility. In the final full-text assessment process, 30 articles were excluded because of a lack of alignment with the study’s aims and objectives. Ultimately, 31 articles were included in the final systematic review. A comprehensive delineation of the screening and eligibility processes across the various databases is presented in Table 1 and the selection process is illustrated in Figure 1 PRISMA flow chart.

Table 3 Database- specific screening outcomes and reasons for exclusion across PRISMA stages

Database	Records Retrieved	Not Journal Articles	Not Accessible	Not Related to CM or TLT	Not Matching Aims & Objectives	Included
Scopus	12		1	2	1	8
JSTOR	68	13		49	3	3
ERIC	5			1	1	3
ProQuest	186			167	17	2
Google Scholar	123	63	4	47		8
Other Sources	14				8	6
Total	408	76	5	266	30	31

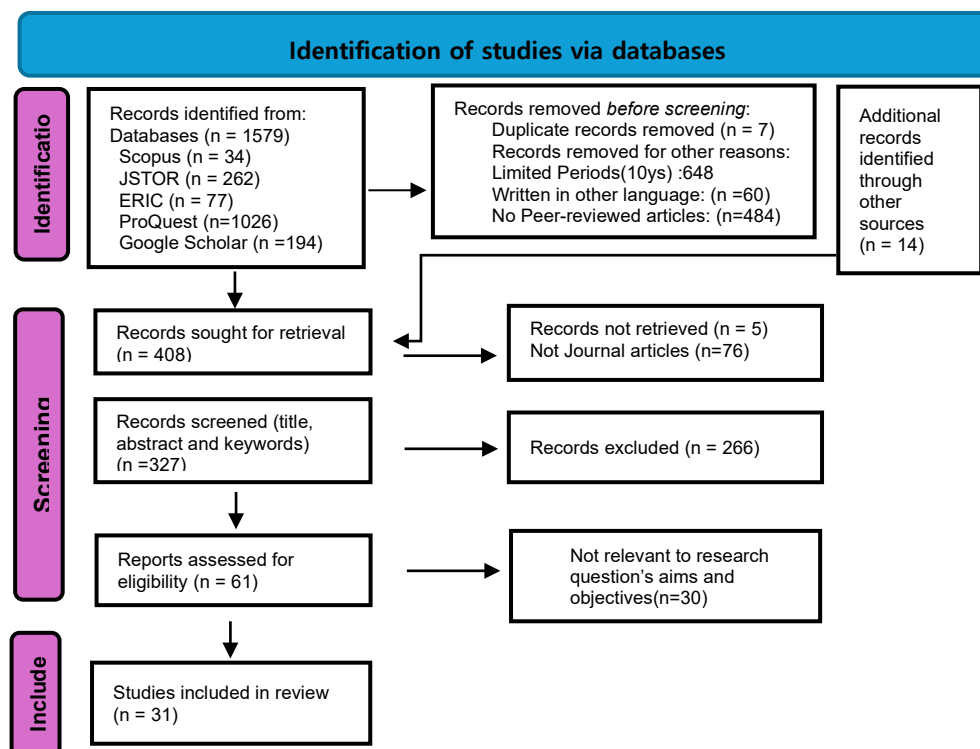


Figure 1. PRISMA flow diagram of the study selection

Data Extraction and Synthesis

A qualitative coding scheme was developed inductively in response to the study's research questions and refined through iterative reading of the texts included. NVivo software was used in the initial organization of codes. Coding decisions were subsequently refined through iterative close reading of the included studies across two independent rounds, separated by a two-week interval, to enable self-comparison and reduce interpretive drift. As a single-researcher review, formal inter-rater reliability statistics were not calculated; however, the predefined coding framework and iterative self-checking procedure served to enhance analytic transparency. Because individual studies often engaged metaphors in multiple ways or across several learning phases, overlapping codes were permitted, reflecting the non-linear and multidimensional nature of transformative learning.

