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DeVry University Journal of Scholarly Research

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DeVry University Journal of Scholarly Research

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A message from the Provost and the Associate Provost

As members of a university deeply committed to academic excellence and innovation, we have a unique opportunity to contribute to and benefit from a vibrant culture of scholarship. We want to take a moment to encourage you to consider sharing your expertise, insights, and teaching experiences through the ***DeVry University Journal of Scholarly Research*** (DUJOSR).

The DUJOSR serves as an important platform for scholarly collaboration across our community. Whether you're an experienced researcher or just beginning your publishing journey, the Journal offers an inclusive space for thoughtful inquiry and professional growth. With the recent addition of Course Reviews and Faculty–Student Collaborations, the Journal now offers even more avenues for participation—making it easier than ever to engage with topics that are meaningful to you and your students.

One emerging area of particular interest is AI in the classroom. As technology continues to reshape higher education, your observations and research can help shape the conversation around how we integrate innovation into teaching and learning.

We encourage our more experienced faculty to support and mentor colleagues who may be less familiar with scholarly publishing. Collaboration strengthens our community and helps elevate the work we all do on behalf of our students. To explore current and past issues of the Journal, please visit the Newsroom archive, or access it through the Center for Teaching Excellence (CTE) and DeVry portals.

Let's continue to foster a culture of curiosity, innovation, and academic inquiry—together.

Shantanu Bose, PhD
Chief Academic Officer and Provost

Darryl Field, PhD
Associate Provost – Academic Operations

A message from the Managing Editors

We welcome the DeVry University community to the latest edition of the ***DeVry University Journal of Scholarly Research (DUJOSR, Vol. 9, No. 1)***.

In this issue we have a range of interesting and novel contributions from our colleagues in the Colleges of Business and Management (COBM) and Engineering & Information Science (EIS) and the College of Liberal Arts and Sciences (LAS). AI in education is an important theme, beginning with our letters to the editor and in comments from the Provost and Associate Provost. We live in interesting and rapidly changing times.

We are excited to include two papers and several From the Classroom submissions, and we can again enjoy book reviews from the DeVry University community of scholars.

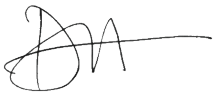
Our thanks to all of the authors who provided submissions: Taj Kachaamy, Penn Wu, Paula Herring, Willie Hosch, Nick Lebredo, John Morello, DeAnn O'Donovan and Willie Wilborn. A special thanks to Jim Schneider who had an unusually busy time with the DUJOSR this session.

We want to invite you to contribute to DeVry University's vision for the future of online education in business, healthcare, and technology in a future issue of the Journal. We encourage all members of our community to explore the many opportunities to publish, serve as a reviewer, or join the editorial board. If you have previously submitted a paper but have not yet completed the revisions, consider adding it to your "To Do" list as it should help benefit your IPP!

We acknowledge the continued support of the Provost and Associate Provost, the leadership of Sandy Kampenga, the continued dedication of the editorial board and peer reviewers, and the very important work and generosity of our contributors.

Please visit the DUJOSR via the library and CTE, and in the Journal archive in the DeVry University Newsroom: https://www.devry.edu/newsroom/academic-publications.html

Deborah Helman, PhD
Managing Editor



Michael Bird, PhD
Managing Editor

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Editorial Board of the DeVry University Journal of Scholarly Research

JOURNAL INFORMATION

The DeVry University Journal of Scholarly Research (ISSN 2375-5393 1) is a semi-annual multi-discipline, peer-reviewed, journal devoted to scholarship and education research.

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MANUSCRIPT SUBMISSIONS INFORMATION

The journal welcomes unsolicited articles, case studies, reviews, and letters on scholarship, education research or related subjects. Text and citations should conform to APA style as described in the Publication Manual of the American Psychological Association (7th ed.). Because the journal employs a system of anonymous peer review of manuscripts as part of its process of selecting articles for publication, manuscripts should not bear the author's name or identifying information.

Electronic submissions of manuscripts (MS Word) and all other communications should be directed to: DUJOSR@devry.edu

EDITORS AND REVIEWERS

DeVry faculty who wish to apply for positions on the Journal's board of editors or as reviewers of manuscripts should contact Deborah Helman or Michael Bird.

PEER REVIEWERS FOR THIS ISSUE

The following DeVry faculty served as peer reviewers for this issue. We thank them for their service.

Julie Hagemann, PhD
Paula Herring, PhD
Elliot Masocha, DBA
Bhupinder S. Sran, PhD
Chao Ying Wang, PhD

INSTITUTIONAL REVIEW BOARD

DeVry University has an Institutional Review Board (IRB) to protect the rights and welfare of humans participating as subjects in a research study. The IRB ensures the protection of subjects by reviewing research protocols and related materials. DeVry University's colleagues and students who want to conduct research must first contact the IRB for an application. Once received, the IRB will review the application and supporting materials to determine if all criteria have been met before approving the research. In support of helping colleagues and students gain an in-depth understanding of ethical research processes, the IRB requires CITI certification for all applications. The application is available on the CTE website. Applicants should contact Sandy Kampenga skampenga@devry.edu for approval and reimbursement of the CITI certification costs.

For additional information, you can contact the DeVry University IRB through the following email address: dvuirb@devry.edu.

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DeVry University Journal of Scholarly Research

Call for Papers, Spring 2026 Issue

The *DeVry University Journal of Scholarly Research* (DUJOSR) continues to expand its pages to include a variety of publishing opportunities for faculty. Academic scholarship remains a staple for the journal, but new categories include Case Studies, Book Reviews, Course Reviews, Letters to the Editor, and From the Classroom, and Faculty-Student Collaboration sections, in which faculty can share vital experiences and best practices. These categories of submission are fully described below. Specific deadlines and instructions for submission conclude this "Call for Papers".

ACADEMIC SCHOLARLY ARTICLES

For the **Spring 2026** issue, we continue to solicit "working papers" (3000 to 5000 words) in our scholarly article category.

Papers of all types are welcome including theory, empirical, or methodology papers, as well as literature reviews, from both positivist and naturalistic traditions. Research- and evidence-based papers emphasizing practical relevance that resonate with our readers are preferred. We regard submissions as "working papers" that can be submitted to other journals for consideration (but have not been previously published elsewhere).

The review process requires that each paper is coded and blind reviewed by two peer reviewers with expertise in the author's discipline. Faculty volunteers (for whom profound gratitude is expressed) comprise the peer review board. Final publication decisions are made by the editorial board, consisting of College and Managing Editors.

Authors who have previously submitted academic scholarly papers for past issues are encouraged to re-submit their revised papers. Papers should be sent with an additional document that specifies detailed responses to reviewers' and editors' feedback.

CASE STUDIES

DUJOSR solicits case studies (ranging from approximately 500-word short cases, to 1000 to 3000-word long cases) that have not been published elsewhere but are considered "working papers." The purpose of this initiative is to create a repository of case studies that can be used by faculty to teach DeVry University graduate and undergraduate courses. Our aim is to provide students with a unique and valuable learning experience that has been generated by our faculty.

Case studies of all types are welcome, including multi-media. We would prefer case studies that emphasize practical relevance that resonate with our faculty and students. Case study submissions must also be supported by a set of directions, i.e., Faculty Teaching Notes. The teaching notes must indicate the relevant courses and TCOs associated with the case study, as well as suggested question strategies and pedagogical practices.

The case study should be significant, complete, compelling, inclusive of alternative perspectives, qualitative, sufficiently evidenced, aligned with one or more Course Objectives, and written with accuracy and relevance.

The review process for case studies is the same as for academic scholarly papers. Case studies will be evaluated on the following criteria:

- Timeliness of case & relevancy (tied to 1 or more Course Objectives)
- Theoretical framework, and practical applications
- Opportunity to expand knowledge,
- Implications for field of studies
- Case notes for faculty
- Writing quality: Clarity, conciseness, and organization, grammar and mechanics,
- APA format, including in text citations and reference page.

There is no submission deadline; case studies will be accepted on an ongoing basis.

BOOK REVIEWS

Book reviews continue to be a regular feature in the journal pages. They are an important part of scholarly life. They alert colleagues to new developments in the academy, foster discussions that can lead to new scholarship, and ultimately provide us with both a broader and deeper view of the world, which we in turn can share with our students.

Reviews of either fiction or non-fiction works should adhere to the following publication guidelines:

1. Reviews should be between 500 to 1000 words in length, double spaced, and include the following: author, title, place of publication, publisher, year, price, page length (including introduction and text), and International Standard Book Number (ISBN).
2. Reviews should include a brief summary of the scope, purpose, content of the work, and its significance in the literature of the subject. Reviews should evaluate the strengths and weaknesses of the work as well as attend to its use of sources, including documentation, methodology, organization, and presentation.
3. Reviews should be fair, balanced, and treat authors with respect.
4. A signed permission form to publish a review is required.

COURSE REVIEWS

Course reviews should pertain to an academic course attended by the author of the review.

1. Reviews should be between 500 to 1000 words in length and provide an overview and critique of the course content, name, location, supporting organizations and date.
2. Reviews should include a summary of the scope, purpose, content of the course content, and its academic significance. Reviews should evaluate the strengths and weaknesses of the course as well as attend to its use of documentation, methodology, organization, and presentation.
3. Reviews should be fair, balanced, and treat authors with respect.
4. A signed permission form to publish a review is required.

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LETTERS TO THE EDITOR

Letters to the Editor are a welcome addition to the journal pages. Letters that reply to or extend academic scholarship published within DUJOSR pages are particularly welcome, as these add rich texture and dialogue to ideas presented. Letters should be professional, well-tempered, and engage with content meaningfully. Letters that do not necessarily attend to previously published work but are timely and relevant are also welcome.

Letters responding to published articles in DUJOSR should identify the month and year of the article, review, or previous letter on which it is commenting. The full title of the article, review, or letter as well as the author(s) should be included. Letters should be double-spaced and 500 to 1000 words in length. Letters may express well-tempered opinions but should include citations in cases where academic integrity requires documentation. Letters should be fair, balanced, and treat authors with respect.

FROM THE CLASSROOM

This section of the journal is newly offered to faculty who have rich pedagogical experiences worthy of sharing with a larger audience. Papers in this category may use research to support ideas but may also consist of valuable experiences about which research may not have yet caught up. Well-crafted papers that demonstrate increased student engagement in the classroom are particularly prized. In this category, the recommendations for length are 750 to 1000 words, but longer papers of exceptional quality and relevance will be considered. Content should seek to express pedagogies that transcend the commonplace or that provide an interesting new spin on well-trod best practices.

FACULTY-STUDENT COLLABORATIONS

Collaborative faculty-student publications provide an opportunity for students to engage in scholarship and learn how to publish as part of a collaborative effort. This section of the journal is newly offered to faculty who have the opportunity to encourage students to prepare papers from course projects or assignments. In this category, the recommendations for length are 750 to 1000 words for case studies, and 2500 to 3000 words for research papers. Content should seek to express domain (related to the course taken) expertise that transcends the commonplace or that provides an interesting new spin on traditional approaches. Submissions are not peer reviewed - they are dealt with by the editor. Faculty members are expected to act as mentors, collaborators, or consultants for the students' scholarly work.

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EDITORS' INSTRUCTIONS FOR AND SUBMISSION AND DEADLINES

All submissions are expected to follow the APA 7th edition style sheet. APA source materials are available in the DVU LibGuide APA/Writing Center. In addition, the APA publishes a handbook advising writers on all aspects of the publishing process: Publication Manual of the American Psychological Association, Seventh Edition (2020). Please consult the following websites:

DVU LIBRARY:
https://libguides.devry.edu/APA

The American Psychological Association (APA):
https://www.apa.org/
https://apastyle.apa.org/style-grammar-guidelines

Please note that DUJOSR allows the use of AI-generated content in all its submissions categories, but faculty and student authors must acknowledge the use of such content as relevant and as appropriate so that it is clear to readers which content is generated by AI and which is by the authors themselves. In addition, authors are expected to correct any AI-generated factual content or APA documentation errors before submission. For more details about how to acknowledge AI-generated content, see the "How to Cite AI Tools" section of the DVU LibGuide on Artificial Intelligence – Faculty. Please consult the following website:

DVU LIBRARY:
https://libguides.devry.edu/AI

The submission deadline is March 1ST, 2026. Please submit your work and a Turnitin Report in any category to Managing Editors, Deborah Helman and Michael Bird, at DUJOSR@devry.edu.

