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TLIC PAPER

Transferable Best Practices and Mutual Learning Opportunities Between Instructional Design in Higher Education and the Corporate World: Shared Insights for Instructional Design in Academia and Business

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ABSTRACT

Instructional design facilitates effective learning in higher education and workplace training contexts. This paper examines the crossover between instructional design approaches in these settings. It identifies core transferable practices like defined objectives, assessment alignment, and active learning grounded in learning theories and research-based models. Differential practices suited to the unique contexts are also explored, including critical thinking in higher education and rapid iterative design in corporate learning. Finally, mutual learning opportunities are presented for how each domain can adapt select practices from the other to enhance their instructional design effectiveness, such as higher education integrating more experiential learning and corporate training focusing more on critical thinking development.

KEYWORDS

instructional design, higher education, corporate learning, transferable practices, Universal Design for Learning (UDL), learning theories, mutual learning opportunities

1 INTRODUCTION

Quality instructional design establishes the framework for impactful learning experiences. The systematic process of analyzing needs and goals, designing learner-centered materials and activities, and evaluating their effectiveness transforms how knowledge and skills are successfully acquired [7]. Instructional design provides a research-supported process for developing engaging learning interventions tailored to specific pedagogical objectives and learner contexts. Models guide practitioners through iterative design, development, implementation, and evaluation cycles to optimize instruction [21].

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Instructional design practices are applied across diverse learning environments, from higher education institutions to workplace corporate training programs. Teaching the next generation of leaders and preparing employees with job-relevant skills requires a nuanced understanding of learner needs and expertise in applying evidence-based design principles. There are certainly differences in context between designing a college course versus a corporate training module due to contrasting policies, resources, learners, development timeframes, and overarching goals. However, many overlapping quality design practices are grounded in instructional theories and models that crossover effectively between these settings.

This article will examine the crossover between instructional design approaches in higher education and corporate learning contexts. First, it will highlight transferable design practices representing effective strategies that both settings share based on their grounding in research-supported instructional theories and models. Next, it will discuss certain differential practices better suited to the unique context of either higher education or workplace learning environments. Finally, it will present mutual learning opportunities for how each domain can adapt targeted approaches from the other to enhance their instructional design effectiveness and better achieve intended learning aims. Understanding this crossover elevation allows postsecondary institutions and corporations to learn from one another's established best practices while recognizing contextual differences.

2 TRANSFERABLE BEST PRACTICES

Several instructional design practices represent effective strategies leveraged in higher education and corporate training settings. These approaches reflect core design principles grounded in established learning theories and models like cognitivism, constructivism, and universal design [16]. When applied appropriately to specified learning goals and learner characteristics, research shows these practices enhance learning processes and outcomes across diverse contexts. The following section describes these broadly transferable practices.

3 DEFINING LEARNING OBJECTIVES

Delineating learning objectives represents a fundamental practice in systematic instructional design, providing the foundation for all subsequent design decisions [15]. Objectives describe the intended goals or desired performance capabilities learners should be able to exhibit after engaging in the learning experience [19]. Clear objectives help establish direction and priorities for developing the instructional materials, learning activities, assessments, and media needed to enable learners to demonstrate those capabilities. Defining objectives is a critical first step in models like ADDIE, guiding the application of other design practices to achieve those goals [32].

Explicitly defining learning objectives benefits learners and instructors/trainers across educational and corporate contexts. For learners, objectives provide transparency about expected learning aims and performance standards to demonstrate mastery [34]. This helps students and employees appropriately direct their efforts. Instructors/trainers use objectives as a blueprint for intentionally designing all aspects of the learning intervention to scaffold acquisition. Objectives also aid in selecting aligned assessments to evaluate learning effectiveness.

Lastly, objectives facilitate learners' transfer of knowledge and skills to new situations by clarifying intended applications.

There are established best practices for writing effective learning objectives based on research. Objectives should focus on observable learner behaviors starting with action verbs, describing performance conditions or constraints, and delineating criteria or standards to be met [27]. Quality objectives aim for the appropriate level of specificity, balancing description with brevity to provide usefulness without overwhelming it. Well-constructed learning objectives represent a transferable foundation underpinning intentional instructional design across learning contexts. They bring research-backed principles into practice for both higher education and corporate learning interventions.