The analysis addressed the three core research questions through targeted coding categories. For RQ1, the functional use of conceptual metaphors was coded in three primary categories (Table 3). For RQ2, Mezirow's ten original phases were first consolidated into five higher-order analytic stages: Disorienting Dilemma, Self-Examination, Critical Reflection, Exploration/Action, and Reintegration. Stage-specific alignment with these five higher-order stages was coded as a further analytical category (Table 3). For RQ3, five lifelong learning implication codes were developed from patterns identified across the reviewed studies and grounded in established literature. *Reflective Enhancement* draws on Mezirow's (2000) conception of critical self-reflection as the engine of perspective transformation.

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Intellectual, Professional, Cheerfulness, Morality

Emotional Engagement is grounded in Dirkx's (2006) argument that emotion is integral to adult meaning-making. *Identity Development* builds on Illeris (2014)'s conceptualization of transformative learning as fundamentally concerned with the reconstruction of adult identity. *Adaptive Expertise* and *Informal Learning Transfer* were derived from recurring patterns observed across the 31 reviewed studies, reflecting learners' development of transferable capacities and meaning making beyond formal educational contexts. These five codes were applied as a distinct analytical category (Table 3).

Table 4 Integrated Coding Framework for Systematic Review

Domain	Code	Category & Description
1) Study Characteristics	Area	HE (Higher Ed), NIE (Non/Informal), GE (General), AL (Adult/Lifelong), SS (Social Science), MS (Medical), AM (Arts/Music), NS (Natural Science), ETC
	Type	EMP (Empirical), THE (Theoretical)
	Method	Qual (Qualitative), Quan (Quantitative), Mixed, Com (Comparative)
	Region	EU (Europe), NA (North Am), AS (Asia), AF (Africa), SA (South Am), OC (Oceania)
2) RQ1.Functional Use	UC	Uncovering: Reveals tacit assumptions/hidden meaning structures
	NA	Naming: Labels/organizes diffuse experiences into categories
	IM	Imagination: Envisions alternatives and reframes identity
3) RQ2. TLT Stages	DD	Disorientation: Expresses disruption and disequilibrium
	SE	Self-Examination: Surfaces internal tension and self-assessment
	CR	Critical Reflection: Enables analytical reconsideration of assumptions
	EA	Exploration/Action: Supports imagining and trying new roles
	RI	Reintegration: Articulates stabilized new identity/worldview
4) RQ3. LLL Implications	RE	Reflective Enhancement: Builds lifelong reflective capacity
	EE	Emotional Engagement: Supports emotional depth in learning
	AE	Adaptive Expertise: Encourages flexible, transferable learning
	IL	Informal Learning: Extends meaning beyond formal settings
	ID	Identity Development: Enables ongoing adult identity growth

*A detailed overview of the included studies and their coding across analytical dimensions is provided in Table A1 (Two supplementary tables are provided in the Appendices: Table A1 contains the full coding dataset for all 31 studies across RQ1, RQ2, and RQ3 dimensions, and Table A2 lists the complete 36 conceptual metaphors with their functional use codes and source studies).

Risk of Bias Assessment

This review adopted a qualitative, interpretive approach to assessing the risk of bias. Bias was considered in three main areas. Selection bias was minimized by searching multiple databases, using clearly defined inclusion and exclusion criteria, and a screening process informed by PRISMA. Publication bias was reduced through broad coverage across journals and supplementary strategies. Conceptual bias was evaluated by examining how substantively each study engaged with transformative learning theory (TLT) and conceptual metaphor theory (CMT); studies that mentioned these frameworks only superficially were excluded. Analytic consistency was supported by a predefined coding framework, which was refined iteratively through constant comparison.

Data Analysis

The analysis focused on three interconnected dimensions aligned with the review's research questions: (1) identifying patterns in the functional use of conceptual metaphors within transformative learning scholarship, (2) examining how these metaphors were applied across Mezirow's ten-phase model, and (3) synthesizing their broader implications for lifelong learning. Descriptive statistics were first used to summarize the distribution of studies across theoretical, methodological, and regional categories. This was followed by a qualitative thematic analysis to explore how TLT and CMT were conceptualized and operationalized within the selected literature, including their stage-specific alignment with Mezirow's framework.