The Managing Editors reserve the right to edit all submissions in any category of submission for length, tone, and content, over and above recommendations made by peer reviewers and College Editors.

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Letter to the Editors:

The AI Impact On Education We're Not Measuring

Dear Editors,

In education, our focus on AI often zeroes in on measurable improvements—higher test scores, faster assessments, streamlined administrative tasks. But the real transformation AI is driving is less about efficiency and more about the silent, profound shifts happening within our students and classrooms.

With AI, students are developing a quiet confidence that goes beyond grades. They're asking questions they couldn't have conceived of last year, tackling concepts and projects that once felt intimidating. These changes aren't reflected in our traditional metrics because the value AI brings isn't confined to easily quantified outcomes—it's in opening doors to knowledge that once seemed out of reach.

Our traditional ways of measuring educational success fall short of capturing how AI is dissolving learning barriers, empowering students to explore unfamiliar territory with newfound curiosity. How do we measure the courage students gain to explore beyond the syllabus? Where in our metrics can we find evidence of the deeper, more analytical discussions AI is helping foster?

In classrooms today, students are quietly redefining what learning can look like, blending AI into their studies in ways that empower them to solve problems and seek answers independently. This isn't just about doing schoolwork faster; it's about reimagining education to expand what they believe is possible.

We need to start looking beyond test scores and assignments completed. The real indicators of AI's impact on education are in the expanding complexity of ideas students engage with, the depth of their inquiries, and the growing ambition in their projects. These are the signals that AI is not just improving learning outcomes but also nurturing a new generation of thinkers, ready to push boundaries.

So perhaps it's time we shift the question. It's not simply whether AI is making students more productive; it's how AI is transforming what they believe they can achieve.

Mohamed E. Brihoum, PhD
DeVry University, Florida

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Letter to the Editors:

When AI Thinks Like The Brain: The Future Of Student-Centered Learning

Dear Editors,

The integration of AI into education has been an evolving journey, gradually shifting from structured, teacher-led instruction to dynamic, student-centered learning environments. Early advancements sought to replicate the effectiveness of one-on-one tutoring, as demonstrated by Bloom's 2 Sigma Problem, which found that individualized instruction led to student performance gains of up to two standard deviations above the average (Bloom, 1984). However, scaling such personalized instruction proved challenging. The development of Universal Design for Learning (UDL) was a major step forward, offering flexible instructional methods that could accommodate diverse learning needs (Meyer et al., 2014). Still, these solutions remained largely static—requiring educators to manually tailor lessons to students. With AI-driven systems, we now have the potential to take personalized learning even further. As AI continues to advance, its role is evolving beyond simple automation into adaptive, cognitive learning models—a progression that mirrors how the human brain optimizes knowledge retention and efficiency.

One of the most promising parallels between AI-driven learning and human cognition can be found in microglia, specialized cells that help refine neural connections by strengthening essential pathways and eliminating weaker ones. Just as microglia ensure that learning remains efficient by filtering out redundant connections and reinforcing meaningful ones, AI can act as an intelligent learning partner—identifying key knowledge areas, removing redundant content, and dynamically adjusting instruction based on a student's progress. The transition from static instructional models to AI-powered adaptive learning systems marks the next phase in education, bringing us closer to scalable individualized learning experiences once envisioned by Bloom.

AI-powered adaptive learning systems are already beginning to reflect this approach. These systems optimize knowledge acquisition by analyzing student performance and tailoring content accordingly. Unlike traditional curricula, which deliver the same material to all students regardless of their needs, AI-driven platforms refine lessons in real time, ensuring that students receive personalized instruction at the right moments. While early AI applications focused on automation, next-generation AI systems will function as cognitive partners, dynamically shaping educational experiences just as microglia shape neural pathways in the brain.

Beyond content delivery, AI can reinforce learning pathways through real-time feedback, much like microglia strengthen frequently used neural connections. AI-powered writing assistants can analyze patterns and personalize feedback, helping students refine their communication skills. In mathematics, AI-driven tutoring systems already adjust problem difficulty based on student responses, but future AI models will go further—identifying mastered concepts while introducing new challenges dynamically, mirroring how microglia strengthen and reshape neural pathways based on experience.

Another critical function of microglia is maintaining cognitive homeostasis, ensuring that mental resources are used efficiently. AI can replicate this by modulating cognitive load, preventing students from being overwhelmed while optimizing knowledge retention. AI-driven course assistants can analyze student engagement in real time, detecting frustration or disengagement and modifying

instructional pacing accordingly. Similarly, AI-powered lecture tools could provide instructors with real-time insights, helping them adjust lesson structure based on student feedback.

Memory retention is another area where AI can mimic microglial function. AI-driven spaced repetition algorithms already improve retention by adjusting review schedules based on prior performance. However, more advanced AI systems could dynamically reinforce weaker concepts while reducing unnecessary repetition of well-mastered material. This biologically aligned approach to learning ensures that students focus on the information they need most, improving long-term retention without cognitive overload.

Microglia also play a role in motivation, interacting with dopamine systems that influence learning engagement. AI could similarly enhance motivation by monitoring engagement levels and adapting instructional strategies to sustain attention. AI-driven analysis can track typing speed, pause frequency, and student interaction patterns to detect disengagement. If a student appears frustrated or bored, the AI could adjust lesson pacing, introduce interactive elements, or offer encouragement, keeping students motivated and engaged. This adaptive engagement strategy is especially useful in remote and self-paced learning, where students often struggle without direct instructor interaction.

While AI presents extraordinary opportunities for education, it must be implemented ethically and responsibly. Concerns such as algorithmic bias, data privacy, and over-reliance on automation must be carefully managed to ensure that AI serves as a complement to human instruction rather than a replacement (Russell & Norvig, 2021). Additionally, educators must avoid normalcy bias, which may cause institutions to underestimate the pace and impact of AI-driven learning. The question is no longer whether AI will transform education—it is how effectively we can guide this transformation to create a learning system that is adaptive, equitable, and student-centered.

Rather than fearing disruption, educators and policymakers should embrace AI as an opportunity to advance learning beyond traditional limitations. AI-driven tools that prune unnecessary content, reinforce critical knowledge, regulate cognitive load, enhance retention, and personalize learning experiences can help create an intelligent, responsive education system that mirrors the adaptability of the human brain. By aligning AI with cognitive science principles—such as microglial pruning, reinforcement, and homeostasis—we can design an educational paradigm that is not only scalable and efficient but also deeply personalized and neurologically informed.

Genevieve Sapijaszko, PhD
DeVry University, Florida

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Proposing A Confidence Index Model For Project Management

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ABSTRACT
To mitigate project failures caused by discrepancies between anticipated and confirmed resources, this study proposes a "confidence index." This novel "confidence index" model quantifies the gap between what is expected and the actual status of resources and influence. By combining this quantitative metric measure with qualitative ratings, the index offers a comprehensive view of project discrepancies, enabling project managers to make informed decisions, develop proactive strategies, and improve overall readiness throughout the project life cycle.

Correspondence regarding this article should be addressed to Dr. Wu at pwu@devry.edu

Keywords: discrepancy measurement, gap analysis, project planning analysis, confidence index

INTRODUCTION

A primary cause of project failure is the discrepancy between initial project estimates and confirmed realities, which is rooted in a lack of validated confidence in the control of critical variables (Flyvbjerg et al., 2002; Glass, 2002; Jones, 2015; Lovallo & Kahneman, 2003; Stenbeck, 2008). This issue manifests unrealistic expectations, insufficient planning, and ambiguous project scope, leading to significant delays and a resource strain. To mitigate these risks, this study proposes a confidence index model designed to quantify the gaps between anticipated and confirmed resources and tasks. By converting these discrepancies into qualitative ratings, the model provides project managers with a KPI (Key Performance Indicators)-style overview that facilitates more informed decision-making and the development of proactive response strategies throughout the project life cycle.

LITERATURE REVIEW

While index-based assessments have been used to reflect confidence in project estimating, little effort has been made to formalize a "confidence index" into a practical and common project management model. Multiple project management frameworks and indices utilize the concept of a confidence score to gauge a project's readiness and the reliability of its estimates. Examples include the RICE model (Airfocus, n.d.), which uses a confidence score to reflect the certainty of product management estimates; the Project Definition Rating Index (PDRI), which measures scope completeness to build confidence in construction projects; and the Change Readiness Index, which evaluates an organization's preparedness for change (U.S. Department of Energy, 2010). Furthermore, several guides, such as those from the City of Portland (n.d.) and TrustEd Institute (n.d.), and articles like one by Elizabeth Harrin (2022) define and illustrate how to use confidence ratings to manage project uncertainty and improve estimation accuracy.

WHAT IS A "CONFIDENCE INDEX"?

A "confidence index" in finance and economics is a statistical measure that quantifies the level of optimism or pessimism in a group, often reflecting sentiment toward market trends. Examples include the Investor Confidence Index (ICI) and the Consumer Confidence Index (CCI).

This paper introduces a confidence index that quantifies a project entity's control over specific project items. The term project entity refers to a project member or a group of members. Project items are any and all elements that make up a project. The index calculates a percentage of control, reflecting an entity's confidence in its ability to manage components like resources and procurement. Unlike the general economic index, this model focuses on a project's internal dynamics. It simplifies these percentages into concise qualitative or numerical indicators, giving project managers a quick overview of a project's status and confidence in its execution.

PROPOSED CONFIDENCE INDEX

This study introduces a model that uses a ten-level confidence index to quantify the degree of confirmed control over project elements. The index, calculated from empirical data and thorough analysis, translates a quantitative measure of control into a qualitative assessment. A higher index value, such as "substantial," signifies greater confidence and control, while a lower value, such as "nominal," indicates a more pessimistic outlook. The model's ranges and qualitative descriptors are adaptable, allowing project managers to tailor them to a project's specific needs and increase granularity as required.

INDEX	RANGE	CONTROL	MEANING
9	100%	Absolute	Having the power to manage a project's direction, tasks, and resources, while occasionally needing approval for higher-level decisions. This provides sufficient autonomy for effective planning and execution.
8	95~99%	Full	Having substantial authority to define tasks, allocate resources, and make critical decisions with minimal stakeholder intervention but still requires oversight for major decisions.
7	86~94%	Significant	Operating in a shared-authority environment, where success depends more on negotiation and influence than on formal authority; however, decisions often require approval from stakeholders.
6	76~85%	Substantial	Having an insufficient level of authority, information, or managerial capacity over a project component, which impedes progress, elevates project risks, and often causes schedule delays, cost overruns, or compromised quality.
5	61 ~ 75%	Moderate	Operating in a shared-authority environment, where success depends more on negotiation and influence than on formal authority; however, decisions often require approval from stakeholders.
4	46 ~ 60%	Limited	Having an insufficient level of authority, information, or managerial capacity over a project component, which impedes progress, elevates project risks, and often causes schedule delays, cost overruns, or compromised quality.
3	31 ~ 45%	Nominal	A project entity is formally included and given responsibilities but lacks practical authority. The entity's input may be requested, yet its recommendations are rarely implemented, and its authority can be easily overridden.
2	16 ~ 30%	Inadequate	This index signifies inadequate control, which is a flawed process or a lack of attention to detail that directly causes project risk and failure.
1	6 ~ 16%	Negligible	A project entity has minimal authority to influence project tasks, and its input or recommendations have no practical effect on final decisions.
0	0~5%	No	A complete absence of influence over a project item, which prevents the project entity from affecting its outcome..

The interpretation of the confidence index is highly dependent on the specific "project item" being assessed, such as its components, activities, and/or resources. For instance, in a non-technical project, a confidence index score of 8 could signify that a functional manager possesses substantial authority over many tasks and resources. Conversely, in a technical project, the same score might indicate a high degree of autonomy and decision-making power for a project team member regarding specific resources.

To quantify a confidence index for a given item, such as a key material, a project entity must analyze critical factors including inventory levels, production lead times, process variability, and quality control. While a confidence index may sometimes be the result of a qualitative assessment rather than a precise mathematical calculation, this study advocates for the use and application of commonly agreed-upon formulas or statistical analyses whenever feasible, such as using the standard deviation to calculate the probability of completing a project task within a demanded range. Other common methodologies for calculating or estimating project execution and completion rates are Earned Value Management (EVM), metrics used in Agile project management like Velocity and Burndown charts, and various project estimation techniques such as bottom-up, top-down, and three-point estimation.

