
A conceptual alignment between Universal Design for Learning (UDL) and Social and Emotional Learning (SEL) in higher education : A structured narrative review.

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Déclaration de divulgation : L'auteur n'a pas connaissance de quelconque financement qui pourrait affecter l'objectivité de cette étude.

Conflit d'intérêts : L'auteur ne signale aucun conflit d'intérêts.

Pour citer cet article : ZNIBER .K & BENTAIBI .R (2026) « A conceptual alignment between Universal Design for Learning (UDL) and Social and Emotional Learning (SEL) in higher education : A structured narrative review», African Scientific Journal « Volume 03, Num 35 » pp: 2529– 2550.



DOI : 10.5281/zenodo.20122548

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Abstract

This literature review examines Universal Design for Learning (UDL) and Social and Emotional Learning (SEL) as complementary approaches to supporting learning and well-being in higher education. UDL is presented as a proactive design framework that anticipates learner variability through multiple means of engagement, representation, and action and expression, with growing attention in university teaching and online learning contexts (McNutt & Craddock, 2021; Fornauf & Erickson, 2020). SEL is discussed through evidence reporting improvements in social-emotional skills, attitudes, behavior, and academic performance, with emerging applications in university courses and structured programs targeting stress, anxiety, and social connection (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Stocker & Gallagher, 2018; Seppälä, et al., 2020; Ellard, Dennison, & Tuomainen, 2023). Synthesizing the reviewed literature, the paper argues that UDL and SEL converge on four shared foundations: inclusion, engagement, motivation, and learner empowerment. UDL contributes enabling course structures, while SEL contributes competencies that support participation and persistence. The review identifies two major gaps: the absence of a proven framework in higher education that integrates both frameworks and explicitly teaches SEL skills through a UDL-based design, and by the lack of platform architectures that enable this integration to be implemented in a university context (Wells, 2022; Bucheli, Gómez-Galán, Mesa, & Catalán, 2024)

Keywords : Universal Design for Learning (UDL), Social and Emotional Learning (SEL), Higher Education, Learner Engagement and Motivation, Inclusive Learning Design.

Introduction

Universities increasingly face a dual challenge: supporting academic learning while also responding to student well-being concerns such as stress, anxiety, loneliness, and reduced persistence (Ellard, Dennison, & Tuomainen, 2023). In this context, two bodies of work offer promising but often separate contributions. Universal Design for Learning (UDL) emphasizes proactive instructional design that anticipates learner variability from the outset by offering multiple means of engagement, representation, and action and expression (McNutt & Craddock, 2021). Social and Emotional Learning (SEL), in contrast, focuses on competencies that shape how learners regulate emotions, sustain effort, build relationships, and make constructive decisions, such capacities that are increasingly examined in relation to academic functioning and student adjustment (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Weissberg, Durlak, & Domitrovich, 2015).

Within higher education, UDL has gained traction as institutions reconsider traditional approaches to teaching and learning and seek inclusive practices that reduce barriers in both face-to-face and online environments (Fornauf & Erickson, 2020; Wells, 2022). At the same time, university-focused SEL interventions have been implemented through course-embedded units and structured programs, with reported improvements in coping-related outcomes, mindfulness, mood, and social connection, alongside links to academic performance (Stocker & Gallagher, 2018; Seppälä, et al., 2020; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Although both frameworks address participation and success, they often operate in parallel: UDL emphasizes the design of learning environments, while SEL emphasizes the development of learner competencies.

This review therefore examines how UDL and SEL may be conceptually aligned and practically integrated for university students. Specifically, it synthesizes literature on (1) UDL applications in higher education, (2) SEL interventions in university contexts, and (3) the points of convergence of both frameworks. Building on this synthesis, the paper highlights convergent foundations, namely inclusion, engagement, motivation, and learner empowerment, and identifies key research gaps, including the limited presence of higher-education models that teach SEL skills through UDL design and the lack of specified platform architectures or prototypes that operationalize this integration.