Integrating these analytic strands provides a structured basis for interpreting how conceptual metaphors function within transformative learning processes and how these functions relate to developmental transitions across transformative stages. This approach enabled the review to connect conceptual, developmental, and practice-oriented dimensions, offering a coherent analytic framework for the findings presented in the subsequent sections and supporting a more robust synthesis of the implications for lifelong learning practice.

Results

To contextualize the dataset, the distribution of key metadata categories, such as authors' regional affiliations, study methodology, research type, and disciplinary area, is summarized in Table 4. The overall pattern indicates a strong predominance of North American and European scholarship, a heavy reliance on empirical research type and qualitative research designs, and substantial representation of adult/lifelong learning and general education fields. These characteristics reflect the current landscape of transformative learning research and serve as important context for interpreting the metaphor-specific findings discussed in this chapter.

Table 5 Regional, Methodological, and Study Area Distribution (N=31)

Category	Codes	Frequency	Percentage
1. Author Region	NA; EU; AS; OC; AF	14; 8; 4; 3; 2	45.2%; 25.8%; 12.9%; 9.7%; 6.5%
2. Research Type	EMP; THE	23; 8	74.2%; 25.8%
3. Methodology	QUL; MM; TC	22; 4; 5	71.0%; 12.9%; 16.1%
4. Study Area	AL; GE; SS; HE; NIE; AM; NS; MS	10; 7; 7; 4; 1; 1; 0; 1	32.3%; 22.6%; 22.6%; 12.9%; 3.2%; 3.2%; 0%; 3.2%

Functional Uses of Conceptual Metaphors (RQ1)

A total of 36 distinct conceptual metaphors were identified across the 31 reviewed articles (see Table A2 in Supplementary Materials for the full list with author(s) (year) and paper ID number). These metaphors served three core functions: Naming, Imagining, and Uncovering, as detailed in Table 5. Naming and Imagining were equally the most prevalent (both $n = 14$, 45.2%), followed by Uncovering ($n = 10$, 32.3%).

Table 6 Integrated Coding Results

Code RQ1	Count	Percent	Code RQ 2	Count	Percent	Code RQ 3	Count	Percent
NA	14	45.2%	CR	15	48.4%	ID	20	64.5%
IM	14	45.2%	EA	15	48.4%	RE	19	61.3%
UC	10	32.3%	RI	12	38.7%	AE	7	22.6%
			DD	3	9.7%	IL	6	19.4%
			SE	2	6.5%	EE	4	12.9%

Note. The percentages exceed 100% because some studies used multiple functions.

Transformative Learning Stages (RQ2)

Mezirow's five core TLT stages—Disorienting Dilemma (DD), Self-Examination (SE), Critical Reflection (CR), Exploration/Action (EA), and Reintegration (RI)—appeared with markedly different frequencies (Table 5). Critical Reflection emerged as the most frequent stages ($n = 15$, 48.4%). Exploration/Action evenly followed ($n = 15$, 48.4%), appearing most strongly in experiential, field based, and practice-oriented studies. Reintegration was evident in over one third of the sample ($n = 12$, 38.7%). The early-stage processes of Disorienting Dilemma and Self-Examination were comparatively rare (9.7% and 6.5%, respectively).

Implication for Lifelong Learning (LLL) Codes (RQ3)

Five Lifelong learning codes captured the broader implications of transformative learning experiences (Table 5). Identity Development was the most prominent outcome ($n=20$, 64.5%).

Reflective Enhancement (n=19, 61.3%), followed by Adaptive Expertise (22.6%), Informal/Lifelong Learning (19.4%), and Emotional Engagement (12.9%).

Discussion

The findings show that conceptual metaphors serve three distinct but interrelated functional uses within transformative learning: Uncovering, Naming, and Imagining. These functional uses provide insight into how adult learners use metaphoric language to surface implicit meanings, structure complex experiences, and project alternative possibilities.

Alignment with Transformative Learning Theory and Prior Research

Uncovering metaphors act as powerful catalysts for disorientation and emotional insight. For example, “Material symbols of struggle” (Finn, 2025; Paper 4) uses physical objects to present unveiled struggle and resistance. These metaphors exposed learners’ tacit cultural assumptions, emotional tensions, and habitual ways of seeing. Their role echoes Mezirow’s assertion that transformation begins with a disorienting dilemma that disrupts an individual’s existing frame of reference (Mezirow, 2000). These metaphors were most strongly associated with Critical Reflection during the Disorienting Dilemma and Self Examination stages.

