IJUDUDL
International Journal for Universal Design and Universal Design for Learning

International Journal for Universal Design and Universal Design for Learning (IJUDUDL) Vol. 1, No. 2, April 2026 ISSN: 3119-6055

Universal Design for Learning in Project Management

Thomas J. Tobin[1] & Christopher Hromalik[2]

[1] Independent Scholar, USA, thomasjtobin.phd@gmail.com

[2]State University of New York at Oswego, USA

DOI: https://doi.org/10.34874/PRSM.ijududl-vol1iss2.6060

ABSTRACT

The formal project management (PM) framework, as expressed in the Project Management Body of Knowledge (PMBOK), does not explicitly advocate the use of inclusive design techniques to reduce access barriers for project participants and stakeholders. Because design, communication, budget, and quality are essential to any formal project, the Universal Design for Learning (UDL) framework dovetails well with formal project management processes to reduce waste, duplication, and rework throughout the project life cycle. In various phases and tasks within projects, project managers act in teaching and facilitating roles with stakeholders who need to learn information, understand processes, and contribute to project decisions. Barriers can arise in how project managers design engagements in which project personnel serve as stakeholders, take in information, and demonstrate their skills; UDL can proactively help lower such barriers to success. This article provides practical, evidence-based methods for implementing multivariate paths to improve task and project success, reducing rework, delays, and confusion.

Keywords

Universal Design for Learning (UDL), access, accessibility, barriers, design, project management

Introduction

Project management is equal parts planning, resource tracking, and asset management. Throughout project phases, project managers facilitate, train, and teach others about processes and information that help make stakeholder experiences smoother and more efficient. The Universal Design for Learning (UDL) framework is an evidence-based, systematic approach to developing and executing stakeholder learning engagements that lowers access and knowledge-gap barriers (Tobin & Behling, 2018), reducing unexpected negative risks and taking work off project managers' already full plates. Using a systems approach to change management, this article shares UDL techniques that have been

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

demonstrated to lower barriers and reduce project friction during the initiation, planning, and execution of projects. We propose aligning the UDL framework with process-based project management as effective practices that readers can apply and test, drawing on the authors' experiences and recent published research. The following sections preview our primary arguments.

Initiating Universally Designed Projects

In developing project charters and identifying stakeholders, applying the principles of UDL to the work helps project managers build in affordances and optimised options whenever stakeholders encounter new information, need to communicate, practice concepts, or collaborate with colleagues (Posey, 2018). During the charter and stakeholder-identification processes, both project managers and stakeholder groups are in learning roles, seeking information and predicting actions, timelines, and resource needs. A UDL lens at the start of projects helps everyone involved to speed up constitutive processes and reduce confusion and re-work, as we will demonstrate below.

Planning Universally Designed Projects

When defining, sequencing, and estimating project activities, a UDL perspective guides project managers to invest small amounts of time and effort up front, helping stakeholders become and stay engaged, absorb project information, and act based on it. The UDL framework helps project managers design stakeholder engagements to provide optimised options in all three areas—engagement, representation, and action/expression—lowering the risk of rework and reducing the likelihood of disengagement (Posey, 2018).

Executing and Monitoring Universally Designed Projects

During the execution and monitoring phases of projects, communication and team management are key elements of project success. In universally designed projects, quality assurance, change control, and risk management are aided by multiple pathways for stakeholders to participate in decision-making, receive information and communications, and communicate with one another, project sponsors, and project managers.

The Evidence for UDL's Effectiveness in Project Management

The neuroscientists at CAST developed the UDL framework in the late 1990s, and they have been evolving it through three major iterations since then (see CAST, 2024). Beginning in the early 2000s, part of CAST's organisational focus has been on workplace learning (CAST, 2025). Recently, several major studies of UDL's application and effectiveness in workplace learning and development have been published (e.g., Bartlett & Ehrlich, 2019; Gronseth & Hutchins, 2020; Lemanis, 2024; McKenna, 2023). Most of these publications share case

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

studies of UDL principles in training scenarios carried out by formal learning-and-development units within organisations. Table 1 presents data from case reports from 12 organisations worldwide on the attributes and actions of project managers.