4 ALIGNING ASSESSMENTS

Constructively aligning assessments with defined learning objectives constitutes another core instructional design best practice [4]. Assessments gauge whether learners have successfully acquired the knowledge and skills delineated in the objectives after engaging with the instructional materials and learning activities [33]. Aligning assessments helps ensure learners have opportunities to demonstrate the intended performance outcomes sufficiently. It also enables instructors/trainers to evaluate the effectiveness of the learning intervention design in producing the desired capabilities based on assessment results.

Properly aligned assessments offer benefits for learners and instructors/trainers across settings. Aligned assessments clarify what learning matters most and where to focus their efforts when preparing [43]. Instructors/trainers help ensure evaluation instruments target the critical knowledge and skills stated in objectives. This yields valuable data to identify learners' strengths and weaknesses related to the intended outcomes. Assessment results reveal where additional instruction or practice may be needed to close performance gaps. Aligning assessments with objectives provides focusing benefits while supporting data-driven design refinement toward better-achieving goals in both higher education and workplace training contexts.

Best practices guide the alignment process grounded in cognitive learning theories and models. Assessments should evaluate learners at the appropriate level of cognitive processing described in objectives, such as remembering facts, applying procedures, or evaluating arguments [2]. Assessments should provide sufficient opportunities in terms of questions, problems, simulations, or prompts to adequately demonstrate the full range of stipulated learning goals. Rubrics and criterion-referenced benchmarks should establish clear performance standards aligned with those goals. Following these and other evidence-based recommendations supports constructive assessment alignment and its learning benefits across domains.

5 INCORPORATING ACTIVE LEARNING

Active learning represents another transferable instructional design strategy grounded in research on knowledge acquisition and skill building. Active learning engages learners directly in the learning process through discovery, inquiry, practice, and knowledge construction rather than having them passively receive transmitted information [36]. More experiential than lecture-based reception models, active learning better stimulates learners' higher-order thinking for deeper learning and transfer according to cognitive and constructivist learning theories [16].

Diverse learner-centered strategies qualify as active learning, including discussions, collaborative problem-solving, hands-on practice, peer teaching, case analyses, and reflections [5]. These approaches encourage learners to take greater ownership over clarifying, applying, and integrating new knowledge within their mental frameworks. Meta-analyses show that active learning interventions positively impact knowledge, skill development, and learner attitudes across educational contexts when well implemented [17]. Enriching college courses and corporate training with appropriate active learning opportunities provides cognitive engagement benefits motivating such broad adoption of this strategy across settings.

There are recommendations from learning sciences research for effectively scaffolding active learning. Tasks should be designed at appropriate levels of complexity for learners' current capabilities. Facilitation should provide oversight and feedback while still maintaining learner autonomy. Collaborations should promote individual and collective accountability. Reflection should enhance metacognition and meaningful connections. Following evidence-based principles helps optimize engagement and learning gains from active learning across instructional contexts.

6 EMPHASIZING AUTHENTIC LEARNING

Anchoring learning experiences in authentic, real-world contexts and examples provides another transferable instructional design practice. Authentic learning situates activities and applications in scenarios mimicking learners' actual professional environments and practices as closely as possible [26]. This helps overcome the transfer challenge of abstract decontextualized knowledge not readily connecting to practical application [28]. Through authentic activities, learners can transfer skills and knowledge more seamlessly to their professional roles by learning and practicing in simulated natural environments.

Authentic learning design mirrors real situations learners face using case studies, role-playing, work samples, field visits, and projects [22]. Scaffolding these complex authentic tasks enables contextualized development of knowledge and skills necessary for competent application in the field. Authentic designs are enhanced by incorporating ill-defined challenges, client perspectives, time constraints, resource access, and collaboration reflective of professional practice demands. Integrating authenticity helps learners build the schemas needed to transfer learning to unpredictable real situations.