Naming metaphors serve as structuring devices for critical reflection. Metaphors like “Tapestry weaving” (Clarke et al., 2024; Paper 7) serves to name and characterize the intricate, multilayered nature of experiences in social work education. These metaphors were used to structure, categorize, and make sense of complex learning processes, and functioned as conceptual anchors that rendered abstract developmental and pedagogical dynamics more comprehensible and understandable. Naming metaphors showed strong alignment with the Critical Reflection and Reintegration stages. This suggests that effective critical reflection depends not only on questioning assumptions but also on having robust conceptual resources to reorganize meaning. Thus, Naming metaphors also directly support what Mezirow (2000) identifies as the central stage of transformative learning: critically assessing and restructuring assumptions through meaning-making discourse.

Imagining metaphors act as resources for envisioning new identities and futures. Metaphors such as “Agency as compass” (Green, 2021; Paper 17) guides learners by providing directions during transformative learning processes. These metaphors were the most prevalent across the dataset and enabled learners to envision alternative identities, possibilities, and trajectories, reflecting contemporary expansions of transformative learning theory that emphasize imagination, relational meaning-making, and embodied knowing. Imagining metaphors aligned most closely with Exploration/Action stage and to a lesser extent with Reintegration.

Importantly, these three functional uses map meaningfully onto Mezirow's transformative learning stages in a complementary manner: Uncovering metaphors support Critical Reflection, Naming metaphors strongly facilitate Critical Reflection and Reintegration, and Imagining metaphors drive the later Exploration/Action stage. This stage-specific alignment is vital as it enhances learners' understanding of the entire transformative learning journey, allowing them to recognize where they are in the process and what kinds of meaning-making are most needed at each point of learning process. For educators and lifelong learning practitioners, this relationship offers valuable guidance in designing and enhancing lifelong learning programs. By intentionally incorporating stage-appropriate functional uses of metaphors, practitioners can create more structured, emotionally supportive, and forward-looking interventions that help learners navigate the full trajectory of perspective transformation.

Overall, these findings suggest that conceptual metaphors operate as cognitive-emotional scaffolds that help shape the overall structure of transformative learning. Through this combination of functions, conceptual metaphors support learners as they move across stages of transformative learning and help sustain perspective change as a coherent, developmental, and lifelong process.

Contributions to Lifelong Learning

The findings show the implications of conceptual metaphors to enhance lifelong learning engagement and practice by bridging the cognitive, emotional, and imaginative dimensions of adult development across formal, informal, and everyday learning contexts. Naming metaphors strengthen reflective enhancement (61.3% of studies) by providing stable linguistic tools for ongoing sense-making, enabling learners to organize diffuse life experiences into coherent, manageable categories that support continuous critical reflection long after formal programs have ended (Hoggan, 2014; Lawrence, 2022). Uncovering metaphors foster reflection and some emotional engagement (12.9%) and help learners confront tacit assumptions and cultural contradictions, transforming disorienting dilemmas into opportunities for deeper self-awareness and emotional regulation, which are key drivers of sustained lifelong learning motivation (Dirkx, 2006). Imagining metaphors, prevalent in identity-focused studies (64.5%), empower learners to envision alternative selves and trajectories, in that way cultivating adaptive expertise (22.6%) and the capacity for ongoing identity reconstruction in response to changing personal, professional, and societal demands (Hoggan, 2016; Taylor and Cranton, 2012).

In practice, these functional uses promote learning transfer across contexts: metaphors make abstract processes of transformative learning into concrete and personally meaningful, increasing learner agency and persistence in self-directed, workplace, community, and digital learning environments. By revealing hidden dynamics, structuring complexity, and projecting future possibilities, conceptual

metaphors help learners equip themselves with symbolic resources for making meaning over their entire lifetimes.