This article addresses the intersection between Universal Design for Learning (UDL) and Social and Emotional Learning (SEL) in higher education, with particular attention to their potential

integration as complementary approaches to supporting both academic learning and student well-being. The objective of the review is twofold: first, to synthesize how literature conceptualizes and applies UDL and SEL in university contexts; second, to identify convergences and research gaps that may support the development of integrated pedagogical and technological frameworks.

The article is structured in five main sections. The article starts with a presentation of the theoretical background of UDL and SEL, followed by a review of educational models and approaches that combine both frameworks. Thirdly, major research gaps emerging from the reviewed literature were identified, followed by a section synthesizing literature related to UDL applications in higher education, SEL interventions for university students, and the conceptual alignment between the two frameworks. Finally, the discussion and conclusion examine the implications of this convergence for higher education research and practice, while highlighting directions for future framework and platform development.

Purpose and Research Questions

This literature review examines how UDL and SEL are conceptualized and applied in higher education, and how the literature frames their potential integration for university students. Building on the theoretical foundations and empirical studies reviewed, the article synthesizes points of convergence between UDL and SEL and identifies gaps related to operational frameworks and technology-supported implementations.

This review is guided by three questions:

1. How is UDL described and applied in higher education contexts?
2. What does the literature report about SEL-focused interventions or practices for university students?
3. What gaps emerge in models integrating the two frameworks?
4. What conceptual alignment emerges between UDL and SEL from the reviewed

literature?

Research Methodology

This article presents a structured narrative literature review with thematic synthesis. The objective is to synthesize theoretical and empirical work relevant to UDL, SEL, and their potential integration in higher education, and to use that synthesis to identify gaps that justify future frameworks.

The corpus consists of peer-reviewed research and scholarly publications from scientific literature platforms, publishers, and search engines such as scopus, google scholar, ScienceDirect, SpringerLink, and other scientific platforms. The corpus directly address UDL in higher education, SEL in university contexts, and work that discusses connections between the two frameworks. Because the purpose of this review is conceptual integration and gap identification, the review does not claim exhaustive retrieval of all available studies. Instead, the included literature was selected for relevance to the research questions and for its contribution to theoretical framing or empirical evidence in higher education contexts.

Synthesis was conducted through thematic organization of the reviewed literature. Findings were compared across strands and discussed through four integrative foundations that recur in the conceptual alignment and discussion: inclusion, engagement, motivation, and learner empowerment. These foundations were used as an analytic lens to organize findings and interpret convergence across the UDL and SEL literatures.

1. Theoretical background

1.1. Universal Design for Learning

Universal Design (UD) was “initially coined by Ronald L. Mace in 1985 to denote: ‘a ways of designing a building or facility, at little or no extra cost, so that it is both attractive and functional for all people, disabled or not’” (Mace, 1985; Moore, Boyle, & Lynch, 2022)A project for research and demonstration was conducted by the Center for Universal Design from 1994 to 1997, with funding provided by the National Institute on Disability and Rehabilitation Research (NIDRR) under the U.S. Department of Education (Story, Mueller, & Mace, 1998). The project was titled Studies to Further the Development of Universal Design and was given the project number H133A40006. Among its activities, the project involved creating a complete set of guidelines for universal design (Connell, et al., 1997) (Story, Mueller, & Mace, 1998)

Through this research emerged seven universal design principles: equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, and size and space for approach and use (Connell, et al., 1997; Story, Mueller, & Mace, 1998; Moore, Boyle, & Lynch, 2022). Educational authors connect this UD foundation to instruction, noting that when educators employ UD principles in the design and delivery of instruction, accommodations can “more naturally occur in general education classrooms” (King-Sears, 2014, p. 199). In this sense, UD becomes a conceptual bridge from environmental design to instructional design (McNutt & Craddock, 2021).