Table 1

International Attitudes and Actions of Project Managers

Source	Description
Canada: Chee & Weaver, 2024	Integration of UDL principles in the management of unit-level projects to adopt open educational resources (OERs) for a Canadian institution's library and information-technology operational data store (ODS).
Canada: Kearney, 2024	A report on the implementation of UDL principles across the entire organisation using project-management techniques. The "Universal Design for Learning for Technology-enabled Post-secondary Courses at Mohawk College" research project from 2018 is a forerunner to the ideas in this paper.
Ireland: O'Shaughnessy & McAvinue, 2025	A case report on implementing project management and UDL principles across entire organisations, not just those with formal disability-support and project-management roles. Demonstrates the distributed nature of UDL-supported project management at the University of Limerick.
Ireland: ALTIT**UD**E Project, 2024	A consortium of more than 50 further education and higher education institutions adopted UDL principles across their service operations, using formal project management processes. The organisations involved in the project asked one of this article's authors to consult on the development of the UDL/project-management schema developed for participating institutions, and outputs of this work directly inform this article.
Japan: Kravit, 2019	Establishment of a "Universal Design Action Project" to train Japanese civil servants and educators to craft action, advocacy, and work plans for lowering access barriers using formal project management principles.
Norway: Lund, 2016	Country-wide use of universal design principles in the design of physical spaces as well as digital resources used by the public, with evidence of savings in terms of time, re-work, and money across various project types.

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

Spain: Saldaña, 2025	Merges UDL principles and an existing institutional project-management system to achieve efficiencies in a disability-support program.
United Kingdom: Moriarty, 2018	Adoption of UDL principles across DeMontfort University through a formal project-management approach in the "Learning and Organisational Development [office], the Centre for Enhancing Learning through Technology, the Department of Academic Quality, Information Technology and Media Services, Student and Academic Services, Library and Learning Services (LLS), and staff and students from the four academic faculties.
United States: LeGary & LaRocco, 2022	Narrative about how Goodwin University adopted UDL across all of its service touchpoints through a formal integration project.
United States: Bogdan, 2018	Establishment of Greensboro College as a "UDL institution," and sharing of their "Model of UDL in the Curriculum" report.
United States: Skaggs & McMullin, 2024	An edited collection of reports from large-scale academic libraries that have implemented formal projects to adopt UDL across their service and operational units.
Uruguay: Inspección Docente Departamento de Desarrollo y Diseño Curricular, 2025	An agile project management guide that advocates for incorporating several design frameworks into formal project management, including UDL.

Many of the formal processes in project management involve learning. From taking in information to analysing data to communicating effectively about progress and challenges, using the UDL framework increases efficiency and reduces rework across these processes. UDL is especially relevant to project management because of two patterns that we see in the evidence.

First, the slack and flexibility that need to be included in the design of well-run projects are often "take your best guess" factors: UDL provides a consistent and measurable way to think about flexibility in the design of project processes and tasks. For example, Pinto and Davis (2024) argue that "adding slack (extra time) to our activity duration estimates is a common behaviour and occurs for a variety of reasons, most commonly due to the desire to protect ourselves from aggressive or unreasonable project schedules" (p. 93). In other words, we create slack in schedules and budgets mostly to avoid setting expectations too tightly. By

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

applying UDL principles to the design of our materials and schedules, project managers can more accurately predict where flexibility is needed.

Second, both project management and UDL "grew up" together and have been slowly merging since their inception. While both inclusive design and project management have existed for many decades, the publication of the first edition of the PMBOK (PMI, 1996) and the earliest version of the UDL principles (CAST, 2024) both occurred in 1996. As seen in the dozen resources outlined above, early UDL work took the form of implementation projects, in which a project management approach was used to introduce UDL across teams, units, and institutions. As project managers implemented UDL, they often found that UDL techniques assisted them in general project management (see Kravit, 2019; Lund, 2016; Moriarty, 2018). The most recent studies report on effective ways to adopt UDL in project management processes across entire organisations. Developing a "crosswalk" of practical ways to adopt UDL across the project management life cycle is one potential strategy.

