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RESEARCH ARTICLE

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DESIGNERS, HIT THE NAIL ON THE HEAD! 3 KEY FACTORS TO FIXATE IN THE PROCESS OF INTERIOR DESIGN PROJECT DELIVERY

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ABSTRACT

In the delivery of contemporary interior design projects, a variety of factors work together to influence the efficiency, quality, and outcomes of the design process. This study aims to systematically explore these key factors and their impact on the interior design process. Through a combination of literature review and case study methodology, this study identifies and categorizes the key variables that influence the interior design process, including the dynamic changes in client needs at different stages of the project design process, the design team's ability to collaborate, and the project management execution capabilities and technologies. The study found that uncertainty of client needs was the main driver of iterative revisions during the design process; the efficiency of communication within the design team and across disciplines directly impacted the progress of the design phase; and the mastery of professional and managerial skills not only optimized the design expressiveness, but also significantly improved the achievability of the construction phase. In addition, this study suggests that the strategies implemented at different stages of the design process have different impacts on project delivery. Based on the findings, this study proposes an execution phase focus in an improved interior design process, emphasizing the systemic perspective of design management and the importance of stakeholder well-being. This critical factor provides theoretical guidance for future interior design project management practice and strong execution support for successful project delivery.

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INTRODUCTION

In the context of globalization and rapid technological development, the interior design industry is facing external opportunities and challenges. Zhang emphasizes (2020) that interior design, as an important part of architectural and spatial planning, not only directly affects the quality of life of users but also corporate branding. However, with the increasing scale and complexity of projects, the interior design process is gradually exposed to problems in efficiency, coordination, and decision-making in project delivery practices. Zhang and Wang (2023) argue that problems in project delivery decision-making quasi-movement plays a great role in the development of project management. Thus, Hudson (2021) explored that the systematization of the design process from the design requirements ultimately to the construction influences the successful delivery of the project. Miller (2014) also emphasized in project management the impact of the project management execution involving the design process on the project delivery.

problems that arise in a project are closely related to the design process, and these problems often lead to delays in project delivery, cost overruns, quality complaints, and other issues. The complexity of the interior design process stems from the interaction of several factors. On the one hand, the trend of individualization and personalization of customer needs increases the number of changes in the design phase, especially in high-end residential, hospitality, and commercial complex projects; there is often a perception gap between customer expectations and design practices. Instead, design teams need to be highly coordinated across different disciplines (e.g., architecture, engineering, and materials) while responding to dynamic changes in technology, regulations, and the supply chain over the course of the project cycle. In addition, while the proliferation of digital technology has brought tools to support design optimization, its practical application has been built on a technical foundation. In recent years, more and more studies have begun to focus on key issues in the interior design process, such as communication and collaboration, technological innovation, and management configuration. However, most of these studies are dominated by

theoretical explorations or a single case, which lacks systematicity and comprehensiveness thus making it difficult to develop an in-depth understanding of the whole process of project delivery. Zhu (2018) claimed, therefore exploring the key factors affecting the interior design process and their mechanisms of action is not only of great academic value but also of practical significance for optimizing project management and decision-making in practice. Based on this background, this study aims to reveal the key influencing factors of the interior design process from practice through a comprehensive multi-method analysis and to construct a management framework with theoretical guidance and practical applicability for the enhancement and setting of industry standards.

RESEARCH METHODS

Live research methodology, combining literature collection and then analysing the project problems. The literature collection is mainly based on the comparison of Chinese and international processes. Cresswell (2018) points out that through literature collection it is possible to identify existing results, theoretical frameworks and research gaps in the research area and to ask questions, and literature collection helps to establish credibility while avoiding repetitive research.

Yin (2018) emphasized that a literature review can help to identify relevant contextual information, provide accurate theoretical support for the case study, and contribute to the formulation of research questions and hypotheses. The practical cases are based on the problems encountered in the practical operation of the processes, and the impact and criticality of the processes are further analysed. From this, the factors and impacts of the interior design management process problems are summarized. Summarize the critical factors. Eisenhardt (1989) emphasized that by comparing efficient practice cases, common patterns can be identified and a theoretical framework can be developed. Stake (1995) recognized that practice case studies can reveal the uniqueness of a particular practice and at the same time inform a wider range of practices.