Higher education and corporate training utilize authentic learning designs tailored to their learners and aims. College courses on teaching may have students co-teach lessons to classmates to mirror classroom complexities. Nursing programs provide clinical rotations in hospitals to situate practice in actual patient care contexts. Law courses apply case study methods, enabling students to collectively evaluate scenarios from legal, ethical, and public policy perspectives. Corporations use in-basket exercises that simulate prioritizing tasks and requests as an employee. Customer service training role-play calls presenting realistic challenges and complaints to develop adaptive skills. Apprenticeships situate new employees alongside experts to acculturate norms and processes. Authenticity provides an immersive environment that enables schema development for transfer when aligned to goals.

Best practice principles are derived from situated cognition learning theories to optimize authentic designs [3]. Tasks should align with learners' future professional roles and activities. Scenarios should represent natural complexities and social dynamics. Tools, resources, and performance expectations should mirror accurate

workplace parameters. Elements like coaching and collaboration should be incorporated to reflect organizational practices. Following these guidelines helps construct authentic learning experiences and facilitates transfer across settings.

7 UTILIZING MULTIMEDIA LEARNING

Research-backed principles for optimally designing multimedia learning constitute another transferable instructional design practice. Multimedia learning involves presenting instructional content using words and graphics rather than text alone, which enhances processing and retention according to the cognitive theory of multimedia learning [30]. Learners have separate channels for visual and verbal processing. Combining narration, video, illustrations, photos, diagrams, animations, text, and other multimedia stimuli leverages both channels to heighten understanding and application per dual coding theory [14].

Strategically selecting and designing multimedia can expand engagement and comprehension, enabling learners to visualize complex concepts, processes, relationships, contexts, and procedures they struggle to envisage from text alone. Multimedia also improves retention by activating and connecting visual and verbal cognitive processing [29]. Research shows learners perform better when applying knowledge learned from well-designed multimedia versus text across domains, including remembering concepts, making inferences, and transferring skills [12]. Integrating multimedia learning theory principles helps college instructors and corporate trainers enhance learning interventions.

However, haphazardly incorporating multimedia does not automatically improve outcomes. Cognitive load theory highlights learners' limited working memory capacities that multimedia needs to accommodate [42]. Strategic decisions should guide the selection of multimedia rationally aligned to learning goals and audiences without overburdening or distracting. The cognitive theory of multimedia learning synthesizes evidence-based best practices for multimedia design, including providing coherent summaries, avoiding extraneous content, chunking information, positioning images proximate to text, employing signaling, and enabling learner control [30]. Applying multimedia intentionally following research-based principles amplifies learning while mitigating cognitive overload—outcomes valued across higher education and workplace learning contexts.

8 PROMOTING UNIVERSAL DESIGN

Universal design for learning (UDL) represents an inclusive instructional design approach grounded in neuroscience and learner variability research [38]. Traditional instruction often assumes a singular average learner, building barriers for those who differ. In contrast, UDL aims to proactively design flexible learning experiences accessible to diverse learners from the outset rather than requiring reactive accommodations [40]. Variability in learners' prior experience, linguistic fluency, cultural norms, latent skills, pace, mobility, sensory capacities, cognition, and motivation all impact how they best access and engage with learning. Ignoring differences erects barriers, whereas embracing variability promotes inclusion.

The UDL framework outlines research-supported design strategies enabling multifaceted means of representation, engagement, and expression [11]. Options like customizable interfaces, varied examples, embedded supports and scaffolds,

compelling projects, collaborative spaces, multi-modal materials, frequent feedback cycles, and expanded assignment choice help learners access, comprehend, practice, and demonstrate learning in ways matching their strengths and needs. Universally designed instruction reaches broader learners, benefiting those with disabilities alongside expanding flexibility for all.

Higher education and workplace training serve increasingly diverse populations with varying abilities and backgrounds. Both contexts value removing unnecessary barriers to foster equity and inclusion in learning access and opportunity. Hence, UDL offers a research-grounded set of flexible design practices enabling personalization and accessibility valued across settings [39]. Though learners differ, optimally designed instruction accommodating variability transcends context. Implementing UDL following its guidelines amplifies learning experiences, making content reachable, skills attainable, and assessments equitable for diverse college and corporate learners.