Need for UDL in Project Management

The Project Management Institute (PMI) unveiled a major shift in focus between the sixth (2017) and the current seventh edition (2021) of the *Guide to the Project Management Body of Knowledge* (PMBOK). Where earlier editions of the PMBOK Guide were process-based, the newest iteration of the *Standard for Project Management* within the PMBOK Guide is principle-based. The authors explain that "while effective in supporting good practice, process-based standards are prescriptive by their very nature. . . [T]his edition shifts to a principles-based standard . . . to focus more on intended outcomes rather than deliverables" (PMI, 2021, p. x). The authors try to soften the impact of the shift from processes to principles, saying that "nothing in this [seventh] edition . . . negates alignment with the process-based approach of past editions" (PMI, 2021, p. xi). Especially now that PMI has shifted to an outcomes- and principles-based structure for project management, there remains a need to be able to "crosswalk" the formal rigidity and predictability of earlier PMBOK standards against the more fluid domain-based principles in PMBOK 7—stakeholders, teams, development/life-cycle, planning, work, delivery, measurement, and uncertainty. UDL can play such a bridging role. Project managers can combine specific earlier PMBOK standards with UDL considerations to achieve outcomes aligned with the latest PMBOK 7 principles. Indeed, the Project Management Institute itself has taken a "both paths" approach with the publication of *Process Groups: A Practice Guide* (PMI, 2022), which also aims to align the process-based approach from PMBOK 6 and the domain-based structure of PMBOK 7.

In James McKenna's book *Upskill, Reskill, Thrive*, he argues for the use of UDL across workplaces to "examine the environment for elements that would impede" learning connections, especially in situations where training and skill development are key business

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

drivers: "the [UDL] guidelines help us establish, maintain, and enhance the learning triangle that is vital for any meaningful change" (p. 135). Throughout the project management life cycle, stakeholder groups encounter new information, knowledge gaps, learning needs, and communication challenges. One of the twelve principles of project management is *3.7: Tailor Based on Context*. While this principle does not explicitly speak to accessibility, inclusive design, or universal design in project materials and engagements, it prefigures a UDL approach, advocating for project teams to "examine the unique set of conditions for each project, so that they can determine the most appropriate methods of producing the desired outcomes." In other words, understanding stakeholders' specific needs, working methods, and preferences allows project managers to customise the elements of given projects to streamline work and provide communication and processes that align with how stakeholders expect to work together. The tailoring process occurs iteratively as project teams learn more about the resources, affordances, and constraints in specific projects. Because it is customised to the specific stakeholders in each project, this approach is time-consuming and resource-intensive (see Pinto & Davis, 2024).

Before we ever know the specific stakeholders, start tailoring for specific people, circumstances, and resources, and begin the first phase of projects, we can assume that the people involved in our work will bring varying characteristics to our engagements. By assuming variability among our colleagues—in terms of their levels of familiarity with our ideas, amount of background knowledge, skill levels, resource availability, preferences for communication, and many more vectors—we can plan the processes in the project life cycle using the UDL principles, guidelines, and considerations in order to lower access barriers and reduce overall project friction.