Universal Design for Learning (UDL) is introduced in education by Rose and Meyer, who argued that resources and adaptations developed for disability can be applied across the curriculum to benefit all learners and should be informed by multimedia technologies and contemporary cognitive neurosciences (McNutt & Craddock, 2021). UDL is described as a proactive method for designing and delivering flexible approaches to teaching and learning that recognize learner variability from the outset (McNutt & Craddock, 2021) in order to accommodate all learners “without the need to retrofit or remove the student from the classroom” (McNutt & Craddock, 2021, p. 179).

The UDL framework “based on UD” (McNutt & Craddock, 2021, p. 179) is operationalized by three pillars: multiple means of representation, multiple means of action and expression, and multiple means of engagement (McNutt & Craddock, 2021). These pillars specify, respectively, varied ways of acquiring information, alternatives for demonstrating learning, and supports for motivation and appropriate challenge (McNutt & Craddock, 2021). King-Sears stresses that UDL is not solely about technology; it is equally about pedagogy for students with and without disabilities, thereby clarifying UDL as the curricular translation of UD’s design stance (2014). It is also rooted in neuroscientific research, with the core principles corresponding to affective (engagement), recognition (representation), and strategic (action/expression) learning systems (Dalton, Lyner-Cleophas, Ferguson, & McKenzie, 2019; Vladimirovna & Alexandrovna, 2023)

The table below summarizes how the three UDL principles mapped onto the “why/what/how” learning questions and associated learning systems, as described in the literature (Vladimirovna & Alexandrovna, 2023; Moffat, 2022; Bucheli, Gómez-Galán, Mesa, & Catalán, 2024)

Table N°1 : UDL principles mapped to the “why/what/how”

| Learning question | UDL Principle | What it represents | Focus |
|--------------------------|---|--|--|
| Why ? | Multiple means of engagement | Affective networks, variability of motivation | Recruit and sustain interest; develop self-regulation; support competence, autonomy, and self-reflection |
| What ? | Multiple means of representation | Perception ; comprehension | Provide information in multiple formats; support language/symbols; optimize understanding |
| How ? | Multiple means of action and expression | Provide multiple ways for students to demonstrate knowledge and skills | Provide multiple ways for students to demonstrate knowledge and skills |

The design of UDL aims to address the needs of every learner by delivering challenging instruction characterized by flexibility and variety (Hitchcock, Meyer, Rose, & Jackson , 2002;

Rose & Strangman , 2007). The principles of UDL are linked to brain networks, and these principles have been crafted to target learning processes associated with each network (Boothe, Lohmann, Donnell, & Hall, 2018). UDL reframes inclusive education from case-by-case adjustments to inclusive-by-design, aligned with natural variation present in classrooms (Dalton, Lyner-Cleophas, Ferguson, & McKenzie, 2019). At the systems level, CAST’s UDL framework from the 1990s has become influential in U.S. policy and is gaining international attention (Dalton, Lyner-Cleophas, Ferguson, & McKenzie, 2019). In practice, higher-education examples show UDL used to provide multiple means in blended and online courses, reduce barriers, and support high levels of performance (Dalton, Lyner-Cleophas, Ferguson, & McKenzie, 2019).

All in all, UD supplies usability principles, while UDL applies them to representation, action/expression, and engagement in order to proactively address learner variability rather than face the obligation to retrofit accommodations (King-Sears, 2014) (McNutt & Craddock, 2021).

2. Social and emotional Learning (SEL)

Social and emotional learning (SEL) refers to the development of knowledge, attitudes, and skills that support individuals’ ability to recognize and manage emotions, build relationships, and make constructive decisions. In educational research, SEL is commonly discussed as a

framework of competencies linked to student well-being and academic functioning (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Weissberg, Durlak, & Domitrovich, 2015).

SEL is frequently organized around five competency domains: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Weissberg, Durlak, & Domitrovich, 2015; Simion, 2023). Across studies, SEL is associated with outcomes such as improved attitudes, behavior, and academic performance, as well as improved classroom climate and participation (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Weissberg, Durlak, & Domitrovich, 2015).