Quantifying the percentage of control is a nuanced process requiring a project manager's

subjective judgment. This assessment considers project characteristics, defined roles, responsibilities, decision-making dynamics (including "span of control"), and how team members' influence can evolve beyond their formal authority. The following sections will explain how to apply these indices to improve project management decisions.

INDEX 0 - "NO" CONTROL

This level is defined by a complete absence of influence over a project item such as a diverse component, an activity, and a resource, which prevents the project entity from affecting its outcome. For instance, a project task to install new software was initially estimated at 40 hours. However, an unforeseen technical issue resulted in a revised estimate of 42.67 hours, calculated from the 75% completion at the 32-hour mark. This revised estimate reflects an additional 10.67 hours *((100%-75%)/(75%) ×32 hours)* required to complete the remaining work. The project manager's lack of control is evidenced by the inability to secure additional resources, such as more technicians from the management information system (MIS) department, to accelerate the task. Consequently, the "percentage of control" over meeting the original schedule is 0%, indicating the project manager possesses no authority to ensure the task's timely completion. This scenario corresponds to a confidence index of 0.

Upon identifying a project delay of 6.68% *((42.67-40)/40 ×100%)*, the project manager must immediately adopt a role of negotiator and communicator. The objective is to clearly articulate requirements, timelines, and deliverables to all internal and external stakeholders, thereby enabling the development of mitigation strategies to minimize potential negative project impacts.

INDEX 1 - "NEGLIGIBLE" CONTROL

The described index characterizes negligible control, a state where an entity has minimal authority and influence over a project. Positioned just above "no control," this signifies that while an entity may be aware of a task or resource, it lacks the power to influence its outcome or decision-making. For example, a construction project team has negligible control over a government permit's approval timeline. When historical data suggests a low probability of on-time approval, the project manager must develop contingency plans, such as identifying alternative vendors or adjusting the project schedule, to mitigate potential delays.

INDEX 2 - "INADEQUATE" CONTROL

This index signifies a lack of effective control over project elements that the project entity should be managing. This is a direct cause of project risk and failure, and it is a flawed process or a lack of attention to detail.

For example, a developer team is assigned to build a new user authentication feature for a mobile app with a strict deadline. The team discovers that a crucial back-end API required for the feature has not been built and is not on the back-end team's priority list. Despite repeated requests and explanations of the deadline, the developer has no authority or influence over the back-end team to get the API built. The developer team's ability to complete their assigned task is severely compromised, not due to their own skills, but because of a management failure to secure the necessary resources (the API) and align team dependencies.

INDEX 3 - "NOMINAL" CONTROL

The described index characterizes a level of control that is formally acknowledged but lacks practical efficacy. This state, termed "nominal control," signifies an entity's inclusion in a project framework, often with assigned responsibilities, despite having restricted decision-making authority. The entity's input may be requested, but its recommendations are rarely implemented, and its authority can be easily suspended or overridden.

This dynamic is illustrated in the urban development scenario where resident representatives are granted a formal role on the planning committee. Despite their participation, their influence is limited to a small percentage of discretionary funds, while core project decisions are determined by the developer. The resulting 40% control *(2/5 ×100%)* over community

enhancement funds, while a formal responsibility, is distinct from having actual power over the project's scope.

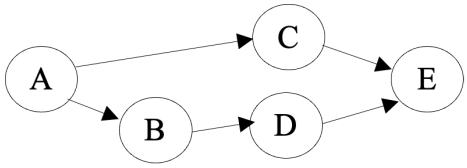
INDEX 4 - "LIMITED" CONTROL

"Limited control" is characterized by an insufficient level of authority, information, or managerial capacity over a project component. This deficiency impedes progress, elevates project risks, and frequently results in schedule delays, cost overruns, or compromised quality.

In project management, "inadequate control" and "limited control" describe two different types of challenges faced by a project team. While "inadequate control" refers to a lack of due diligence or flaw in authority of control, "limited control" refers to an improper authorization of control. "Inadequate control" is an internal weakness or failure in the project management process. "Limited control" is caused by external factors outside the project's direct authority.

In an Agile software development project, a scenario of limited control arises when two developers with equal authority and influence are tasked with peer code reviews. This shared authority, where neither individual possesses the final decision-making power, can lead to conflicting ideas and priorities. Despite their best intentions, this power dynamic results in a confidence index of 5, indicating a state of limited control.

Based on the network diagram, two parallel tasks, C and D, must be completed to initiate the next project phase. The project team's reported confidence levels are 70% for completing Task C on time and 85% for Task D. Given that these are independent events, the probability of both tasks finishing on schedule is the product of their individual probabilities. Consequently, the project manager's probability of control to launch the next phase on time is calculated as *0.70 × 0.85 = 0.595*, or 59.5%.



A project manager is in a state of limited control, with a confidence index of 5, when their confidence in control is below a certain threshold (e.g., 60%). This is especially relevant in scenarios involving parallel tasks, such as C and D, where the successful completion of one does not directly influence the other.

FEATURE	LIMITED CONTROL	INADEQUATE CONTROL
Origin	External to the project's direct authority.	Internal to the project management process.
Nature	A known constraint or inherent risk.	A preventable failure or deficiency.
Impact	A risk to be managed and planned for.	A cause of risk, cost overruns, and delays.

INDEX 5 - "MODERATE" CONTROL

A project entity with moderate control operates in a more common, shared-authority environment. While they have the authority to manage their team and execute the plan, their decisions are often subject to approval from senior stakeholders or functional managers. Their success depends heavily on negotiation and influence rather than on a high level of formal authority.

For example, in a cybersecurity project, a project manager proposes a risk mitigation plan requiring a budget of $5,500. However, the Chief Executive Officer (CEO) approves only $3,750, resulting in a control percentage of 68.18% *(3750/5500 ×100%)* for the project manager. This discrepancy necessitates a compromise, leading to the adoption of a less robust,

albeit more cost-effective, alternative. In this scenario, the confidence index is assessed at 6, corresponding to a "moderate" level of control.

It is incumbent upon the project manager to facilitate these compromises proactively, ensuring that the resulting trade-offs do not substantially diminish the project's scope or adversely impact other project deliverables.

INDEX 6 - "SUBSTANTIAL" CONTROL

This index indicates a high degree of authority and autonomy in project management. The project manager or designated entity possesses significant power to define and assign tasks, allocate resources, and make critical decisions with minimal stakeholder intervention. Although high-level strategic alignment is necessary, the execution of project routines remains largely within the project team's control. They maintain substantial authority over essential tasks and resources, and while they may incorporate stakeholder input, they ultimately have the power to finalize the project's scope. This level of control signifies a greater degree of independence and decision-making power.

An average control percentage of 79% *((71%+81%+85%)/3)* was revealed by a revised Performance Measurement Baseline (PMB), indicating the team's anticipated performance in meeting the baseline by the next evaluation. While the PMB outlines the project's adherence to its plan, this control percentage reflects the team's confidence in achieving its target values. The integration of this confidence level, represented by an index of 7, with the PMB data offers stakeholders a more comprehensive and realistic perspective on the project's current status. This "substantial" control level suggests that the project manager must develop strategies to accelerate the team's progress in subsequent phases to align with the original schedule and budget. The project items can be anything like a diverse component, an activity, and a resource.

When a project consistently experiences negative deviations from its established Project Management Baseline (PMB), it results in diminished confidence in achieving the originally planned completion date and budget. Consequently, it is imperative for project managers to conduct regular assessments of these confidence levels and communicate them to stakeholders. This practice enables proactive decision-making and mitigates potential risks.

INDEX 7 - "SIGNIFICANT" CONTROL

An entity with significant control possesses a level of authority and influence that allows it to independently determine project direction and manage its tasks and resources. While not absolute, this degree of control is sufficient for effective planning, execution, and adaptation. The entity retains robust autonomy, though it may still be subject to strategic alignment, overarching guidelines, or the occasional need for higher-level approvals. Positioned between "Substantial control" and "Full control," this level of oversight reflects a powerful, yet not entirely unconstrained, ability to guide the project.

For instance, a curriculum development team with significant control has the authority to finalize the project's scope, deliverables, and acceptance criteria. Although they may solicit input from advisors, consultants, and senior management to align with the broader implementation roadmap, the final decisions on task breakdown and scope rest with the team.

In a recent review, the project team presented data using a weighted scale, which was approved by the project manager.

PROJECT ITEM	BASELINE	ACTUAL	VARIANCE	CONFIDENCE
Scope completion	75%	64%	Under 11%	71%
Schedule adherence	May 3, 2059	May 10, 2059	1 week delay	81%
Cost expenditure	$3000	$3250	Over $250	85%

The calculated weighted overall percentage of control is 86.80% *(derived from 85% × 25% + 90% × 60% + 77% × 15%)*. This result corresponds to a "significant" control rating and a confidence index of 8. The data suggests that the project team should more effectively leverage its existing control to ensure a successful project outcome.

CONTROL	PERCENTAGE	WEIGHTED
Budget	85%	25%
Schedule	90%	60%
Scope	77%	15%

INDEX 8 - "FULL" CONTROL

Full control within a project is defined as the unilateral authority granted to an entity over all aspects of task definition, assignment, and execution, as well as the allocation and utilization of all necessary resources. This level of control implies the ability to make all decisions independently, without the need for external approval or facing significant constraints. An entity with this authority can thus fully shape the project's direction and manage all of its components. This concept of comprehensive power is understood to operate within the specific context of a given project.

A practical illustration of this principle is a solo developer on an Android application project. Possessing the necessary technical expertise, the developer exercises full control by independently managing all project phases, including conceptualization, design, coding, testing, marketing, and customer support. This comprehensive authority extends to unilaterally defining the project's scope, features, timelines, and quality standards.

Acknowledging that absolute control (100%) is practically unattainable due to inherent external realities and limitations, a high level of authority can be quantified. In this particular scenario, the level of control is subjectively determined to be 92%, which is correlated with a confidence index of 9. This linkage provides a quantifiable measure for assessing control within a project management framework.

An analysis using the earned value method reveals that a key project task has a Cost Performance Index (CPI) of 0.95. This is derived from an Earned Value (EV) of 95% of the anticipated value against an Actual Cost (AC) of 100% of the granted budget. While a CPI less than 1.0 typically indicates the project is over budget, the current value of 0.95 suggests a high degree of efficiency and effectiveness, with the project manager maintaining a 95% control rate. This performance is generally considered excellent, placing the project team in a "full control" status for this task. However, if a 5% budget variance is deemed critical, the project manager must evaluate other factors, such as time, technological, or scope constraints, to determine and implement appropriate corrective actions.

The project manager should act like a facilitator

$$\text{CPI} = \frac{EV}{AC} = \frac{95\%}{100\%} = 0.95$$

to maintain good collaboration, communication, and coordination among project team members. To ensure project success, it is essential for the manager to identify limitations in their direct control and proactively engage stakeholders. This approach fosters a unified team capable of achieving project objectives.

INDEX 9 - "ABSOLUTE" CONTROL

Gaining absolute control over all project tasks and resources is a theoretical and often unattainable assumption in project management. The highest score on a confidence index, a 10, would hypothetically signify an entity possessing unquestionable authority and influence over a project. However, it is exceedingly rare for an individual, group, or organization to have unrestricted power across the entire project

lifecycle, including the initiation, planning, execution, monitoring, and closure phases.