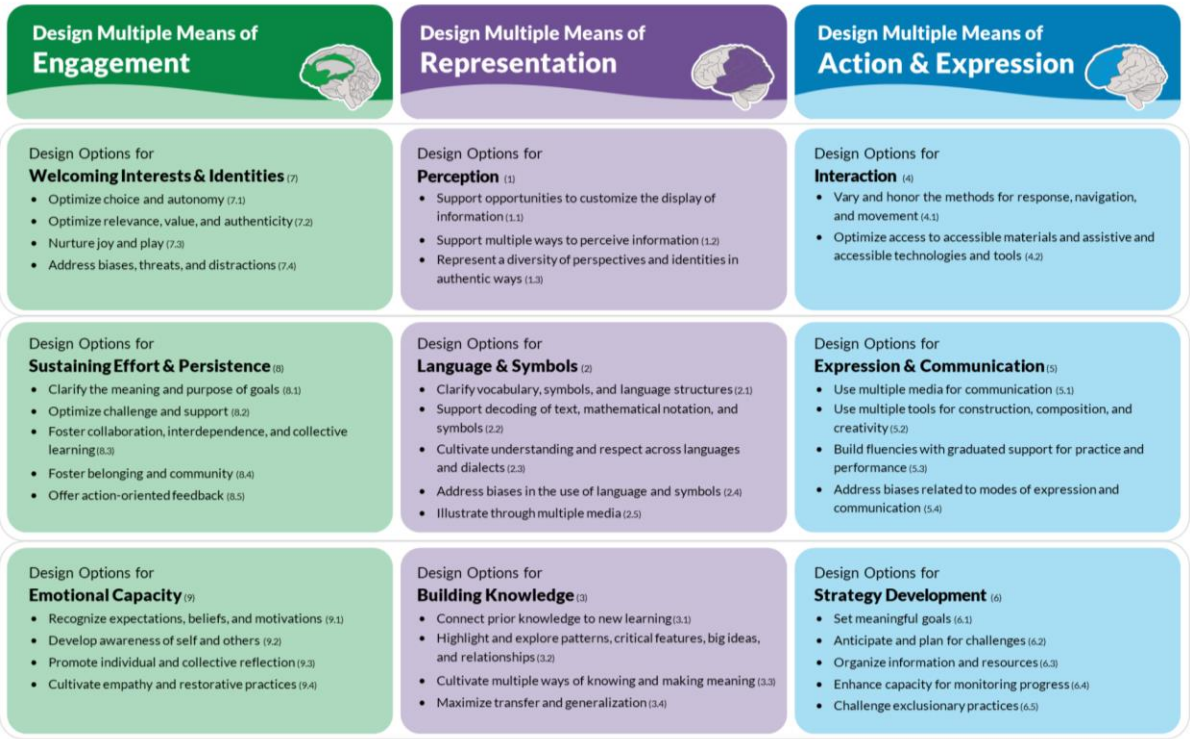
The Universal Design for Learning Framework

Universal design for learning, or UDL, has its origins in the neuroscience of how humans learn. When we learn anything, whether we are six years old or sixty, we activate three different chemical pathways in our brains. The neuroscientists at CAST mapped the neurochemistry of learning into three sequential and overlapping phases: engagement (affect), representation (recognition), and action/expression (strategy)—these are the three UDL principles. Using research from K-12, higher education, and workplace learning, the CAST team further breaks down the UDL framework into nine guidelines (three for each principle) and, in turn, into 36 action-oriented considerations, as shown in Figure 1. We will examine and share some of these UDL considerations below, as they apply to specific tools, inputs, outputs, and processes in formal project management.

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

Figure 1

Universal Design for Learning Guidelines Version 3.0



https://udlguidelines.cast.org

UDL Origins & Overview

The discovery that led to the codification of the UDL principles and guidelines was that most learning engagements are designed for a target audience of intended learners, with typically only one way for learners to progress through the experiences. Think of lectures and readings in your experiences of formal schooling: if you were not yet good at, or did not conform to, the expectations for how such learning experiences were designed, that created barriers to your successful participation. Conversely, the researchers at CAST showed that learning "sticks" more effectively for more people when their learning experiences are designed to provide multiple means for learners to get engaged and stick with the learning when things get complex or confusing (Rose & Meyer, 2002). Multiple means of representation, such as alternative formats for video and audio materials, also increase recall and application. Finally, designing multiple means for learners to act and express their learning—whether in preparing, practising, or critiquing—also lowers barriers and allows learners to persist better and take agency in their learning (King-Sears et al., 2023).

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

UDL in Workplace Professional Practice

When we say, "workplace learning," most of us think of direct training from learning and development teams: classroom- or online-based skill development or information sharing. We invite readers to broaden the idea of "workplace learning" to encompass a broader range of professional-practice tasks that fall under the umbrella of learning engagements. For instance, gathering information for a charter requires researching a project's resources, scope, and goals. Likewise, identifying stakeholders, scoping projects, developing activities/schedules, cost estimation, quality planning, and risk management all involve significant information-seeking on behalf of project managers and stakeholder groups. This addresses just the planning phase of a project.

In each major project phase, we can identify interactions in which one or more project roles need to discover, collect, and learn new information from data sources, each other, professional providers, support teams, or wider communities. As we will detail below, in planning for and designing the form for such interactions, applying the UDL framework allows project managers to reduce friction, speed time-to-solution, and lower barriers to task completion.