For lifelong learning practitioners (educators, facilitators, informal workplace trainers, and community developers), this review suggests several evidence-based approaches that may support perspective transformation. One such approach is the use of guided metaphor-elicitation activities in workshops or coaching sessions. Learners may be asked to describe their current learning journey, professional challenges, or life transitions using metaphors (e.g., “My learning is a tapestry” or “My life is on an island”). This brings tacit assumptions, stimulates critical reflection, and activates both analytic and creative thinking (Bracci et al., 2017; Hoggan, 2014). Metaphor mapping or visual/narrative exercises were used to support the Exploration/Action and Reintegration stages. Learners can visually expand Imagining metaphors (e.g., “agency as compass”) to plan concrete actions, thereby building adaptive expertise and motivation for ongoing learning (Lawrence, 2022). Integrating metaphor-based dialogue into informal and digital lifelong learning settings can strengthen learners’ engagement and social participation. In community programs, online platforms, or workplace training, facilitators can encourage group sharing of personal metaphors to foster emotional engagement, reduce isolation, and support culturally responsive identity development through shared experiences. This approach is particularly valuable in Indigenous, non-formal, or diverse adult contexts (Hoggan, 2016; Taylor and Cranton, 2012).

These accessible, low-cost techniques make transformative learning more intuitive and inclusive, turning everyday language into a powerful lever for lifelong perspective transformation. As a whole, understanding the stage-specific functional uses of metaphors enables practitioners to develop long-term visions and systematic programs that support learners throughout the entire transformative process rather than isolated events.

Limitations and Future Research Directions

This study has several limitations. First, focusing only on explicit mentions of TLT and metaphors may have led to the exclusion of relevant studies from the review. Second, because many studies employ overlapping functional uses and stages, frequency counts reflect co-occurrence rather than mutually exclusive categories. Third, the synthesis is interpretive, and different coding teams might yield nuanced variations. An additional limitation concerns potential publication bias resulting from the exclusive inclusion of English-language, open-access journal articles. This approach may have excluded relevant non-English, subscription-based, and regionally published studies, leading to the underrepresentation of perspectives from developing countries and non-Western contexts. This limitation reflects structural inequalities in global academic publishing and should be considered when interpreting the findings. Future reviews may address this bias by incorporating multilingual and non-OA sources.

Future research should address these gaps through: (a) expanded geographic and linguistic inclusion to examine cultural variations; (b) employing longitudinal or mixed-methods designs that track metaphor evolution; (c) testing metaphor-based pedagogies in diverse lifelong learning contexts.

Conclusion

This PRISMA-guided systematic review provides evidence that conceptual metaphors play a central and facilitative role in transformative learning through three interrelated functional uses: Uncovering, Naming, and Imagining. The analysis of the 31 peer-reviewed studies suggests that these functional uses align meaningfully with Mezirow's developmental stages. Uncovering metaphors primarily support Critical Reflection, Naming metaphors facilitate critical reflection by structuring emerging understanding, and Imagining metaphors drive Exploration/Action and, to a lesser extent, Reintegration.

These results have practical implications for learners and educators. Understanding this stage-specific alignment helps learners better understand the transformative learning process and offers educators and lifelong learning practitioners a coherent framework for designing emotionally resonant and developmentally responsive learning environments. This means that practitioners could design more effective programs by using conceptual metaphors that match the learner's cognitive and emotional needs.

These findings further highlight the significance of conceptual metaphors in lifelong learning. Beyond their linguistic function, metaphors operate as accessible cognitive-emotional tools that strengthen reflective capacity, foster some emotional engagement, support identity development, and cultivate adaptive expertise. By bridging Conceptual Metaphor Theory and Transformative Learning Theory, this review advances both theoretical understanding and practical application. It reaffirms Mezirow's emphasis on perspective transformation while extending it through a symbolic and imaginative lens that accounts for the emotional and developmental dimensions of learning. Ultimately, the functional uses of conceptual metaphors do not merely describe transformation but actively enact it, supporting transformative learning as a coherent and lifelong process. As adult education continues to respond to increasing societal complexity, the deliberate use of these metaphor functions holds considerable potential for fostering more meaningful, inclusive, and sustainable lifelong learning experiences.

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