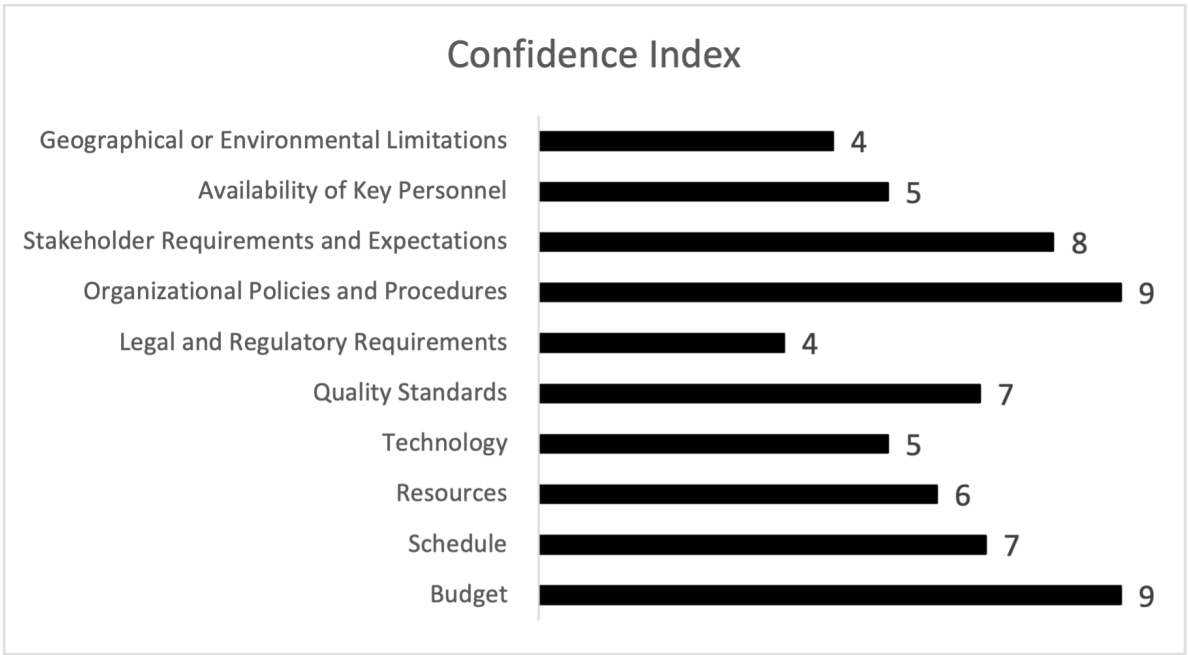
For instance, in a construction project, a project manager might secure a contract with a key supplier for steel materials at a guaranteed maximum price (GMP), providing a high degree of confidence regarding a portion of the project's costs. This scenario could lead to a confidence index score of 10, as the level of control over this specific resource is nearly absolute. Nonetheless, it is crucial to acknowledge that achieving this 100% confidence level is generally impractical due to inherent project uncertainties and external factors beyond direct control.

SAMPLE INTEGRATIONS

The proposed confidence index model is applicable across all phases of the project life cycle with a quick overview for proactive management and informed decision-making. This section demonstrates how to integrate the model into project planning to evaluate the degree of confidence that a given project item (such as a component, activity, or resource) will meet its defined goals and objectives.

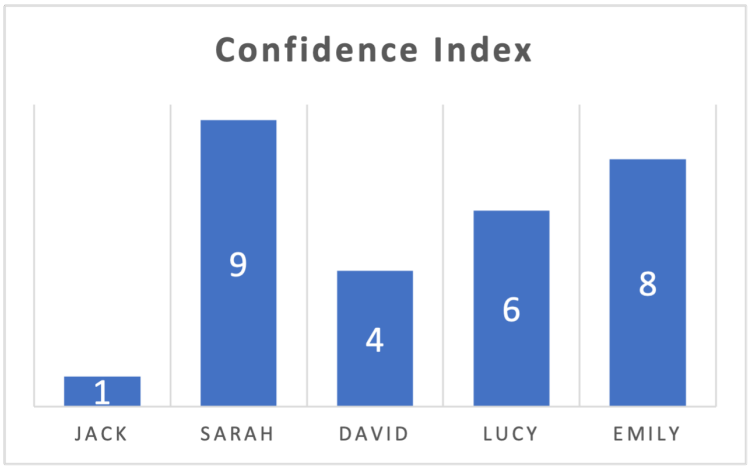
A practical application of this model involves enhancing the project scope statement, particularly the section on constraints. In addition to the standard description of limitations, a graphical representation can be used to visually express the confidence index and the percentage of control over these project constraints, offering a clear and immediate overview of potential risks.

In a progress report, confidence indexes become KPIs of tasks.



TASK	TASK OWNER	STATUS	% OF CONTROL	CONFIDENCE INDEX
User authentication module	Jack	Currently, the task is blocked. It is awaiting the API integration specifications from the client to proceed.	10%	1
Product listing page	Sarah	The current status indicates the task is on track to be delivered by the end of day tomorrow.	95%	8
Database schema design	David	The project's duration has doubled the initial schedule estimate.	45%	3
API development	Lucy	The deliverable completed formal verification by the testing lab, achieving 65% compliance against the predefined acceptance criteria.	65%	5
Mobile app development	Emily	The project has reached the beta test milestone.	82%	6

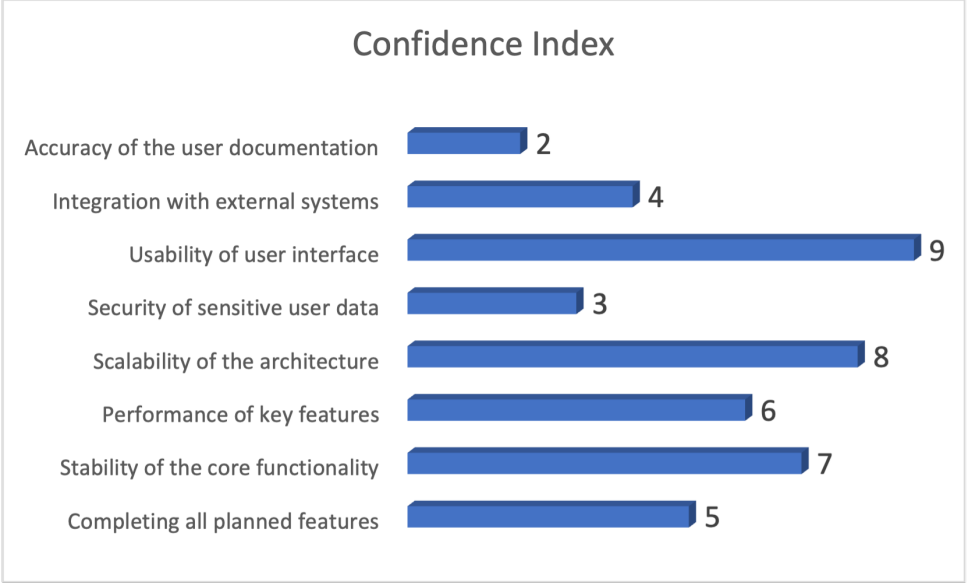
A visual aid as shown below is presented to offer a concise overview, which can be incorporated into progress reports for a rapid assessment of project status.



To facilitate stakeholder communication, the subsequent table offers a condensed summary of project status, enabling a quick assessment of key metrics independent of a lengthy narrative.

TASKS	CONFIDENCE INDEX	CONTROL LEVEL
Completing all planned features	2	Inadequate
Stability of the core functionality	6	Substantial
Performance of key features	5	Moderate
Scalability of the architecture	7	Significant
Security of sensitive user data	4	Limited
Usability of user interface	8	Full
Integration with external systems	3	Nominal
Accuracy of the user documentation	2	Inadequate

A sample chart, designed for inclusion in the stakeholder communication document, is presented below to provide an immediate and concise overview of the team's overall performance.



A risk report is a formal document that summarizes the status of a project's risks. This includes an overview of identified risks, their current status, implemented risk responses, and any new or emerging threats. Incorporating a confidence index into the risk report provides stakeholders with a more comprehensive understanding of each risk. It allows for the assessment of not only the potential impact and likelihood of a risk, but also the project team's confirmed capacity to execute planned responses. For example, in a risk register—a key component of the risk report—a project team may add columns for a "confidence index" and "percentage of control." This enables a quantitative and qualitative assessment of the team's ability to manage specific risks. In the case of risks such as "technical difficulties" or an "unexpected power outage," a team may report "full" control, reflecting

a high level of readiness. The confidence index, in this instance, could be assigned a value of 9, providing a quantifiable measure of the team's capacity to manage these particular threats.

RISK ID	RISK DESCRIPTION	LIKELI-HOOD	IMPACT	RISK OWNER	% OF CONTROL (PC)	CONFIDENCE INDEX (CI)
R001	Low attendee registration	Medium	High	Event Manager	65%	5
R002	Keynote speaker cannot arrive on time	Low	High	Agenda Liaison	85%	6
R003	Technical difficulties	Medium	Medium		95%	8
R004	Delay in catering service	Low	Medium	Logistic Liaison	47%	6
R005	Unexpected power outage	Low	High	Event Manager	90%	4

SIGNIFICANCE

Many organizations develop their own internal "Project Readiness Assessments" with indices. The Literature Review section also discussed several approaches or methodologies. However, they are often checklists or questionnaires that evaluate a project's preparedness to move from one phase to the next. The model provides project managers with a KPI-style overview that facilitates more informed decision-making and the development of proactive response strategies throughout the project life cycle. The confidence index reflects the project team's certainty that control of their estimates for reach and impact are accurate. With the use of the proposed model, all project-related assessments can be compiled into a meaningful numerical index or a set of qualitative ratings that serve as a "confidence index" for key stakeholders.

LIMITATIONS

While the proposed confidence index model offers a valuable tool for project management, its application is not without limitations. As detailed in the following table, these foreseeable limitations necessitate that project managers supplement the index with all appropriate project management techniques, tools, and methodologies to ensure effective project outcomes.

All project management models have inherent limitations. As such, while the proposed model offers practical applications, further research is necessary to explore and identify its potential limitations. Project managers must be cognizant of these constraints to ensure cautious and appropriate application of the model.

LIMITATION	DESCRIPTION
Dependence on Accurate Input	The accuracy is contingent upon the quality and integrity of the input data.
Subjectivity and Bias	Individual optimism, pessimism, or biases could unavoidably influence assessment results.
Uncontrollable Factors	The determination and computation of the index are constrained by external factors and complexities that preclude individual isolation for thorough analysis.
Difficulty in Aggregation	Integrating the confidence index of a single project item into an existing project health evaluation may not accurately reflect the overall project profile. This is because different project areas may exhibit varying levels of confidence due to distinct underlying factors.
Lack of Predictive Power	A high index does not correlate with a direct prediction of success, while a low index indicates potential risks rather than guaranteeing project failure.
Lack of Actionable Insights	While an index can effectively signal the presence of issues, it may not provide actionable solutions.
Simplification of Complexity	Effective project management necessitates the careful decomposition of complex situations. The use of a single index, however, risks oversimplifying this complexity, which can lead to misinterpretation and inaccurate conclusions.

CONCLUSION

This study introduces a confidence index model as a leading indicator to proactively manage project risks. The model quantifies the perceived control over project variables, providing early warnings to prevent minor concerns from becoming critical issues. By integrating this index with existing metrics, project managers can make more informed decisions on scheduling and resource allocation, thereby enhancing the probability of successful project delivery. While the model has inherent limitations, its efficacy can be maximized by using it alongside other established project management techniques. Its future development and substantial contribution to the field will require continuous refinement through collaborative, interdisciplinary research.

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The Whisper Of Art Expression: Promoting Art Intervention In Education And Health

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ABSTRACT

This article offers a critical analysis of art as an expressive medium that not only communicates nonverbally but also serves as a powerful tool for healing. Grounded in an integrative literature review spanning aesthetics, art therapy, and psychosomatic medicine, the work hypothesizes that creative expression, whether through visual arts, music, writing, or movement, enhances both psychological and physical well-being. In addition to reviewing historical and contemporary perspectives on art's role in healing, this paper introduces a Senses Activation Model for Art Well-Being, which provides a practical framework for using all sensory modalities to experience art as a means of self-care. The findings have implications for art education and healthcare settings that seek to integrate art-based interventions for enhanced human well-being.

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Keywords: art expression, art education, healing, well-being, psychosomatic medicine, art therapy

Former First Lady Eleanor Roosevelt once said, "To handle yourself, use your head; to handle others, use your heart" (Roosevelt, 1946). This timeless insight captures the delicate balance between thought and emotion that shapes our lives. In many ways, this same balance defines the nature of art. Art is not simply a visual pleasure or decorative object; it is a means of expression that often speaks where words fail. At its most powerful, art reaches into emotional spaces that are too deep, fragile, or complex for direct speech. It reflects not just what we see, but what we feel.

People naturally turn to art when they cannot find the right words. In moments of grief, joy, or confusion, a song, a painting, or a poem can say what they cannot. Art becomes a channel, offering comfort, catharsis, or even confrontation. It does more than entertain; it shapes how we process experience. The emotional effects of art can be subtle or overwhelming, but they are rarely neutral. A painting can evoke a memory, a piece of music can move us to tears, and sculpture can create a space for contemplation.