9 DIFFERENTIAL PRACTICES

While these practices represent broadly transferable strategies grounded in learning theory research, some instructional approaches significantly differentiate between higher education and corporate learning settings based on their unique contexts, constraints, policies, learners, goals, and cultures. Below discusses practices better attuned to either academic or workplace learning environments.

10 CRITICAL THINKING FOCUS

Developing learners' critical thinking abilities represents a central goal more uniquely embedded within higher education's mission and curricula [6]. Given the college's role in cultivating skilled thinkers and lifelong learners across disciplines, course designs intentionally target higher-order cognitive processing through questioning assumptions, integrating varied perspectives, reflection, metacognition, and constructing reasoned arguments [1]. Traditional pedagogies like lectures often fail to spur these complex cognitive skills needed for deep learning and adaptive transfer [8].

Faculty develop instructional interventions emphasizing ill-structured problems, debates, multiple solution paths, theory evaluation, analytical writing, and design thinking to prompt critical knowledge construction [25]. Scaffolding helps students hone skills by systematically analyzing claims and evidence, identifying assumptions, detecting bias, scrutinizing the reliability of sources, constructing logical reasoning, situating knowledge in context, considering alternative viewpoints, and tolerating ambiguity that characterizes real-world problems [24]. Mastering critical thinking empowers broader application, creativity, and discovery. Developing these transferable higher-order competencies fits squarely within higher education's mission, even if only sometimes well actualized in practice.

In contrast, corporate learning focuses more narrowly on developing skills, mindsets, and procedures specific to organizational goals and job roles. Critical thinking receives less emphasis as an explicit learning outcome expected of employees. Training stresses accuracy, speed, service quality, sales, safety, communication norms, coordination, compliance, and technology utilization based on workplace performance requirements [35]. While foundational cognitive

aptitudes benefit work, training usually targets lower-order competencies around procedures, vocabulary, processes, regulations, tools, and company-specific knowledge. Critical thinking is not prioritized apart from efficacious decision-making and problem-solving, directly enhancing productivity and efficiency.

Corporations logically tailor learning toward immediate business objectives rather than broadly cultivating analytic thought. Transmitting established knowledge, skills, and behavioral norms precedes questioning assumptions underlying workplace operations. Corporate learners expect clear guidelines and best practices rather than conceptual abstractions and theoretical critiques common in higher education. Critical thinking is more ancillary in corporate learning design than its central position in developing future knowledge leaders and innovators within academia. However, this poses tradeoffs for workforce adaptivity, a point returned to later.

11 RAPID ITERATIVE DESIGN

Corporate learning commonly utilizes rapid iterative instructional design approaches compared to typical higher education course development processes. The accelerated speed of business change and compressed project timelines in organizations necessitate agile design models enabling continuous responsive improvements [37]. Corporate training employs iterative prototyping, testing, and refinement cycles based on lean development principles and user feedback rather than following rigid linear models [31]. Rapid iterations allow updating training to change organizational priorities and learner needs quickly.

After initial deployments, rapid revisions enhance corporate learning interventions based on participant feedback, adoption metrics, and performance data indicating what works versus potential gaps or frictions impeding learning application [13]. Rapid design thinking values speed and flexibility, prioritizing good enough solutions that satisfy immediate learning requirements and may be perfected over subsequent iterations [10]. While still incorporating analysis and evaluation, rapid corporate design focuses on timely prototyping and implementation to meet real-time needs.

In contrast, higher education course design follows protracted development cycles reflecting semester schedules and approval processes. Most faculty research, design, and prepare courses months before delivery with limited scope for quick adjustments once underway. Following quality assurance protocols, curriculum committees, administrative approvals, and catalog publishing timelines inhibit rapid iterations [9]. However, once launched, courses often run unchanged for years, barring substantive redesign efforts. While aiming for durable interventions, such rigidity limits nimbleness in adapting to evolving learner capacities, technology shifts, discoveries within the field, and applied realities continually transforming the workplace.