Factors influencing the interior design project management process: Piotrowski (2022) asserted that management is guided by established guidelines and standards, which are not created arbitrarily but are instead designed to encompass the entire workflow—from project initiation to delivery. These standards aim to achieve appropriate and adoptable practices. Notably, interior project management standards are not solely based on experience but are shaped by a combination of factors. Zhu (2018) outlined interior design process management across two dimensions: vertically, it includes program positioning, conceptual design, schematic design,

Figure 1. China interior design project delivery practice IDWDP-SOW

WORK DEVELOPMENT PLAN FOR CHINA INTERIOR DESIGN PROJECT PRACTICE (WDP for ID)										
CHINA INTERIOR DESIGN SCOPE OF WORK (SOW for ID)										
stage	RIBA PoW 2017	Work Development Process (WDP)			SOW		DESCRIPTION			
				A			Initial/ Start			
Pre Contractual Stage	1	1.1	Programming				1	Appointment of Consultant		
							2	on-site survey		
							3	design brief		
						B Briefing	4	Initial Client's Budget & design needs		
						C Feasibility Study	5	Site Analysis		
			D Schematic Design							
			E							
			F				6	conceptual design		Floor plans, schematics, design plans
		2	2. 2	Schematic Design				Design Development		Detail Development of Proposed Design
								7	Design Development	
							8	Design Implementation		
	3	3-4.3	Design Development							Design drawings
				G						Planning, programme reporting, design deepening
				H						
				I			9	Cost Estimation		Budget
			Contract Documentation & Implementation				10	Construction Schedule		Project schedule
							11	Client's Approval		Programme recognition
				J			12	Tender drawings (bidding, evaluation, and determination)		
							13	Construction Schedule		
							14	Client's Approval		
Contractual Stage	4	4		k	Project Tendering	Detail Specifications	15	Start of construction		
				l			16	collaborate with construction		
							17	on-the-spot briefing		
							18	Equipment preparation		
Construction Stage	5			M			19	construction management		
				Q			20	Formation of the construction organisation (personnel of all disciplines, sites, plans, equipment)		
							21	Mobilize various specialties and drawings for review and disclosure		
							22	Demolition, Renovation & Fit Out Works		
							23	Regular site inspections and meetings for construction follow-up (quality, planning, materials, finance, safety)		
							24	Progress Report		
							25	Monitoring, Claims & Certificates		
							26	Client's Approvals		
							27	Variations & Instructions		
							28	Extension of Time		
							29	Testing Mechanical		
							30	Engineering Installation		
							31	Services		
							32	Pre-transfer quality control		
							33	Internal and external quality control and rectification		
							34	quarantine		
							35	Completion of as-built records		
							36	Handover		
							37	Final partial inspection		
							38	Acceptance report, settlement report		
							39	Certificate of Compliance & Completion (CCC)		
							40	Project Hand Over		
							41	Final Account		
							42	Project End		
	7							Post Occupancy Evaluation		

and construction drawings; horizontally, it involves coordinated construction to optimize the project's value. This perspective is frequently emphasized by experts in the field. Similarly, Gao and Ou (2010) stressed that interior design management spans various project stages and highlight the influence of critical factors at each stage. Ni (2024) proposes a process framework for analyzing the scope of work and project content, as illustrated in Figure 1.

This framework combines China's workflow structure with Malaysia's approach, as developed by Mustapha (2018), compared and synthesized insights. While China's workflow is contextualized domestically, the Malaysian framework integrates international workflows and identifies six distinct process stages. Table 1 presents the process framework and its scope of work for interior design project analysis of the provision of interior design work development

Table 1. Results on IDWDP and IDSOW Provisions

	IDWDP	IDSOW
The work stages	The project flow suggests a pre-contract, construction, and post-construction phase.	
The work phases	During the work phase, it is recommended that the work be carried out based on pre-planning, schematic design, contractual documents, construction, and other documents.	
	The construction phase, including installation, is collectively called the construction phase.	
	Post-construction phase includes completion and delivery, post-sale	
The work process	Programming	Includes design brief, conceptual design, feasibility report
	Schematic design	Program design, reporting, client validation, planning, estimation
	Design development	Also, design deepening, design coordination, review, budgeting, planning, client confirmation
	Contract documentation & implementation	Including project bidding, response to queries, finalisation of bids, identification of contractors, contracts, etc.
	Construction installation	This includes construction start-up, organisational formation, construction entry, construction follow-up, regular quality monitoring and coordination, changes, materials, progress, finance, etc.
	Project completion & handover	Including pre-handover quality control, testing, installation, completion, acceptance, delivery
	Post evaluation occupancy	Including post-delivery rectification, acceptance certificates, project handover, after-sales service
workflow Please refer to the flowchart and schematic diagram		