The American Art Therapy Association (2022) defines art-making as a therapeutic process that helps individuals navigate emotions that might be difficult to articulate. This connection between emotion and creative practice is not new. Aristotle's theory of mimesis, the idea that art imitates life, suggested that through experiencing art, we gain emotional insight. He also proposed the concept of catharsis, that art allows for the purging of deep feelings (as cited in Nakhlé, 2016). In this way, art has always been a bridge between internal feeling and external understanding.

Today, modern science lends further weight to this ancient view. Kaimal et al. (2016) demonstrated that engaging in art-making for even a short period reduces levels of the stress hormone cortisol, indicating a shift toward psychological calm. Similarly, Stuckey and Nobel (2010) reviewed multiple studies and found that creative activity, whether painting, drawing, or making collages, is associated with improvements in mood and emotional resilience. Neuroimaging studies by Bolwerk et al. (2014) revealed that both creating and observing art activate areas of the brain related to reward, pleasure, and emotional regulation, reinforcing the notion that art affects us on both cognitive and emotional levels.

This paper explores how art functions not only as a mode of expression but as a practical and deeply personal avenue for emotional well-being. Through visual, tactile, and auditory engagement, art can foster a reflective space that supports healing, growth, and self-awareness, qualities increasingly valued in both education and therapeutic environments

ART AS EMOTIONAL EXPRESSION: AN AESTHETIC PERSPECTIVE

Art is often divided into categories: representation, expression, and modeling. These distinctions help explain how different works engage emotion in distinct ways. **Representation** focuses on portraying the physical world, portraits, still lifes, landscapes. But even the most precise realism is shaped by choice. A soft light on a face or a heavy sky in the background adds emotional weight. These visual decisions affect how we respond to what we see. Vermeer's *Girl with a Pearl Earring*, for example, creates a sense of mystery through her sideways glance and the contrast of light and shadow (Wheelock, 1995). Rather than duplicating reality, representation becomes a curated lens that stirs feeling. Small artistic choices like color tone or line tension shape how we emotionally connect with the work.

Expression is more internal and immediate. It is about pouring emotion directly into the work. Romantic artists did this boldly. Goya's *The Third of May 1808* pulls the viewer into horror and helplessness. Turner's *The Slave Ship* uses swirling color to provoke anger and sorrow. Beethoven and Chopin channeled grief and longing into their music. This kind of art is not subtle; it hits you. Expression leans on intensity, movement, and contrast to strike an emotional nerve. It skips logic and speaks straight to the nervous system, particularly the limbic brain, which processes emotion (Malchiodi, 2012). That

is why expressive works can feel raw; they mirror the emotional chaos we often carry inside.

Modeling, on the other hand, is more conceptual. It does not aim to show or shout emotion; it builds an environment where emotion emerges on its own. In these works, meaning comes from how the viewer interacts with color, space, light, or form. Take James Turrell's installations. His use of diffused colored light wraps the viewer in a quiet sensory experience, inviting reflection without images or narrative (Adcock, 1990). What we feel comes not from what is depicted, but from how the artwork changes our perception. This is especially true in contemporary installations, where ambiguity allows the viewer to bring their own emotions and experiences into the piece (Noë, 2015). By not spelling anything out, modeling often heightens personal impact. It can slow down time or open mental space, letting us become more aware of how we feel.

In recent decades, science has begun to back up what artists and viewers have long sensed: art changes how we feel. Brain scans show that art-making or viewing can release dopamine, the neurotransmitter linked to pleasure and reward (Bolwerk et al., 2014; Malchiodi, 2012). This partly explains why creative activities can ease anxiety or lift our mood. For people experiencing depression or trauma, art is not just a distraction; it offers relief and insight.

We do not need a therapist's office to feel this. Many of us turn to art without even thinking about it. A song reminds us of someone we love. A painting draws us in even if we cannot say why. A sculpture might bring calm or discomfort. These reactions happen before we put words to them. That is the power of art. As Celkyte (2018) notes, part of what makes art so moving is how personal our response is. The Oxford Living Dictionaries (2019) defines aesthetics as "a set of principles concerned with the nature and appreciation of beauty, especially in art." Beauty, in this case, includes emotional resonance.

Ultimately, art remains one of the sincerest ways humans express themselves, both to others and to their own hearts. Whether in a silent museum, a music hall, or the pages of a sketchbook, creating art lets us feel, reflect, and heal. From the classical paintings of the 1800s to a child's drawing on a refrigerator door, art still tells emotional truths that language cannot reach.

THE HISTORICAL PURPOSE OF ART

Art has been part of human life for as long as people have existed, not as decoration, but to understand and survive. Before writing or formal language, people made marks on walls, on stone, in dirt, not to impress, but to say something that words could not. In places like the caves of Altamira and Lascaux, ancient humans painted animals and outlined their own hands. These were not made for beauty. They were part of life, maybe ritual, maybe memory, maybe connection to something bigger than themselves (Clottes, 2008). What is left behind tells us one thing clearly: people had something to say, and they found a way to say it.

More than representations of wildlife or daily life, these cave images reflect the human desire to make meaning visible and enduring. They illustrate an instinct to record, to connect, and to leave behind evidence of existence. Even in their simplicity, these ancient works reveal the roots of symbolic thought and visual communication. They show us that from the beginning, humans have used art not only to depict the world, but to interpret it, to leave a trace of their presence, and to share their story across time.

As civilizations took form, art evolved alongside them. In ancient Egypt, art became a sacred form of expression. Paintings and carvings inside tombs were not created only for beauty, but they guided souls in the afterlife, explained religious beliefs, and solidified the pharaoh's divine status. Hieroglyphics and murals showed a record of power and belief. In Mesopotamia, artisans etched battle scenes, temple rituals, and royal accomplishments into stone. These pieces captured memory, taught future eras, and supported political order (Winter, 1995). In both cultures, art served as a living narrative, a way to carry meaning forward beyond the spoken word.

By the Renaissance, the objectives of art had grown. Rather than operating only in religion

or rulers, artists explored the body, nature, and the mind. Leonardo da Vinci's *Vitruvian Man* is a visual study of proportion, science, and symmetry, a bridge between math and philosophy (Kemp, 2006). Michelangelo's *David* is not just a sign of biblical heroism; it echoes an inner struggle, bravery, and humanity. Renaissance art turned the direction from sacred narratives to human possibility.

In the 1800s, Romantic artists recognized feeling at the center of their creation. They were not curious about copying nature but about capturing its emotional impact. Their art became more contemplative, more atmospheric. Through vast landscapes or sweeping designs, they described awe, grief, joy, and the secret of existence. Art evolved as a vehicle for feeling, a mirror to the internal self.

The 20th and 21st centuries brought new challenges and expanded responsibilities for art. In times of conflict and imbalance, artists started to answer with analysis. Diego Rivera painted the battles of Mexican workers across public walls, making history visual to ordinary people. Kara Walker, via stark silhouettes, revealed the violence and legacy of American racism (Walker, 2014). Modern artists use technology, performance, and media to question prevalent narratives and give voice to marginalized groups. In today's world, art persists to speak, but often with urgency and confrontation.

What has never changed is art's core function. It enables us to see what facts alone cannot define. It holds memory, provokes thought, and brings people together through shared experience. Whether carved in stone or rendered in pixels, art reminds us who we are and who we might become. Across all periods and civilizations, it has helped the same essential mission: to keep, to examine, and to feel.

ART AND HEALING

People have always turned to art during difficult times, not just to make something beautiful, but to work through pain. Whether it is painting, writing a poem, or shaping something with clay, the act of creating gives emotions a place to go. It helps release feelings that are too hard to say out loud. That is why, even thousands of years ago, art was not just a form of expression; it was something people relied on to feel better and stay connected to themselves.

Neuroscience studies have begun to shed light on why creative expression can feel so healing. Art-making stimulates areas of the brain involved in emotional regulation and memory, specifically the prefrontal cortex, amygdala, and hippocampus (Bolwerk et al., 2014; Stuckey & Nobel, 2010). This kind of brain activity helps explain why individuals living with trauma, anxiety, or depression often find real relief in creating something. When talking feels too difficult or overwhelming, making art can become a safer, more accessible way to process emotions and express what is inside.

Even when words fail us, images can still speak. That is the quiet power of art. In moments of deep emotional pain, talking might feel impossible or unsafe. Art gives people another way to let their feelings out, without needing to explain, defend, or relive their trauma (Malchiodi, 2012). Scientists have also found that both making and viewing art can trigger the brain to release dopamine, the same chemical that lifts our mood and gives us a sense of reward (Lusebrink et al., 2013). It is no wonder, then, that art therapy is used with a wide range of people: veterans coping with PTSD, cancer patients enduring harsh treatments, and children trying to heal from abuse. What connects all these cases is this: art opens a door when everything else feels shut.

Although the benefits of art in healing are widely recognized, they are not guaranteed or universally experienced. Much of the research in this area is still developing, and many studies are limited by small sample sizes or short-term observations. The effectiveness of art as a therapeutic tool depends heavily on individual factors, such as a person's life history, the type of trauma they have experienced, and their cultural background (Kaimal et al., 2016). That is why it is crucial not to generalize these findings. What brings healing or insight to one person might not resonate at all with another.

Future research would benefit from drawing from broader and more diverse participant groups. In addition, comparing different forms of creative expression, such as painting, music, movement, and other art practices, could offer clearer insight into how each form supports emotional or psychological well-being. These kinds of studies could identify the most appropriate approaches for specific conditions or populations, helping practitioners offer more thoughtful, individualized, and research-based support.

You can find art being used in all kinds of difficult settings—hospitals, schools, prisons, and refugee camps—where it helps build connection and bring a sense of calm. Even with its limitations, art continues to play a powerful role in emotional recovery. Whether it is a child painting with their fingers in a hospital room or a community coming together to paint a mural in a place torn by conflict, these moments remind us that meaning and beauty can still grow from hardship. The healing does not just come from the finished piece; it often begins in the act of creating it.

RESULTS AND DISCUSSION

Art has the power to shift how people feel, not just what they see. In healthcare environments, especially hospitals or clinics, art can help turn sterile, tense spaces into places where patients feel more at ease. Many patients facing serious illness have said that creating or viewing art helped them feel like themselves again. A study in the UK found that individuals undergoing cancer treatment used art therapy not only to feel better emotionally but to regain a sense of control during a very uncertain time (Cancer Research UK, 2018).

When people are struggling, words do not always come easily. That is where art steps in. A painting or drawing might carry meaning that is too difficult to express out loud. As Cathy Malchiodi (2002) notes, art offers a way for people to understand and process their feelings without having to explain them verbally. That alone can be a form of healing. The act of creating something with your hands or expressing yourself through color and shape allows for a kind of emotional release that talking does not always offer.

There is growing scientific evidence to support this. Research using brain scans has shown that engaging in artistic activities stimulates areas of the brain associated with pleasure, memory, and emotional regulation (Bolwerk et al., 2014). In simpler terms, art helps people feel good, stay focused, and process their emotions. While it is not a replacement for medical care, it works alongside it, offering relief, comfort, and a sense of agency.

Of course, the current research has its limitations. Many of the studies available are based on small groups and short timeframes. Others depend heavily on how participants describe their own experiences, which can vary widely. Cultural background also plays a big role, what feels soothing or expressive in one community may feel unfamiliar in another. These differences make it hard to apply findings universally, and they highlight the need for more inclusive and diverse research models.

What we are learning now is not entirely new. Earlier studies, such as the work by Reynolds and Lim (2007), showed that cancer patients found comfort and meaning in creative work. They described it as grounding and even life-affirming. But while their stories were powerful, many of those studies did not follow participants over time. We still need more research that looks at the long-term emotional and psychological effects of engaging in art, not just how people feel immediately after.

That said, it is important to recognize the limitations of this body of research. Many of the studies mentioned rely on relatively small samples, limited intervention periods, or subjective feedback from participants, factors that may affect reliability (Fancourt & Finn, 2019). In addition, inconsistent delivery methods and variations in cultural context make it hard to compare outcomes across different studies. What's healing in one setting might not resonate in another.

At the same time, when we compare visual art therapy to other forms of creative healing, such as music or dance therapy, we see that similar emotional benefits appear across disciplines. However, music and dance therapy often benefit from more robust testing, including randomized trials and longer follow-up periods (Bradt & Dileo, 2014). These comparisons show us that creative expression, in any form, holds potential as a valuable part of emotional support and recovery. But we need more consistent and well-structured research to confirm and build on these results.