Though grounded in quality assurance, higher education's customary design cycles contrast sharply with corporate learning's rapid iterative approaches. Extended development phases cultivate deliberate interventions but constrain flexibility. This tradeoff poses barriers to modifying courses midstream or quickly incorporating learner feedback, catalyzing real-time improvements valued within business training environments. Rapid revisions enable corporate learning solutions to keep pace with change, sometimes sacrificing comprehensive design. Straddling these extremes offers higher education opportunities for greater agility and responsiveness, exploring in the mutual learning section.

12 EXPERIENTIAL LEARNING FOCUS

Corporate training heavily emphasizes experiential learning modalities, fully immersing employees in authentic skill-building applications [23]. Hands-on learning experiences facilitate acquiring tacit knowledge and practical judgment through practice, trial-and-error, experimentation, reflection, and collaboration. Corporate contexts enable embedding extensive opportunities to grapple with real organizational challenges and processes collaboratively alongside experts as core learning strategies.

Apprenticeships, on-the-job training, stretch assignments, simulations, coaching, case studies in actual job activities, rotations across departments, applied workplace projects tied to company objectives, and other authentic experiential strategies manifest as prime corporate learning vehicles [18]. Experiential approaches accelerate capability development centered on performing and improving through practice within authentic roles, tasks, and collective problem-solving. Natural learning curve struggles and reflections build experience prized within corporate contexts.

In contrast, higher education needs comparable immersion opportunities, given students' limited exposure to actual professional environments early in their degrees. Experiential learning still occurs but in more limited doses. Class projects, simulations, undergraduate research, labs, studio work, and practicums provide some authentic practice trialed more extensively within occupations after graduation. While internships increase workplace immersion, most remain relatively short-term. For traditional-aged college students, opportunities to apply knowledge in genuine professional contexts remain constrained versus the realities of post-graduation careers or mid-career learning.

Additionally, higher education emphasizes declarative and conceptual knowledge as foundations for later application [8]. Lectures, reading, research, discussion, and demonstration projects enable grappling with theories, models, vocabulary, history, abstract principles, causal relationships, and other concepts comprising knowledge bases and ways of thinking within disciplines. While applied assignments allow the practice, priority resides with developing conceptual understanding and analytic thought capacities. Students then leverage completing occupational tasks or solving workplace problems.

Experiential learning still enhances higher education but usually on a smaller, more bounded scale before complete workplace immersion. In contrast, corporate training integrates extensive experiential opportunities, situating employee development within actual organizational contexts and collaborative practice. This divergence reflects lived realities and priorities preparing college students with broad knowledge versus developing workplace skills contextually. Both settings recognize experiential learning's motivational benefits but apply them differently, matching learner needs. However, bridging this gap poses valuable mutual learning opportunities explored next.

13 PERFORMANCE SUPPORT TOOLS

Corporate learning design frequently integrates digital performance support tools and resources into employee workflows to reinforce learning and provide just-in-time guidance [14]. Tools like online references, expert systems, knowledge bases, checklists, guided tutorials, calculators, downloadable templates, decision trees, chatbots, and quick videos uplift worker capabilities while on the job [20].

Readily accessible online, these aids reduce barriers and friction, converting formal learning into operational proficiency. Integrated performance empowers employees to translate knowledge into practice quickly within authentically complex contexts.

Designed to mitigate forgetting and bridge competence gaps that emerge from applying formal training, performance support tools provide in-the-moment learning guidance proximal to employee workflows. Corporations embed them into work systems, enabling employees to reference, model, practice, and troubleshoot needs as they emerge while avoiding disengagement from productive activities to seek answers. Research shows scaffolds improve learning transfer rate, consistency, and quality, enhancing individual productivity and organizational performance [41]. Avoiding disruption through integrated support represents a value proposition prompting growing corporate adoption.