Table 2. Factors affecting the interior design process

FOCUS FACTOR	IDSOW
Through IDWDP and IDSOW, interior design practitioners in project management have to competencies.	
Positioning of the project	1 Awareness of project management
	2 Understand comprehensive knowledge of project management
	3 Understanding and differentiating the nature of the project
	4 Responsibilities of the various roles in project management
	5 Understanding where interior design begins and ends
	6 Understand the responsibilities of the interior designer's role
	7 Understanding of the various stages of project execution
	8 Coordinate and communicate with the client, the team, and people from different disciplines and neighbourhoods.
	9 Knowledge of project planning and cost management
	10 Ability to recognise and control risks in the project process
	11 Ability to recognise and control project process risks
	12 Coordination of human capacity in the course of the project
	13 Ability to resolve ad-hoc and on-site issues
	14 Reserve of technical expertise versus cross-border expertise
Project management knowledge	1 Knowledge of other aspects of the project, such as building submissions, fire protection, HVAC, equipment, structure, etc.
	2 Knowledge of current laws and regulations
	3 Understanding of safety management awareness on projects
	4 Cost, change, monitoring of projects
	5 Project progress, changes, contingencies, claims
	Interior Knowledge
	6 Design, construction, review, site delivery, docking
	7 On-site management, co-ordination with changes, soft furnishing configuration, on-site inspection capability, coordination and control capability, engineering on-site coordination capability
	8 Summarise feedback project improvement capacity
	9 Material allocation, bidding, procurement, contractual capacity
	10 MEP, construction, detailing, and cross-disciplinary technical problem-solving skills such as fire protection, HVAC structural, etc.
11 Sustainable management	
guide	
The Role of the Interior Process Framework	1 It can be used to meet specific project and customer requirements
	2 Available for matters relating to professional service contracts
	3 Available for matters relating to professional service contracts
	With the ID Workflow Framework, interior design practitioners can
	4 Familiar with the scope of work at each stage of the project
	5 Clarify the work and tasks to be performed in the project
	6 Better integration of the respective tasks of project team members
	7 Effectively guide clients through the interior design process
	8 Familiarise with the workflow during the project process to better prepare for the next step in the process
	9 Efficient prediction and forecasting of potential problems or disputes
	10 Control, supervision, and coordination of tasks and assignments
	11 Ability to manage projects effectively
12 Rational and proactive management of human resources and team members related to interior design	
Scope of Work in specific	

process (IDWDP) and interior design scope of work (IDSOW). Table 2 compares and summarizes the processes, data, and influential factors identified by the above-mentioned authors. This comparative analysis provides a holistic view of the workflow frameworks and their applications in both Chinese and Malaysian contexts, which this is the highlight for interior designers that need to fixate on. Interior design practitioners must possess these specific qualities in order to manage projects through the sequence of IDWDP and IDSOW. As a summary of Table 1 above, is an analysis of the content and scope of work at each stage of the workflow. The content's subject examined the role and responsibilities of designer towards the projects that need to be carried out. Table 2 analyzes the content and role of the factors. The problems are, first, from understanding the project, analyze the nature of the project and functional requirements. These elements are considered from a comprehensive perspective, and the analysis needs to be detailed. Second, from the planning and design of the project, this stage reflects the interior designer's professional ability and comprehensive technical integration ability.

These capabilities are not only for a single interior design; there are other cross-disciplinary expertise, but also the implementation of later service projects reflects the ability. Emphasize the important role of the project process implementation. Third is the role of workflow in the project to take the line, where it needs to play a key guide in the implementation of the entire project. Hudson (2021) highlighted that analyzing case studies of interior design practices underscores the importance of understanding the scope of work at various project stages, from design to construction. A comparison of project timetables with emerging issues reveals that problems often accumulate as the project progresses from early to later stages. Miller (2021) emphasized that successful project delivery requires a clear division of labor and strict control at each stage. Moreover, Miller (2021) noted that accurately positioning the project during the initial stages helps avoid late-stage design changes and ensures smooth project execution. The pre-design phase is particularly critical, as inaccuracies at this stage can significantly impact construction progress. Thorough pre-design work, including identifying desired outcomes, accelerates the approval of drawings and material samples, thereby minimizing issues such as tendering delays and risk assessment problems. Yoon (2021) also underscored the necessity of careful consideration and precise positioning during the pre-design phase. Christine (2022) stressed that plan refinement during the design stage is the designer's responsibility and must address cross-disciplinary and overlapping professional concerns. Neglecting these considerations can lead to problems such as inadequate sealing during construction. Furthermore, Hudson (2021) noted that incomplete work in one area can disrupt the internal construction process. Field changes, which are often insufficiently addressed during the pre-design phase, further exacerbate these issues. Proper consideration of these factors would minimize changes, control costs, and prevent delays caused by additional customized materials. Yin (2020) summarized that unforeseen risks and obstacles during design, production, and construction progress are inherent challenges that cannot be entirely avoided from either a design or production perspective. These insights collectively highlight the need for meticulous planning and proactive problem-solving at every project stage.