Ultimately, art brings something essential to healthcare that medication alone cannot provide. It helps people feel seen and understood without saying a word. Whether it is someone drawing quietly in a hospital room or finding peace in a mural on the wall, those moments of connection, between the person and the image, create a unique kind of healing, one that speaks directly to the heart.

SENSES ACTIVATION MODEL FOR ART WELL-BEING

The Senses Activation Model for Art Well-Being, which I developed through my own work in art and healing practices, emphasizes the role of all five senses in creating a deeper and more meaningful relationship with art. Rather than limiting art to something seen or heard, this model encourages a fully embodied encounter in which individuals engage touch, sound, smell, and even taste when appropriate. Through this multi-sensory involvement, art ceases to be a passive object of observation and instead becomes an active force that supports healing, self-discovery, and personal growth.

This framework illustrates how art can strengthen emotional, mental, and physical well-being by transforming aesthetic encounters into rich, lived experiences. When all the senses are engaged, art reaches beyond surface impressions and fosters a profound sense of connection. The discussion that follows will consider the distinctive role each sense plays in deepening artistic engagement and will show how these layers of perception enable people to connect with art on a more powerful and personal level.

1. Visual Engagement – The Power of Seeing

Our relationship with art often begins with what we see. A single glance can trigger a rush of emotion, even when we do not fully understand the reason. Color, especially, speaks directly to our emotions: red may stir tension or urgency, while blues and greens are more likely to invite calm or mental clarity (Malchiodi, 2002).

But the response goes beyond the surface. Looking at art activates the brain's visual processing center, the occipital lobe, but the amygdala is where meaning and memory come alive. This part of the brain ties what we see to how we feel, helping explain why a single image can bring back a rush of memory or an unexpected emotional reaction (Gallo et al., 2021).

Try This: Find a piece of visual art, any medium. Spend a few quiet minutes looking at it, letting your eyes settle where they want. Notice what catches your attention, such as shapes, colors, lines. If you are creating your own art, try choosing colors based on what you are feeling rather than thinking.

Why It Matters: We often think of looking at art as a passive act, but it is deeply engaging. Focusing your gaze with intention can soothe the mind and awaken awareness. Research suggests that viewing art may help reduce anxiety and encourage emotional regulation by stimulating key areas of the brain tied to healing (Zaidel, 2015).

2. Auditory Stimulation – The Impact of Sound

Sound has a deep impact on creativity and emotional expression. Music, in particular, can change mood, improve attention, and boost creative ideas. Many analyses indicate that listening to music while working on creative tasks helps people stay focused while also making the procedure more immersive (Pennebaker, 2016). The rhythm, tune, and energy of a musical piece can stimulate originality, allowing an artist to translate emotions into a visual or physical format.

Try This: Choose an instrumental track or ambient sound to play in the background as you work on an art piece. Before you begin, take a moment to close your eyes and focus on the sounds. Be aware of how the music drives your feelings. Does it spark certain images, colors, or emotions? After immersing in its effect, allow those feelings to shape your creative expression.

Why It Matters: Adding sound to the innovative process can create a more profound emotional connection to art. Music can relax the mind, open up new perspectives, and improve creative flow. By integrating sound into their strategy, artists may uncover unforeseen inspiration, making their work feel more expressive and connected to their emotions.

3. Kinesthetic Involvement – The Connection Between Body and Art

Movement-based art practices integrate the body into the creative process, allowing for the physical expression of emotions. Extended painting techniques offer a deep avenue for emotional expression and stress relief, and immersing the body in creative works, like ecstatic dance, stimulates participants to move willingly and intuitively, enabling self-discovery and enhancing well-being.

Try This: Include expressive movements in your art-making approach, including dancing while creating artwork, utilizing wide brushstrokes, or engraving with broad motions. A kinesthetic practice can deepen your connection with the painting and encourage emotional release.

Why It Matters: Combining physical movement into creative activities can improve self-awareness, relieve anxiety, and enrich innovative expression. This holistic method not only enhances artistic practice but also contributes positively to overall mental and emotional health.

4. Olfactory and Tactile Stimulation – Engaging Touch and Smell

The senses of touch and smell are often forgotten when it comes to experiencing art, but they are incredibly important for memory and emotional balance (Harper, n.d.). Working with materials like clay, textured paper, or fabric can offer a calming, grounding effect. Similarly, pleasant scents such as lavender or citrus can create a relaxing atmosphere.

Try This: Try incorporating scented oils or textured materials into your art process. While working, notice the different textures and the scents in the air.

Why It Matters: By engaging both touch and smell, you help create a richer, more mindful experience that deepens your emotional connection with the artwork.

5. Reflective Integration – Processing the Experience

Taking time to reflect on your experience after creating art is a vital step in processing the emotions and insights it brings (Malchiodi, 2002). Whether through writing or discussion, reflecting helps you fully absorb the emotional aspects of your work, strengthening personal growth.

Try This: After finishing an art session, spend some time journaling. Write about the feelings, thoughts, or physical sensations that came up during your creative process.

Why It Matters: Reflection helps you become more self-aware, supports emotional processing, and makes the therapeutic benefits of art even more powerful.

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FROM THE CLASSROOM:

Crossing Borders: Global Disruption Guides International Uncertainty

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ABSTRACT

This paper explores the 2025 complexities of course preparation amid heightened political and economic uncertainty, focusing on the CaliBaja region—an integrated bi-national zone uniting San Diego, California, and Baja California, Mexico. The international business course curriculum's traditional emphasis on global theories, strategy, and policy was recontextualized through the lens of cross-border regional economies. In this period of volatility, CaliBaja serves as a timely case study in economic interdependence, tariff implications, and the strategic significance of bi-national cooperation. The region's challenges and innovations offer real-world insights that enrich classroom discourse and bridge theory with practice. This paper argues that, in times of disruption, teaching international business grounded in the lived realities of border regions is not only relevant but essential for preparing students to navigate the complexities of global commerce.

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Keywords: borders, bi-national, CaliBaja, cross-border, international, economies, tariffs, strategy

Preparing to teach Keller Graduate School's International Business INTL500 on the San Diego campus of DeVry University in January of 2025 began as most any other vigilance. The course is a general construct of traditional global concepts, theories, and policy exploration. A favorite class to teach, rotating into my schedule three times a year, I adventure with students through economic, political, and technological landscapes. My previous international business career and travel to 50+ countries are attractive alignments to the course materials and the earlier two-week holiday break had allowed for me to enjoy time over the border (Mexico). As a San Diegan, CaliBaja is a natural and inspiring destination.

My career in Fortune 500 firms of the international manufacturing industry paired with my non-profit leadership and research provides a template for INTL500 each time I teach. In addition to author field research, site visits, international dinners, and leading study abroad travels, this course is home to me. Laptop folders have 15+ years' worth of maps, slide decks, case studies, recordings of past guest lectures, podcasts, graphs, and, well, you understand, colleagues, because you also have an abundance of artifacts to share. Our stories cross borders with the stories from our students. And we compose new tales together.

Eight US military veteran students with diverse racial, ethnic, and cultural stories to share provided a sizzling first night of class on campus. Their collected career expertise brought an abundance of logistics, software, finance, hospitality, supply chain, and highly technical skills. This remarkably accomplished group were already real-life experts of INTL500-themed concepts, such as NATO, NAFTA, and DOD. Their lived submergence in these acronyms did not need explanation. They had survived Desert Storm, years of deployments, and decades of travel. Week 1 added G8, WTO, GDP, and IMF to their forefront.

Campus round table-style meetings with coffee sat twelve miles from the busiest land border crossing in the world, so a natural conversation easily twined into our discussions. With ease and sincerity, students shared their desire to deepen their understanding of the dynamics of global business, to further their already experienced sense of international leadership, and to adventure into a sense of belonging in the post-service global world where they had already lived and served. Five of the eight students were born outside of the US, served the US, and had the disposition of belonging to a world as global citizens. From day one of introductions in Canvas, I knew this was a gathering of experts in course objectives through their 20 (+) years of military service and life experience introspection. And while this class had a unique matureness to it, it is not uncommon to meet polished, globally aware students each time I teach the course on campus.

Not due to lack of preparation, my crafted week one artifacts were obsolete by 6:00 PM that evening. Basic international policies, including tariffs and global alliances, changed in the 60 minutes time from leaving my home and morphed into sanctions and global disruption. San Diego and Tijuana are inextricably linked both economically and culturally. Flows of goods and services occur within the larger region known as CaliBaja. This home of seven million inhabitants with a regional GDP of $250 billion (Williams et al., 2025) is a straightforward way to begin dialog with campus students in week one, as we all are rooted in knowing we are a part of this integrated economic zone at the US-Mexico border. US's latest political regime threatening sweeping tariffs and destroyed trade agreements meant my Night 1 agenda was not as current as it was when I left my home an hour prior; impact of these threats was not theoretical, and it was highly relevant for all of us to consider the results of our own family budget knowing the 25% tariffs between our two neighboring countries (Williams et al., 2025) meant higher sticker prices for most any routine family purchase. Half of US car imports arrive to the US from Mexico. Cross-border collaboration is an essential focus in this course and a testament of pride to our local economy.

Though trade and tariff talks are designated to Week 1 of the course, the following seven weeks brought accelerated weekly in-person discussions over dozens of policy shifts and tariff regimes from each previous day. We debated, discussed, reconstructed policies, and shared mutual frustrations at the looming economic crisis ahead and what this would do to our geographic home and businesses we live next to.

Time was a new continuum in the following weeks to come as we explored, traveled, and vented in person and online. Constant seismic shifts in daily news provided unlimited discussions. With bilateral policy ricocheting each minute and supply chains choked by geo-political responsibilities and strategic de-coupling each day, we boldly approached hours related to Russian oil trade inquiries leading to China and India tariffs. In live time, we witnessed two generations of business strategy under siege. During class one evening, we all down-loaded news together only to discover the local companies we researched in the thread that week, now had incurred millions of dollars of trade fees and were in immediate need of new trade certifications; compliance regulator documentation and overnight policy changed again. The CaliBaja partnership stands as a model of regional cooperation and our threaded discussions, case studies, papers and analysis were outdated by the time we finished discussion that evening.

Our Week 8 closing dinner met five miles from campus, concluding our international friendships at a Russian-Georgian restaurant for our final time together. An assortment of spouses and grown kids joined us to explore what we knew to be true: the joy of eating together, taking a risk by ordering mysterious menu items with the certainty of pleasure found through international cuisine. Boris, our Georgian bartender's "Stand with Ukraine" badge and Anastasia, our Russian server's enchanting menu descriptions provided the global flair and whimsy we all craved. Anastasia revisited our large table for hours, answering questions with high energy and optimism. Over borscht soup and pierogies, she smiled as she handed us our check, asking "How can we have so many problems in a country with such good food and polite servers?"

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FROM THE CLASSROOM:

Addressing Uncertianty And Optimizing Academic Risk Response

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ABSTRACT

The Project Management Institute (PMI) provides recommendations on how to avoid project failure using a continual risk management response strategy. Project Managers will encounter project risks and uncertainties which will need to be addressed or result in project failure. Students will also encounter risks and uncertainties with their academic, degree program, and coursework levels. Students should also understand how to manage risk. Although PMI has a dominance at providing standardize methodology for project management practitioners, students alike can also partake in what the PMI and this author suggest regarding how to manage risk. PMI publishes a *Guide to the Project Management Body of Knowledge* (PMBOK) seventh edition. A key section in the PMBOK addresses elements referred to as Project Performance Domains, the twelve Principles of Project Management, and one in particular that addresses how to manage risks and uncertainties. This article will discuss what could be risk avoidance of student academic and program failure, and it will share suggested risk response strategies provided in the tenth Principle of Project Management - Optimize Risk Responses. This observation will recommend not only how projects should have a continual risk response evaluation process to optimize risk opportunities and threats, but also how students could seek to reduce the likelihood of academic learning and degree program failure.