In contrast, implementing comparable integrated performance support systems proves challenging in higher education. Faculty lack access to design and embed aids directly into students' diverse subsequent workplace tools and activities following graduation. Some learning management tools and content exist, providing limited support between classes. However, opportunities to seamlessly incorporate performance supports into authentic professional systems and tasks still need to be discovered within colleges. Supplemental tools are used but must be more immersed into genuine workflow contexts where support is needed most. Still, selecting supports bridging academic learning with future professional activities offers untapped potential. Performance support solutions warrant examination fitting higher education realities to uplift college learning transfer to employment, as discussed next.

14 MUTUAL LEARNING OPPORTUNITIES

This comparative analysis reveals crossover practices and distinctions between higher education and corporate learning strategies reflecting their respective contexts, resources, learners, and aims. However, the dichotomy oversimplifies the diversity within and across these learning environments. While differences exist, each domain faces opportunities to adapt select approaches from the other to enhance their instructional designs in areas needing improvement. Adopting new practices involves changing ingrained structures, cultures, and policies, but potential learner success benefits are worth considering.

15 HIGHER EDUCATION ADAPTING CORPORATE APPROACHES

Higher education could benefit by thoughtfully integrating specific corporate learning strategies to advance priorities like employability, applied learning, personalization, and design agility without compromising core academic values. Possible adoption targets include:

- Using rapid iterative course design models to incorporate stakeholder feedback more quickly and respond to evolving workplace needs through customizable content.
- Providing more immersive authentic learning experiences through simulated workplace environments, organizational partnerships, applied workplace projects, and extended internships enabling genuine skill application.

- Leveraging multimedia learning principles to create vivid simulations of professional contexts learners prepare to enter, allowing low-stakes simulated application opportunities.
- Incorporating select digital performance support tools and aids in online course modules to help students recall concepts, model procedures, practice skills, and transfer learning nearer to professional requirements.
- Collect student capability and confidence data more frequently to enable adaptable personalized support, coaching, and scaffolding refinement to ensure competencies are attained.

These corporate approaches adapted contextually could enrich higher education's ability to cultivate dynamic career capabilities without diverging from core academic values prioritizing disciplinary knowledge, analytic thought, metacognitive development, and lifelong learning. Further learning sciences research is needed to examine how strategies proven successful in corporate contexts transfer based on modifications for higher education's distinct learners, environments, policies, and faculty cultures.

16 CORPORATE LEARNING ADAPTING HIGHER EDUCATION APPROACHES

Corporations may also benefit from embracing select higher education strategies supporting continuous workforce adaptivity, innovation, transdisciplinary thinking, and knowledge building that is valuable in rapidly evolving business environments. Possible adoption targets include:

- Formally integrating critical thinking skill building into training programs to drive more profound analysis, reflective practice, examining assumptions, avoiding bias, and considering divergent ideas.
- Cultivating self-regulated learning habits in employees to instill greater ownership over their continual growth and performance improvement aligned with company goals.
- Incorporating knowledge-building discourses exploring intersections across broader disciplines to prompt creative cross-pollinated solutions and innovations.
- Leveraging cohort and team-based collaborative learning models building relationships, trust, and communication conducing to collaborative problem-solving.
- Expanding cases and simulations focused on ethical judgment, social responsibility, and environmental sustainability to prompt triple-bottom-line thinking.

While still honoring business priorities, these academic approaches contextually adapted could develop broader employee capacities powering workplace agility, ethical leadership, creativity, and continuous learning, supplementing existing company training. Further research should assess the viability and means of successfully transferring such strategies into corporate environments benefitting workers and employers.

17 CONCLUSION

This examination dispels a false dichotomy suggesting a rigid separation between higher education and corporate learning practices. Both settings share research-supported instructional design strategies grounded in quality, accountability, and learner-centeredness ideals transcending context. However, the analysis also reveals meaningful differences reflecting their distinct environments, constraints, policies, and aims. There is no singular best approach given contextual needs. Still, each has opportunities to selectively adapt and evolve by learning from the other's successes contextually modified to their realities. With further comparative research and willing experimentation, such bidirectional learning holds the potential to enrich both domains with expanded capabilities to fulfill their respective roles, preparing knowledgeable college graduates and empowering capable corporate workforces that contribute to society.

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