The table below is presented as a synthesis tool rather than a checklist of guaranteed effects; the specific outcomes reported vary by study design, population, context, and implementation. (Payton, et al., 2008 ; McKown, Gumbiner, Russo, & Lipton , 2009 ; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011 ; Fernandez, Aznal-Diaz, Caceres-Reche, & Trujillo-Torres, 2011 ; Weissberg, Durlak, & Domitrovich, 2015 ; Farozin & Kurniawan, 2019 ; Sorbet & Notar, 2022 ; Vestad & Tharaldsen, 2022)

Table N°2 : SEL competency domains and illustrative outcomes discussed in the reviewed literature

| SEL competency | What it implies | Illustrative outcomes discussed in literature |
|------------------------------------|--|---|
| Self-awareness | Recognizing emotions and how they shape behavior; identifying strengths/limits | Self-reflection; self-confidence; goal clarity; well-being |
| Self-management | Regulating emotions, thoughts, and behaviors | Stress coping; persistence; focus; time management; reduced anxiety |
| Social Awareness | Understanding others; empathy; awareness of norms | Prosocial behavior; reduced conflict; inclusion; collaboration |
| Relationship skills | Building and sustaining relationships; communication; conflict resolution | Peer support; social connection; cooperative learning |
| Responsible decision making | Considering consequences; ethical and constructive choices | Problem-solving; ethical reasoning; reduced impulsivity |

3. Education models integrating UDL and SEL

In recent years, integrated models have emerged that bring together the strengths of both to promote academic access and emotional well-being for all students. Three main models emerge from this landscape: systemic SEL frameworks, trauma-informed multi-tiered systems of support (MTSS), and culturally responsive SEL-UDL integration.

Systemic SEL frameworks present social–emotional learning not as a standalone curriculum, but as a whole-school approach embedded in policies, teaching practices, and community partnerships. In this perspective, SEL becomes part of everyday instruction and classroom culture. UDL then matters because it helps ensure that all students, regardless of background or ability, can access and participate in SEL activities. Teacher professional development often reflects this logic by modelling UDL through choice, collaboration, and structured reflection, mirroring the inclusive learning environments educators are expected to create for students (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011) and belonging in their own learning, they are more likely to reproduce those same conditions in their classrooms.

A second prominent model is trauma-informed MTSS, which integrates UDL and SEL through a tiered support system. In this framework, universal supports (Tier 1) provide all students with access to evidence-based SEL instruction designed with UDL principles (for instance, multiple means of engagement and expression), while targeted (Tier 2) and intensive (Tier 3) interventions address students facing greater challenges or trauma (Chafouleas, Johnson, Overstreet, & Santos, 2016; Maynard, Farina A, Dell, & Kelly, 2019; Nitz, et al., 2023). These models typically emphasize staff training in trauma awareness, organizational shifts that promote safety and trust, and instructional practices that treat emotional regulation as inseparable from academic learning. The implication is that embedding trauma-informed practices within a UDL-informed structure can strengthen student resilience while reducing barriers to participation for those most at risk (Thomas, Crosby, & Vanderhaar, 2019; Avery, et al., 2020; Knox, Lawson, Gaona, & Casella, 2025)

A third model gaining visibility is culturally responsive SEL–UDL integration. This approach starts from the idea that both SEL and UDL must be adapted to reflect learners’ cultural assets, lived experiences, and identities. For English learners and students from marginalized communities, culturally responsive teaching practices can be combined with UDL’s flexibility to ensure that SEL activities are meaningful, accessible, and contextually relevant (Lau & Shea, 2024) The aim is not only access, but recognition: students should be able to bring their

perspectives into literacy development and social–emotional growth, and feel valued as contributors within their communities.