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Keywords: academic, risk, uncertainty, deliverables, adaptability, opportunity

Managing projects across an organization is a major undertaking for any project manager. But, what about students managing their academic program? One can consider an academic program as a combination of degree program and multiple courses, with each course its project. The Project Management Institute (PMI) is a not-for-profit organization that provides guidance and training to those inspired to learn about project management and more. In part of their guidance, they offer suggestions on how to manage projects, and they provide training on how to approach planning and challenges that may be encountered. In their guidance, PMI refers to project activities within project performance domains that are key attributes for leading to successful projects (Project Management Institute, 2021). Project performance domains are taught in project management-related courses for both non-project management learners and students inspired to become professional project managers. This article will provide an overview of eight Project Performance Domains, offer suggestions for students to consider as they relate to the twelve Principles of Project Management, and focus on one specific domain that is related to risk and uncertainties. This author will feature "uncertainty" as a critical domain and how it can be used to manage project risk, and the author will offer suggestions about academic program risk.

WHAT ARE PROJECT PERFORMANCE DOMAINS

The Project Performance Domains interconnect with each other to address key elements and activities of a project. In project management terms and context, and when referring to domains, Figure 1 displays eight Project Performance Domains and below is a summary addressing how each should function.

1. *Stakeholders* — addresses activities and functions associated with stakeholders.
2. *Team* — addresses activities and functions associated with the people who are responsible for producing project deliverables.
3. *Development Approach and Lifecycle* — addresses activities and functions associated with the development approach, cadence, and life cycle phases of the project.
4. *Planning* — addresses activities and functions associated with the initial ongoing, and evolving coordination necessary for delivering project deliverables and outcomes.
5. *Project Work* — addresses activities and functions associated with establishing project processes, managing physical resources, and fostering a learning environment.
6. *Delivery* — addresses activities and functions associated with delivering the scope and quality that the project was undertaken to achieve.
7. *Measurement* — addresses activities and functions associated with assessing project actions to maintain acceptable performance.
8. *Uncertainty* — addresses activities and functions associated with risk and uncertainty (Project Management Institute, 2021).

Figure 1 - Project Performance Domains (Project Management Institute, 2021)

WHAT ARE THE TWELVE PRINCIPLES OF PROJECT MANAGEMENT

Each of the Project Performance Domains are used as guides for twelve Principles of Project Management. They are used to supply guidance and outcomes for project managers, management, and team stakeholders on how behavior could influence the performance of each domain's outcome.

1. Stewardship - Be a diligent, respectful, and caring steward.
2. Team - Create a collaborative project team environment.
3. Stakeholders - Effectively engage with stakeholders.
4. Value - Focus on value.
5. Systems thinking - Recognize, evaluate, and respond to system interactions.
6. Leadership - Demonstrate leadership behaviors.
7. Tailoring - Tailor based on context.
8. Quality - Build quality into processes and deliverables.
9. Complexity - Navigate complexity.
10. Risk - Optimize risk responses.
11. Adaptability and resilience - Embrace adaptability and resilience.
12. Change - Enable change to achieve the envisioned future state (Project Management Institute, 2021).

Students can also place an emphasis on how the twelve Principles of Project Management can relate to efforts of academics and coursework.

1. Stewardship - Be a diligent, respectful, and caring student.
2. Team - Create a collaborative project team environment in all coursework.
3. Stakeholders - Effectively engage with stakeholders in class, with the Professor, and with Academic Advisors.
4. Value - Focus on value and delivery of all schoolwork.
5. Systems thinking - Recognize, evaluate, and respond to system interactions in the discussions and course project collaboration.
6. Leadership - Demonstrate leadership behaviors. This is what all students aspire to do.
7. Tailoring - Tailor based on original context and not just what someone else has already said.
8. Quality - Build quality into processes, deliverables, and confirm quality is assured in all coursework.
9. Complexity - Navigate complexity when confronted in coursework. Seek clarity when complexity is not understood.
10. Risk - Optimize risk responses when there is a risk that has uncertainty.
11. Adaptability and resilience - Embrace adaptability and resilience and be proud of the positivity.
12. Change - Enable change to achieve the envisioned future state and address all methods of change as a lesson learned. (Project Management Institute, 2021)

HOW TO OPTIMIZE RISK RESPONSE

PMI defines risk as an uncertain event that could positively or negatively affect a project's goal, and risks are an aspect of uncertainty (Project Management Institute, 2021). Each of the twelve Principles of Project Management will have uncertainty in related projects, and it will be important for management and stakeholders to understand how to plan for uncertainty related risk events and how each risk event could resonate from within any one of the twelve Principles of Project Management.

Students can also address identified risk with an acceptable risk response strategy. As suggested by the tenth Principle of Project Management - Optimize Risk Responses, the following questions could optimize a risk response action for students.

- What is appropriate and timely to the significance of an academic or coursework type risk?
- Will the response be an opportunity to improve a learning outcome?
- Will the risk be realistic within the course context, and can the risk extend further?
- Is there agreement amongst the relevant stakeholders, such as classmates, teammates, and the Professor?
- As a responsible student, will I own the risk? (Project Management Institute, 2021)

These questions offer a continual risk response evaluation that could optimize what could become opportunities and mitigate the identified threats for students.

CONCLUSION

There will be challenges as to how to address what could be an uncertain event within a project and how a risk can impact the overall success of a project. Although each domain was not discussed in full context, each domain will provide an integrated role that offers suggestive best practices for organizations and how projects can be best managed. There is no specificity to following one right after another. They are best used to support each other. Risks and uncertainties and how to best optimize risk responses will be the goal of the project manager and students. What this author recommends about the differences between a risk-minded, non-project manager, a project manager, or a conscience-minded student, is to consider using any one of the domains that best supports the project or academic objectives and uniqueness of the goals in project or coursework delivery.

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FROM THE CLASSROOM:

Reports Of The Death Of Direct Instruction Have Been Greatly Exaggerated

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ABSTRACT
Over the last three decades, there has been a strong trend toward the adoption of active learning approaches to teaching. While active learning techniques can be useful in certain situations, they do not come without limitations. To this day, there is significant research evidence that direct instruction remains more predominantly utilized in the classroom. Moreover, direct instruction, when thoughtfully practiced, can often be the superior approach for the vast majority of learners.

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Keywords: active learning, deliberate practice, direct instruction, fully guided instruction

If a college professor is asked to reveal their primary teaching method, most will likely avoid mentioning lecturing, which is also known as a form of direct instruction. This is because direct instruction has been largely discredited as an effective teaching approach. Direct instruction is viewed as being associated with ineffective "passive learning." Consequently, over the past several decades, educators have been urged to replace direct instruction with an active learning teaching approach since the latter has been shown to increase student engagement. The flow of thought tends to be if students are not participating in class, they are not engaged, and this translates into students not learning as much as possible. This has often been communicated as instructors no longer needing to be the "sage on the stage" in favor of transitioning toward being the "guide on the side" in their classrooms. Notwithstanding these efforts of persuasion, the educational trend to adopt active learning has not occurred without considerable resistance on the part of many faculty. Many faculty have continued to use direct instruction as their predominant teaching approach while others have very minimally adopted active learning techniques. So, why have so many faculty resisted the adoption of active learning methods?

ACTIVE LEARNING LIMITATIONS

Active learning has its foundation in the learning theory of constructivism. There are many elements to this learning theory, but one of the primary tenets is that new knowledge is built upon prior knowledge and experiences (Bada & Olusegun, 2015). Constructivism learning theory gives us insight into how we learn, but it may be quite a leap to imply that it also reveals the most effective teaching method in every context. While focus is often placed on the disadvantages of direct instruction, active learning methods also have their own limitations. Not every student, particularly in many undergraduate courses, brings relevant knowledge to a course to build upon. There is also considerable ambiguity with the term "active learning" and faculty often lack a common understanding of what is meant by the term. In practice, "being the guide on the side" or implementing active learning is often interpreted in many different ways. For example, active learning methods might include class discussions, case studies, role-play, peer instruction, groupwork, or even playing games, among many other types of activities. Are all methods of active learning equally effective? Does every type of student engagement with active learning techniques produce better learning outcomes than direct instruction? Are popular active learning methods such as word clouds, using clickers or polling, and various forms of gamification capable of anything more than superficially introducing course topics? Does playing Kahoot! in an accounting or math course help the students as much as the instructor demonstrating how to solve an example problem with step-by-step direct instruction? Can active learning methods be used with the same level of efficacy to explain concepts or applications in greater depth or help students understand how to complete more complex assignments? Should we not care about helping students develop the skill of listening attentively since it is a form a "passive" learning? These are all important questions worth serious consideration. Some faculty have even gone to the extent of labeling active learning as a "buzzword" without much, if any, useful merit (Chew, 2025).

BENEFITS OF DIRECT INSTRUCTION

The term "active learning" seems redundant to me. Doesn't every form of learning require active involvement and effort on the part of the learner? Last time I checked, even if a student doesn't utter a word in class, it still requires an active learning effort to pick up a textbook and read its content for understanding. It also requires an active learning effort to listen attentively to an instructor. Attention spans aren't developed or strengthened without practicing the art of listening. In most subjects, students probably learn quite a bit more with their eyes and ears than they do when they are speaking. Developing student capabilities to become thoughtful readers and attentive listeners are invaluable life skills. Somehow, I think honing these latter two fundamental skills will serve students much better if they later decide to attend medical school, law school, sit for the CPA exam, become an engineer, or quite frankly,

pursue almost every other occupation. The push to constantly "engage students with active learning" almost seems as though we somehow believe that keeping students busy with activities is what leads to learning. If a manager wanted to know how to best train his employees to perform a particular task, would it be helpful to tell the manager, "Employees learn best when they are busy, so keep them busy," or would it be better to recommend, "show your employees clearly how to do the required tasks they need to perform"?

If we are referring to the preferred method of teaching, shouldn't it be active teaching that we are recommending instead of a method of learning? It's been my experience that the majority of students enter a course without much related prior knowledge. Research shows that direct instruction can be the most effective teaching method, especially among novice learners. Active learning methods are best reserved for use with highly advanced learners, which are typically the exception not the norm (Clark et al., 2012). Of course, just as there are less effective active learning techniques, there are also ineffective methods of direct instruction. Digressive rambling in an aimless, unstructured manner that is not aligned with the learning objectives of a lesson plan is never productive. However, from over three decades of teaching, I believe that students appreciate and experience positive learning outcomes when instructors are well-versed in their subject matter, come prepared to teach, and thoughtfully share their knowledge. One of the most effective methods of direct instruction, particularly in more quantitative courses, occurs when the instructor works through example problems with fully guided, step-by-step instruction. Throughout my own education, this is the way I was taught by my most esteemed teachers. In fact, it's been shown through many replicated studies that this form of direct instruction is the most beneficial for novice learners because it focuses their efforts on first understanding how to do something correctly rather than attempting to "discover" a solution without clear guidance (Clark et al., 2012). While it's been well documented that mastery in most tasks results from deliberate practice (Colvin, 2018), novice students can find it very frustrating to practice properly if they lack an accurate exemplar to follow. Students that are truly interested in learning want to see their instructor clearly explain difficult concepts, have the opportunity to ask questions, and see how example problems like those they will be assigned to complete on their own are correctly solved. Providing students with step-by-step worked examples via direct instruction builds confidence, encourages practice and repetition, and develops the competence we all desire for our students.

CONCLUSION

To paraphrase Mark Twain, reports of the death of lecturing or direct instruction have been greatly exaggerated. Teaching observations reveal that direct instruction remains "alive and well" as the most predominant teaching method. In fact, some observational studies show that faculty use direct instruction nearly 90 percent of the time (Sheridan & Smith., 2020). As educators, we should not be dissuaded from sharing our expertise and affirming our use of direct instruction as an effective way to teach (Clark et al., 2012). It is also, arguably, the most common approach of training or conveying information that students will encounter in the workplace when they attend training sessions or attend meetings. While some faculty may elect to use active learning techniques as a complementary teaching method, there is no need to disparage direct instruction. We should appreciate that lecturing or direct instruction, when done thoughtfully, is still, and likely to remain, a well-supported and proven method of instruction (de Jong et al., 2023; Stockard et al., 2018).