Conclusion

While all three UDL principles of engagement, representation, and action/expression apply to tasks in projects' initiation and planning phases, the principle of "design multiple means of engagement" comes to the fore in the executing and monitoring phases. During initiation and planning, there is greater focus on clarifying the project and its expectations to stakeholders (i.e., representation) and establishing how team members and stakeholders participate in the project (i.e., action/expression). This also supports the domain-based approach to projects, as outlined in the PMBOK 7 stakeholder-engagement cycle of "identify," "understand," "analyse," and "prioritise." Applying UDL to the executing, monitoring, and closing phases maximizes stakeholder engagement and team member interest through deliberate flexibility.

UDL focuses on the affective aspects of project management processes, subtly implying that successful project management—especially in complex environments—is less about driving progress through control, but benefits more from coordinating and engaging. The researchers at CAST emphasize that "UDL is a framework that addresses the primary barrier to fostering expert learners within instructional environments: inflexible, 'one-size-fits-all' curricula. It is inflexible curricula that raise unintentional barriers to learning" (CAST, 2025).

Applying UDL to project management goes beyond "checking boxes." UDL reduces complexity in projects through the intentional design of multiple pathways for engaging, taking in information, and demonstrating skill and communicating effectively. Intentional effort spent designing inclusive project-learning interactions saves many hours of work

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

throughout the project life cycle. Project teams who feel their work is valued are more willing to contribute, increasing the quality of deliverables and reducing the risk of project failure.

As readers begin practicing with UDL in project management, we encourage you to start small and focus on pinch points. What project tasks repeatedly go differently than planned? Where do stakeholders ask clarifying questions about confusing language in documents? Where do project team members have to re-work tasks because of misunderstandings about requirements? Where do resources have to be re-allocated because of communication gaps? These are good places to consider applying one or two relevant UDL considerations.

In addition, build in time to assess "before" and "after" conditions: how much time, effort, and budget did UDL strategies save projects? Collect data and compare them to results from similar projects—use categories like stakeholder knowledge, participation, and satisfaction, with instruments like questionnaires, focus groups, and task-completion reports.

We encourage readers to share their UDL project-management experiences. Choose one task and one UDL strategy. Document the impact on deliverables, team morale, stakeholder satisfaction, and your own approach. Be an advocate within your organization and share your experience applying UDL. UDL is still an emerging topic in formal project-management circles, and we hope to establish UDL as a key driver that increases access and lowers barriers to project success.

References

ALTIT**UD**E Project. (2024). *ALTIT**UD**E: The national charter for universal design in tertiary education*. AHEAD Educational Press. https://www.atu.ie/app/uploads/2024/12/altitude-charter-supplied-digital.pdf

Bartlett, M., & Ehrlich, S. (2019). How a universal design mindset can support learning in the workplace. *AHEAD Journal*, *10*(1). https://www.ahead.ie/journal/how-a-universal-design-mindset-can-support-learning-in-the-workplace

Bogdan, G. (2018). *Universal design for learning*. Greensboro College. https://www.greensboro.edu/academics/student-success/universal-design-for-learning/

CAST. (2024). *The UDL guidelines version 3.0*. https://udlguidelines.cast.org/

CAST. (2025). *Workplace professional learning*. https://www.cast.org/what-we-do/workforce-professional-development/

Chee, M., & Weaver, K. D. (2024). Using the instructional design process to effectively apply UDL to OER: Considerations, limitations, and best practices. In D. Skaggs & R. McMullin (Eds.), *Universal design for learning in academic libraries: Theory into*

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

practice (pp. 177-193). ACRL Press. https://dspacemainprd01.lib.uwaterloo.ca/server/api/core/bitstreams/bdc0671c-d357-4677-8855-f28f77e08129/content

EDUCAUSE. (2025). *Higher Education Community Vendor Assessment Toolkit* (HECVAT) *version 4*. https://www.educause.edu/higher-education-community-vendor-assessment-toolkit

Gronseth, S. L., & Hutchins, H. M. (2020). Flexibility in formal workplace learning: Technology applications for engagement through the lens of universal design for learning. *TechTrends*, *64*(1), 211–218. https://link.springer.com/article/10.1007/s11528-019-00455-6