Across these approaches, several common threads recur: professional development is itself designed using UDL principles; SEL is treated as a systemic priority rather than an add-on; trauma-informed care is embedded within multi-tiered supports; and cultural responsiveness is positioned as central to effectiveness (Lau & Shea, 2024; Avery, et al., 2020; Knox, Lawson, Gaona, & Casella, 2025; Maynard, Farina A, Dell, & Kelly, 2019; Thomas, Crosby, & Vanderhaar, 2019; Nitz, et al., 2023; Chafouleas, Johnson, Overstreet, & Santos, 2016; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011)

Overall, the message is consistent: integrating UDL with SEL requires moving beyond isolated interventions toward whole-school transformation, where the learning environment anticipates diversity in emotional needs as well as learning needs. When done well, this kind of integration strengthens engagement and supports academic success by creating classrooms where all learners feel safe, connected, competent, and empowered to succeed (Nitz, et al., 2023)

4. Research gaps

This review describes UDL as proactive design with options for engagement, representation, and action/expression, and it presents SEL as five competency domains linked to learning and well-being (King-Sears, 2014) (McNutt & Craddock, 2021) (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011) (Weissberg, Durlak, & Domitrovich, 2015). It also reports positive results for UDL in higher education and for SEL with university students (Dalton, Lyner-Cleophas, Ferguson, & McKenzie, 2019) (Wells, 2022) (Stocker & Gallagher, 2018) (Seymour, 2023) (Seppälä, et al., 2020) (Ellard, Dennison, & Tuomainen, 2023).

A first gap concerns the absence of a concrete framework that teaches SEL skills explicitly through UDL design in higher education. Within the scope of this review, the reviewed studies largely address UDL and SEL in parallel or connect them conceptually, rather than specifying an integrated instructional model in which UDL serves as the mechanism for teaching and practicing discrete SEL competencies.

A second gap concerns technology-supported operationalization. Technology is described as an enabler of UDL and self-regulated learning, but the reviewed literature does not specify platform features or prototypes designed to deliver SEL practice through UDL principles (Bucheli, Gómez-Galán, Mesa, & Catalán, 2024; Bray, et al., 2022).

5. Review of literature

5.1. UDL applications in Higher Education

The concept of UDL has increasingly gained traction within higher education (Fornauf & Erickson, 2020). This shift reflects efforts to reconsider traditional teaching approaches and design learning environments that anticipate student variability. CAST is widely associated with the development of UDL, drawing inspiration from UD in architecture and product design (Fornauf & Erickson, 2020). In higher education, UDL is framed as a proactive approach to creating learning environments and assessments that offer multiple pathways for participation and performance (Fornauf & Erickson, 2020; Dalton, Lyner-Cleophas, Ferguson, & McKenzie, 2019).

UDL is also distinguished from adjacent universal design approaches by its explicit emphasis on learning processes and its alignment with principles linked to engagement, representation, and action/expression (Dalton, Lyner-Cleophas, Ferguson, & McKenzie, 2019; Schreiner, Rothenberger, & Scholtz, 2013). In the higher-education literature reviewed here, UDL is most often discussed as a practical instructional design orientation, particularly relevant to blended and online learning contexts where barriers can be amplified by modality, communication structure, and assessment constraints (Wells, 2022) (Seymour, 2023).

5.2. SEL intervention for University Students

University students often experience stress, anxiety, loneliness, and reduced persistence, which can undermine attention and well-being (Ellard, Dennison, & Tuomainen, 2023). Within this context, studies have tested SEL-informed approaches in university settings, including course-embedded units and structured programs targeting coping, emotion regulation, and social connection (Stocker & Gallagher, 2018; Seppälä, et al., 2020; Charbonnier, et al., 2023; Schoeps, de la Barrera, & Montoya-Castilla, 2019).

A course-specific example is a semester-long SEL unit embedded in a statistics class, designed to help students reflect on stress, identify coping resources, and reduce anxiety during mathematical work and examinations (Stocker & Gallagher, 2018). A systematic review on loneliness in university students also suggests that interventions emphasizing social connection, such as group activities and peer support, are more effective in reducing loneliness than psychoeducation alone (Ellard, Dennison, & Tuomainen, 2023). Beyond single-course approaches, randomized and structured programs have reported improvements across mental

health and well-being indicators, including stress, mood, mindfulness, and social connection (Seppälä, et al., 2020). However, follow-up findings in emotional development interventions suggest that some gains can diminish over time when practice is not sustained, implying the importance of embedding skill practice into ongoing coursework or routines (Schoeps, de la Barrera, & Montoya-Castilla, 2019).