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BOOK REVIEW:

Encounter, Not Discover: Ned Blackhawk's New Framework For U.S. History

Blackhawk, Ned. *The Rediscovery of America: Native Peoples and the Unmaking of U.S. History.* New Haven, CT: Yale University Press. 2023. Pp. 616. Hardcover $35.00. ISBN: 9780300244052

DeAnn O'Donovan,
College of Liberal Arts & Sciences

Reviewer Note: DeAnn O'Donovan, MA. Visiting Professor at DeVry University, Virtual Colorado

In his groundbreaking latest book, *The Rediscovery of America: Native Peoples and the Unmaking of U.S. History*, Ned Blackhawk, a history professor at Yale University, elicits a rethinking of American history by positioning Native Americans not as a footnote, but as central actors. Rather than relegating Indigenous people to the margins, Blackhawk effectively weaves their struggles for existence, autonomy, and land rights into the fabric of colonial ambitions pursued by the Spanish, British, Dutch, and French in North America. Blackhawk states his central aim is to "account for the dynamics of struggle, survival, and resurgence that frame America's Indigenous past" (p. 13). His analysis compellingly advocates for "Encounter – rather than discovery – [to] structure America's origins story" (p. 15), ensuring these pivotal contacts are understood through the profound impacts they had on Native American peoples.

Part I, "Indians and Empires," examines Native American confrontations with European colonists. Blackhawk balances accounts of the horrors and brutality of Spanish conquest, including the devastating collapse of Native populations, with examples of Native resistance and struggles for survival, such as the Pueblo Revolt of 1680. Blackhawk considers this revolt "arguably the first American Revolution," highlighting its role in reshaping Spanish-Pueblo relations (p. 61). Subsequent chapters underscore the centrality of violence in colonial and Native American interactions. Blackhawk also delivers a compelling analysis of the "bonds of commerce, diplomacy, and warfare" that connected Native American nations with French settlers (p. 154). Throughout, he illuminates the crucial role of Native American alliances in key historical events, including the Seven Years' War, the American Revolution, and the conflicts between Anglo-American settlers and Native populations that defined westward expansion.

Part II, "Struggles for Sovereignty," analyzes topics such as the Monroe Doctrine, the Civil War, assimilation efforts, and the sovereignty movement from a Native American perspective. In discussing the Monroe

Doctrine, Blackhawk states that it "also became a declaration of war against America's Indigenous nations, whose long-standing ability to ally with European powers became further inhibited" (p. 393). As this example illustrates, Blackhawk adeptly reveals the multi-dimensional nature of key moments in American history, consistently centering their impact on Native peoples.

Blackhawk is a well-regarded historian, and his book is elegantly written. However, readers seeking a comprehensive overview of his sources may be disappointed; while the notes are copious, there is no consolidated bibliography. Most sources are, in fact, secondary, which may be a drawback for some historians. While the work incorporates some previously unpublished primary sources, the primary source base consists largely of journals from European and American explorers, missionaries, and soldiers, supplemented by Native American primary sources where available. Ultimately, *The Rediscovery of America's* strength lies not in the novelty of its source material, but in the unique perspective through which Blackhawk interprets it.

Candidly, Blackhawk gives voice to Native American leaders who resisted subjugation, as well as to those who perished without leaving a written record. By shifting the historical focus from a predominantly Anglo-American perspective to center on the experiences of the continent's first inhabitants, Blackhawk successfully weaves a narrative of encounter, struggle, and adaptation. This perspective connects those encounters to pivotal moments in American history, such as the Seven Years' War, the War for Independence, and the Monroe Doctrine. The book is essential reading for those seeking a more holistic understanding of the violent struggles that underlie the expansion of U.S. borders from the Atlantic to the Pacific.

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BOOK REVIEW:

Then And Now: A Critical Look At America's Enduring Struggle Against Domestic Extremism

Maddow, Rachel. *Prequel: An American Fight against Fascism.* New York: Crown Publishing Group. 2023. Pp. Hardcover $32.00. ISBN 978-0-593-44451-1.

John Morello,
College of Liberal Arts & Sciences

Reviewer Note: John Morello, PhD Professor of History at DeVry University, (Retired). Currently teaching at Aurora University

The future of America's political system is uncertain. An ultra-right-wing movement, headed by leaders influenced by foreign dictators, seeks the overthrow of the US government. The movement's ranks, made up of Americans from all lifestyles, finds added support from inside government, especially members of Congress. These elected officials defend the extremists, obstruct efforts by law enforcement to exact punishment, and shield themselves from possible criminal liability when outed. Rachel Maddow's *Prequel* delves into a little-known chapter of American history, revealing a similar threat of domestic extremism and its ties to foreign powers in the run up to World War II. Her account serves as a chilling reminder that these threats are not new, and, as she argues, might be part of the foundation of today's political landscape.

Prequel: An American Fight against Fascism examines a period in America's not-too-distant past that sounds remarkably like today. Except it is the 1930s, a time when the United States, mired in an economic depression that highlighted stark income gaps, seemed ripe for fundamental change. Change was on the way, says Maddow, courtesy of Franklin Roosevelt's New Deal that was "radically transforming the economy…with a political force of will that drove his opponents beyond mere outrage" (p. 11). To the anti-Roosevelt crowd, unregulated capitalism and democracy were one in the same, and attempts to regulate the marketplace were un-democratic. The two competing camps appeared to be driving America to a crossroads. But the wrong road was taken, she argues. Instead of fighting the New Dealers' presumed anti-democratic impulses with an even stronger democratic counterpunch, Maddow says the anti-Roosevelt crowd took a road where fascism and authoritarianism seemed the ultimate destination. It had all the makings of a brewing crisis.

A crisis to some but an opportunity to others. Maddow argues Nazi Germany was more than happy to exploit American angst for its own benefit. Hitler's to-do list included world conquest and racial cleansing. American opposition could spoil those plans. Fortunately, she says, "the American experience in 'race protection,' using the law to create a criminally

enforced, racially organized social structure," jibed with Nazi ideas about Jews and non-Germans (p. 29). However, keeping America's industrial and military might sidelined was crucial. "Berlin poured money and manpower into dividing Americans," she says (p. xxvi). Leaflets, postcards, pamphlets, books and magazines were just the tip of the propaganda spear. However, Hitler's Germany knew telling Americans what to think was not a good look. That proved to be a job better suited for Americans. All Germany had to do was find sympathetic or gullible ones to do the talking. It found them among the ranks of the average and the elite, including a prominent architect, an active duty U.S. Army General, automaker Henry Ford, aviator Charles Lindbergh and even "the wildly popular anti-Semite radio preacher, Father Charles Coughlin" (p. xxviii). By 1940, Coughlin had Hitler's message down pat when, according to Maddow, he told a crowd in Chicago as the November election loomed, "We all know whom we're voting for if we vote for Roosevelt; the Communists. Democracy is doomed. It is Fascism or Communism. I take the road to Fascism" (p. 59). But the most frightening cohort of Berlin's American supporters were the two dozen or so members of Congress who used the special privileges of their office to aid the cause. The extent of their help ran from delivering speeches prepared by pro-German ghostwriters to millions of pieces of pro-German literature mailed to constituents over their signatures. American taxes paid for the postage.

Disseminating enemy-sponsored propaganda was disturbing, but Maddow reveals an even more alarming activity: paramilitary groups, some disguised as shooting clubs (like New York's Country Gentlemen), were training to march and maneuver. Others, like the Silver Shirts and the Christian Front, openly mobilized "Christian soldiers, formed to fight Roosevelt and the Jewish menace," whom they blamed for America's problems (p. 74). These groups claimed over 15,000 members, all under the banner of far-right radicalism, and pledged to risk their lives for non-interventionism, Christian nationalism, White nationalism and racial segregation. What they wanted, according to Joe McWilliams of the Christian Front, was "the same methods and the same system Hitler inaugurated in Germany" (p. xxviii). The groups marched, rallied, and recruited, often from within the ranks of the police, the National Guard, and the US Army. When they could not steal guns, or have them stolen for them, they tried to buy them. That step, argues Maddow, is when the authorities finally started paying attention. She details how private citizens, at great risk to their own safety, tried to sound the alarm, only to be dismissed by agencies such as the FBI, who were busy chasing communists. The Bureau's attitude began to shift when its Seattle field office reported the Silver Shirts' attempt to buy "thousands of rounds of ammunition and high-caliber rifles from a Tacoma gun dealer...and had authorized permits from the police" (p. 74). State and local law enforcement noticed, and working with the Department of Justice, which had begun a review of evidence from private citizens who had infiltrated these groups, swooped in and made a string of arrests. The anti-democratic movement was stopped just on the eve of World War Two. Procedural delays meant it would be years before many of the defendants were brought to justice. By then, the war had ended, and America had stopped worrying about Fascism and resumed worrying about Communism.

Rachel Maddow's *Prequel* is meticulously sourced, although some readers will argue that given her position on the political spectrum, she has skewed the sources in her favor. History is neither black nor white, so the question of an ulterior motive or an agenda will be up to the reader to answer. One question which emerges from her work is that if the anti-democratic movement of the 1930's was the prequel to what happened just a few years ago on January 6, 2021, for example, are we destined for a sequel?

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BOOK REVIEW:

Guiding Students In Software Project Management

Bird, Michael Stephen. *Software Project Management: A Systems Analysis Approach.* Amazon. 2024. Pp. 174. Softcover $29.95. ISBN 979-8332339844

Willie J. Wilborn,
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Reviewer Note: Willie J. Wilborn, EdD Senior Professor, DeVry University, Virtual Florida

Dr. Michael Stephen Bird's textbook, *Software Project Management: A Systems Analysis Approach,* provides a detailed exploration of software project management with an emphasis on systems analysis throughout the Software Development Life Cycle (SDLC). Its purpose appears to be to guide readers through the structured phases of software development, from initiation and feasibility to Agile methodologies. The book is well-organized, culminating in 12 solid chapters. Chapters 1–11 cover the traditional SDLC: planning, analysis, design, implementation, testing, deployment, maintenance, and evaluation. Chapter 12 introduces Agile methodologies like Scrum and Lean.

Several strengths are identifiable in this book. First, the text offers one of the most comprehensive breakdowns of the systems analyst's role I have seen in a project management context. Dr. Bird's textbook places systems analysis as the cornerstone of effective project planning and execution. This particular emphasis strengthens the book's alignment with its stated original purpose, which is to provide a systems analysis-driven approach to software project management.

In addition, by including both traditional SDLC methods and Agile methodologies, Dr. Bird positions his book to be useful across different contexts. This includes organizations that rely on waterfall-like approaches or those shifting toward iterative and flexible models. Dr. Bird not only presents these methods but also situates them in terms of when each might be the most effective method. Such a balance should make this textbook adaptable for both academic and professional audiences.

Dr. Bird's textbook also tends to go beyond theoretical descriptions. The textbook discusses practical tools such as CASE software, stakeholder engagement practices, and feasibility techniques. This makes this book a good fit for practitioners, in addition to students. Dr. Bird's decision to emphasize these specific tools is another strength in this textbook; it helps prepare students for real-world applications rather than leaving them with abstract theory.

Although there are several strengths noted in the text, some limitations were observed. For example, there was a limited use of diagrams and other visual models. As a visual learner, I certainly noticed the lack of visual

components. While the writing is clear, the book relies heavily on narrative explanations and has a minimal number of diagrams, models, and other visuals. It is imperative to know that visual representation can be critical for comprehension. Visual learners may struggle to fully grasp the content without accompanying charts, process diagrams, or examples of project documentation.

Moreover, because I prefer case studies, I think the book would benefit from hands-on scenarios or chapter-end assessments or case studies. I think the textbook's purpose is to guide readers through the SDLC with a systems analysis emphasis; the lack of hands-on reinforcement means some students or professionals may find it difficult to bridge the gap between theory and practice.

Finally, I am fascinated with Agile methodologies in project management. Hence, I often look for books that have multiple chapters regarding Agile methodologies. Dr. Bird dedicated only one chapter to Agile methodologies. Agile methodologies in contemporary software development are increasing year over year. Having only one chapter dedicated to Agile methodologies restricts the book's utility for readers seeking a more comprehensive comparison of Agile frameworks, such as Scrum, Kanban, and Lean. This one chapter does not undermine Dr. Bird's stated focus on systems analysis; however, it does constrain its broader relevance in a market where project managers are often expected to navigate Agile methodologies.

Overall, this book serves as a strong foundational and intermediate level on software project management. I feel that it would be a textbook particularly effective in teaching the systems analysis approach. One of the things that stands out is its emphasis on feasibility analysis and cost justification. Having read other Software Project Management books, I have found that feasibility analysis and cost justification are often underemphasized. Dr. Bird has covered those viable topics. This is a highly valuable addition to curricula or professional reference libraries that prioritize structured, life-cycle-based software project management, which I highly recommend.

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