Inspección Docente Departamento de Desarrollo y Diseño Curricular. (2025). *Metodologías Ágiles de Gestión de Proyectos*. Montevideo, UY: Administración Nacional de Educación Pública (ANEP). https://planeamientoeducativo.utu.edu.uy/sites/planeamientoeducativo.utu.edu.uy/files/2025-02/Versi%2B¦n%20final%20AC-Metodolog%2B¡as%20%2Bígiles%20de%20gesti%2B¦n%20de%20proyectos%20_0.pdf

Kearney, D. B. (2024). *Universal design for learning*. Centre for Teaching & Learning Innovation. https://www.mohawkcollege.ca/centre-for-teaching-learning-innovation/teaching-resources/universal-design-for-learning

King-Sears, M. E., Stefanidis, A., Evmenova, A. S., Rao, K., Mergen, R. L., Owen, L. S., & Strimel, M. M. (2023). Achievement of learners receiving UDL instruction: A meta-analysis. *Teaching and Teacher Education*, *122*(1). https://doi.org/10.1016/j.tate.2022.103956

Kravit, L. (2019). *Japan: Universal Design and Innovation*. Master's thesis. Brattleboro, VT: School for International Training. https://digitalcollections.sit.edu/capstones/3143/

LeGary, R., & LaRocco, D. (2022). Scaling up UDL in higher education: Personal and professional stories. *New Directions for Teaching & Learning*, *172*(1), 7-9. https://onlinelibrary.wiley.com/doi/abs/10.1002/tl.20522

Lemanis, D. (2024). Implementing Universal design for learning in workplace learning. In *The ALT text: Accessible learning with technology*. Ed. Rob Powers. https://pressbooks.pub/thealttext/chapter/implementing-universal-design-for-learning-in-workplace-learning/

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

Lund, E. (2016). Local and regional authorities as resources for implementing universal design policy in Norway. *Studies in Health Technology and Informatics*, *229*(1), 63-68. https://ebooks.iospress.nl/doi/10.3233/978-1-61499-684-2-63

McKenna, J. (2023). *Upskill, Reskill, Thrive: Optimizing Learning and Development in the Workplace*. CAST Publishing.

Moriarty, A. (2018). Developing an institutional approach to UDL—Big bang or slow burn? *AHEAD Journal*, *8*(1). https://www.ahead.ie/journal/Developing-an-Institutional-Approach-to-UDL-Big-Bang-or-Slow-Burn

O'Shaughnessy, T., & McAvinue, T. (2025). Bridging the gap: Inclusive practitioners in the third space and the embedding of universal design. *Journal of Learning Development in Higher Education*, *1*(33). https://journal.aldinhe.ac.uk/index.php/jldhe/article/view/1247/1025

Pinto, J. K., & Davis, K. (2024). Our love affair with project slack (and why it ruins our schedule accuracy). In P. Serrador (Ed.), *Mastering project leadership: Insights from the research* (pp. 93-98). Auerbach Publications. https://www.taylorfrancis.com/chapters/mono/10.1201/9781003502654-11/love-affair-project-slack-ruins-schedule-accuracy-1-jeffrey-pinto-kate-davis

Posey, A. (2018). *Engage the brain: How to design for learning that taps into the power of emotion*. ASCD Publishing.

Project Management Institute [PMI]. (1996). *A guide to the project management body of knowledge [PMBOK] (1st ed.)*. Project Management Institute.

Project Management Institute [PMI]. (2017). *A guide to the project management body of knowledge (PMBOK® Guide) (6th ed).* Project Management Institute.

Project Management Institute [PMI]. (2021). *A guide to the project management body of knowledge (PMBOK® Guide) and the standard for project management (7th ed.)*. Project Management Institute.

Project Management Institute [PMI]. (2022). *Process groups: A practice guide*. Project Management Institute.

Rose, D., & Meyer, A. (2002). *Teaching every student in the digital age*. Association for Supervision and Curriculum Development. https://archive.org/details/teachingeverystu0000rose

Skaggs, D., & McMullin, R. M. (2024). *Universal design for learning in academic libraries: Theory into Practice*. Association of College and Research Libraries. https://alastore.ala.org/universal-design-learning-academic-libraries-theory-practice

International Journal for Universal Design and Universal Design for Learning
Vol. 1, No. 2, April 2026 ISSN: 3119-6055

Tobin, T. J., & Behling, K. T. (2018). *Reach everyone, teach everyone: UDL in higher education*. West Virginia University Press.