Across studies, three recurring design conditions for effective university SEL emerge: repeated practice, structured feedback, and opportunities for social connection (Stocker & Gallagher, 2018; Ellard, Dennison, & Tuomainen, 2023; Elmi, 2020)

5.3. Conceptual Alignment between UDL and SEL

Universal Design (UD) establishes a design framework aiming to maximize usability without case-by-case specialized adaptation. This framework is structured through seven principles that emerged from the project Studies to Further the Development of Universal Design (H133A40006) and its guidelines (Connell, et al., 1997) (Story, Mueller, & Mace, 1998) (Moore, Boyle, & Lynch, 2022). UDL extends this model into education by embedding supports proactively into instruction so that accessibility is planned rather than retrofitted

SEL refers to a set of competencies ; self-awareness, self-management, social awareness, relationship skills, and responsible decision-making ; linked to learning, well-being, and participation (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Weissberg, Durlak, & Domitrovich, 2015). By considering design objectives (UD→UDL) alongside learner competencies and outcomes (SEL), a coherent interpretation emerges around shared foundations.

First, when design begins from “use by all” and moves into instruction, inclusion becomes a structural premise rather than a remedial add-on. UD implies inclusion through its principles (Connell, et al., 1997; Story, Mueller, & Mace, 1998; Moore, Boyle, & Lynch, 2022). UDL operationalizes this premise in everyday teaching so that accessibility is planned into materials, methods, and assessments, not retrofitted for individual students (King-Sears, 2014; McNutt & Craddock, 2021). Evidence from SEL indicates that when social and emotional competencies are taught, participation and performance can improve, functioning as indicators of inclusive classroom processes (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Weissberg, Durlak, & Domitrovich, 2015). This implies that UD→UDL positions inclusion in design, while SEL highlights inclusion as an outcome supported by learner competencies.

Second, once inclusion is treated as a design premise, engagement becomes a central mechanism for participation. UDL emphasizes multiple means of engagement, including recruiting interest, sustaining effort, and supporting self-regulation (McNutt & Craddock, 2021; Bucheli, Gómez-Galán, Mesa, & Catalán, 2024). SEL approaches engagement from the learner side: self-management, coping, and social skills are associated with improved participation and reduced conflict, supporting sustained engagement in academic settings (Sorbet & Notar, 2022).

Third, sustaining participation and engagement requires attention to motivation. UDL treats variability in motivation as a design target, offering pathways to relevance, value, and autonomy (McNutt & Craddock, 2021; Vladimirovna & Alexandrovna, 2023; Bucheli, Gómez-Galán, Mesa, & Catalán, 2024) SEL develops capacities that underwrite persistence— such as appraisal, coping, and regulation , which are associated with adjustment and performance (McKown, Gumbiner, Russo, & Lipton , 2009; Fernandez, Aznal-Diaz, Caceres- Reche, & Trujillo-Torres, 2011; Farozin & Kurniawan, 2019). Meta-analytic findings link SEL participation to academic gains, which supports motivational claims with outcome evidence (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Weissberg, Durlak, & Domitrovich, 2015).

Finally, when engagement and motivation are addressed both by design and by competence, learner empowerment emerges as a synthesis. UDL specifies multiple means of representation, action/expression, and engagement, allowing students choice in access and demonstration of learning while maintaining challenge through flexibility (Hitchcock, Meyer, Rose, & Jackson , 2002; Boothe, Lohmann, Donnell, & Hall, 2018; McNutt & Craddock, 2021). SEL contributes skills that support agency and direction, including goal setting, self-monitoring, ethical decision-making, and collaboration (Weissberg, Durlak, & Domitrovich, 2015). When UDL's designed options align with SEL-supported agency, empowerment becomes a plausible integration outcome.

Altogether, these findings support that UDL and SEL converge on four foundations: inclusion, engagement, motivation, and learner empowerment, with UDL providing proactive and flexible design and SEL developing competencies that enable students to benefit from those designs effectively.

Discussion

This article examined UDL and SEL as complementary approaches to supporting learning and well-being in higher education. Across the theoretical background and the reviewed literature, a consistent idea emerges: UDL mainly addresses how learning is designed so barriers are reduced from the beginning, while SEL mainly addresses what learners develop so they can participate, persist, and interact more effectively (King-Sears, 2014) (McNutt & Craddock, 2021) (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011) (Weissberg, Durlak, & Domitrovich, 2015). Bringing both perspectives together makes it possible to frame inclusion, engagement, motivation, and empowerment as outcomes that depend on both course structures and student competencies.

A first point concerns inclusion in the UDL tradition. UD is described as a usability framework built around “use by all,” developed through the seven principles that emerged from Studies to Further the Development of Universal Design (H133A40006) and its guidelines (Connell, et al., 1997; Moore, Boyle, & Lynch, 2022; Story, Mueller, & Mace, 1998). UDL incorporates this idea into education by planning variability directly into the learning environment, instead of waiting for difficulties and then providing accommodations (King-Sears, 2014; McNutt & Craddock, 2021). This shifts inclusive education from individual adjustment to design-from-the-start (Dalton, Lyner-Cleophas, Ferguson, & McKenzie, 2019).

SEL supports inclusion from a different direction. SEL is linked to improved participation, classroom climate, and academic success, including findings from meta-analytic work (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). When considered together, inclusion appears both as a design premise built into instruction (UDL) and as outcomes supported by students’ social and emotional capacities (SEL).

A second convergence concerns engagement. UDL formalizes engagement as one pillar, emphasizing variability in motivation and the need to recruit interest, sustain effort, and develop self-regulation (McNutt & Craddock, 2021; Vladimirovna & Alexandrovna, 2023; Bucheli, Gómez-Galán, Mesa, & Catalán, 2024). SEL reaches a similar focus by emphasizing coping, self-management, and relational competencies associated with better participation and reduced stress-related barriers (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Sorbet & Notar, 2022). This overlap is highly relevant in the university context, where stress, anxiety, and

loneliness can undermine persistence and learning engagement (Ellard, Dennison, & Tuomainen, 2023).

Motivation is also framed as a point of convergence. UDL supports motivation through structured engagement and self-regulation supports (McNutt & Craddock, 2021; Bucheli, Gómez-Galán, Mesa, & Catalán, 2024). SEL supports motivation by building intrapersonal capacities such as coping, goal setting, and responsible decision-making, which are associated with adjustment and performance (Farozin & Kurniawan, 2019; McKown, Gumbiner, Russo, & Lipton, 2009; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). This indicates engagement, motivation, and empowerment as outcomes that depend on both course structures and student competencies.

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Motivation is also framed as a point of convergence. UDL supports motivation through structured engagement and self-regulation supports (McNutt & Craddock, 2021; Bucheli, Gómez-Galán, Mesa, & Catalán, 2024). SEL supports motivation by building intrapersonal capacities such as coping, goal setting, and responsible decision-making, which are associated with adjustment and performance (Farozin & Kurniawan, 2019; McKown, Gumbiner, Russo, & Lipton, 2009; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). This indicates that providing options and flexibility alone is insufficient; students also need skills to use those options effectively, particularly under stress.

The reviewed literature also shows that UDL is increasingly discussed in higher education, especially in online and blended formats, where students report improved clarity and accessibility in UDL-aligned courses (Wells, 2022; Seymour, 2023). Program-level implementation work highlights the importance of leadership and communities of practice (Altowairiki, 2023). The literature also includes an important caution: simply including more UDL elements does not guarantee better outcomes if suitability and assessment are not considered (Roski, Walkowiak, & Nehring, 2021). This caution is relevant to integration efforts because it implies that combining UDL and SEL should be guided by a coherent design logic rather than accumulation of strategies.

On the SEL side, interventions can be effective in university settings, especially when they involve active skill training and repeated practice (Stocker & Gallagher, 2018; Seppälä, et al., 2020; Ellard, Dennison, & Tuomainen, 2023). However, follow-up findings suggest that some effects may fade without continued practice, supporting the argument that SEL is more sustainable when embedded into ongoing coursework and routines (Schoeps, de la Barrera, & Montoya-Castilla, 2019; Elmi, 2020; Simion, 2023).

Still, the research gaps remain substantive: the reviewed literature did not specify a tested higher-education framework that teaches SEL skills through UDL design as one integrated unit, and it did not specify a platform architecture or prototype that delivers SEL practice through UDL principles (Wells, 2022; Seymour, 2023; Stocker & Gallagher, 2018; Seppälä, et al., 2020; Bucheli, Gómez-Galán, Mesa, & Catalán, 2024; Bray, et al., 2022). Because this article is grounded in theoretical framing, the proposed integration remains conceptual and requires empirical testing.

Limitations

This review has limitations consistent with narrative literature reviews. First, the article does not claim exhaustive retrieval of all available studies, and the corpus was assembled to address conceptual integration and gap identification rather than comprehensive coverage. Second, the reviewed UDL literature in higher education includes substantial reliance on student perceptions and implementation descriptions, which may limit causal claims about effectiveness. Third, while SEL is discussed in relation to higher education, several foundational SEL frameworks originate in earlier educational stages, which may affect transferability to university contexts and warrants careful adaptation and evaluation (Weissberg, Durlak, & Domitrovich, 2015).

Implications

For instructors, the review suggests that integrating UDL and SEL can be approached by designing learning environments that provide structured options (UDL) while embedding repeated practice of self-regulation, coping, communication, and collaboration skills within coursework (SEL) (Stocker & Gallagher, 2018; Elmi, 2020; Wells, 2022). For institutions, the reviewed UDL implementation literature highlights the enabling role of leadership, professional development, and communities of practice in sustaining inclusive design (Altowairiki, 2023). For researchers, the most pressing implication is the need to operationalize integration: developing implementable models that map UDL guidelines to teachable SEL skills, and translating those models into platform features or prototypes that can be tested for usability and effectiveness using learning and well-being outcomes aligned with existing evidence (Roski et al., 2021; Bucheli et al., 2024; Seppälä et al., 2020).

Conclusion

This review examined UDL and SEL as complementary approaches to supporting university learning and well-being. Across the theoretical background and the reviewed studies, UDL consistently appears as a proactive design framework that reduces barriers by planning for learner variability through engagement, representation, and action and expression (McNutt & Craddock, 2021; Fornauf & Erickson, 2020). In parallel, SEL research includes evidence linking social-emotional skill development to improvements in attitudes, behavior, and academic performance, with emerging university applications through course-embedded units and structured well-being programs (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Stocker & Gallagher, 2018; Seppälä, et al., 2020; Ellard, Dennison, & Tuomainen, 2023).

A central contribution of the review is the synthesis that UDL and SEL converge on four foundations relevant to higher education: inclusion, engagement, motivation, and learner empowerment. UDL contributes course structures that enable participation and flexible demonstration of learning, while SEL contributes competencies that help students sustain effort, cope with stress, and engage productively with peers and academic demands. At the same time, the review reinforces an important caution raised in UDL research: adding more design elements does not automatically improve outcomes unless suitability and evaluation are considered (Roski, Walkowiak, & Nehring, 2021).

Despite growing interest in UDL and SEL in higher education, substantial gaps remain. Within the scope of the reviewed literature, few studies specify a concrete higher-education framework that teaches SEL skills explicitly through UDL design as one integrated unit, and the literature rarely defines platform features or prototypes that would deliver SEL practice through UDL principles (Bucheli, Gómez-Galán, Mesa, & Catalán, 2024; Wells, 2022). Future work should therefore focus on developing integrated frameworks, translating them into implementable platform designs, and evaluating both usability and effectiveness using learning indicators and well-being outcomes aligned with existing evidence (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Seppälä, et al., 2020; Roski, Walkowiak, & Nehring, 2021).

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