Project Case Analysis: Yin (2020) highlighted that case research serves descriptive, exploratory, and explanatory purposes, enabling cross-domain comparisons to generate theories or test hypotheses. Eisenhardt (1989) expands on this, emphasizing that case studies are not only tools for describing phenomena but also methods for generating theories. Stake (2022) further asserts that case studies go beyond addressing "how" and "why" questions, offering insights into the unique experiences of participants. The following practical case study examines the key elements of workflow during project execution. Project Information, this interior design project is a real estate sales center of 820 square meters located in Guangxi, China. The sales center has 2 floors; the main functions of the ground floor are customer reception, model display, and gong method display function. The first floor's main function is an internal office and

overall function. The whole is characterized by a Chinese-style courtyard, and the Chinese style is present. The whole design element is designed with the characteristics of the local city of "Lotus City." Lotus elements are integrated into the interior style in the space of the ground, wall, partition, ceiling, and so on. Therefore, the use of the elements needs to be expressed in different materials in the space. Many customized materials include mosaic floor parquet, wood carving, glass customization, and wall-customised material characteristics.

The production cycle is longer. This case produced a delivery gap of 15 days between the pre-planned and delivered times, and specific factors were analyzed regarding the specific execution of this case. Compliance with the program test depends on the life cycle of the project as well as the comprehensiveness of the management expertise and methodology. And these need to be analyzed in more depth from the project problem. There are engineering problems in the implementation process that is mainly divided into three parts: the main body of the building, interior decoration, curtain wall of the three blocks in the implementation of the project, the greater the impact of the problem. Overall, the three interfaces belong to different areas but are also interrelated, mutually influencing each other, all affecting the progress of interior decoration construction. The interior decoration work has been delayed from the original planned schedule. Table 3 for a detailed tabular analysis.



Figure 2. Project Rendering

Problem 1 until 3 were derived from Table 4, where in *the Problem 1*: Insufficient work in the early stages. Whether from the contract stage or the design stage, all departments need to work closely together in order to complete the realization of the compactness of the process and the comprehensiveness of the layout.

Problem 2: There is a problem of insufficient deepening of the design drawings in the early stages. Whether it is interior or building, curtain wall. In the design process, it has ignored the interface cross-processing. Due to the lack of drawings, normal construction can only be carried out after the replacement of drawings, and the rate of abnormal construction is quite high. The increase in the number of drawings also increased the bill of materials; visas also increased due to cost changes and a host of other problems. This is the problem of impacts between different stages and the accumulation of problems between different stages.

Problem 3: There were quality deviations in the procurement of material purchases, resulting in rework. Finally, it leads to delayed delivery of materials to the site. Inadequate strength of tenderers affects construction. From the beginning to the completion of the project, there were problems in the execution of each department. Different departments have the problem of unclear responsibilities in the management of boundaries. In particular, the pre-existing own departments did not fulfill the functions of their own departments, which led to conflicts in collaboration and delays in the project. From the time point of view, the biggest reason is that the work content is insufficient, the workflow is unreasonable, and the execution of the workflow is ineffective.

Table 3. Problem analysis of delays

N0	major	project phase	Problems	Department of responsibility	cure	summaries
1	architecture	Contract phase	Weakness of the unit selected for bidding Breach of contract by requesting to leave the site before completing the construction in full accordance with the drawings	project department	Penalties are imposed on contracts, and new units are brought in to supplement construction in a timely manner	Lack of work content : The bidding process wasn't handled properly
		construction phase	The construction drawings are inconsistent with the deepening drawings of the curtain wall, resulting in many unsolvable problems in the field. Material samples are not uniform, and some materials are reworked later with poor results.	design department	Curtain wall units are optimised for the site but waste more time	Lack of work content : Deviation of design drawings from construction drawings, inadequate work in the design phase
2	interior decorating	design phase	Insufficient depth of drawing optimisation Optimisation of drawings takes too long, resulting in slow ordering of many materials and insufficient time reserved; just after the New Year, all the material factories are affected by the holiday, and the provision of materials in a delayed manner	design department	Inadequate drawing optimization by sending architects and interior designers to the site on-site Material rework penalised	Unreasonable workflow : Plan risks are pre-empted, construction according to plans is strictly enforced, and plans are reasonably advanced.
		design phase	Unclear delineation of the interface between interior decoration The interface between the building and the interior is vaguely delineated, and there are disputes over many on-site construction closure issues	design department (Interior, Architecture)	Clarify the interface between the building and the interior, and the problem of closure All disciplines co-operate with each other and deal with them reasonably Timely handling of changes and adjustments	Unreasonable workflow, Unreasonable work steps, Lack of clarity on scope : Interface generated by the design treatment, construction drawings, and material lists need to be clear
		construction phase	Poor quality of decorative hemming and skimming of moulding Some of the materials were not purchased in accordance with the positioning, resulting in colour differences and rework.	Design Department, Project Department	Rework of non-conforming parts, but with delays in the schedule Perform according to the original design positioning	Lack of work content : Sample first, strictly according to the sample implementation, the non-compliance with the requirements of the clear back
3	Architectural curtain wall	Contract phase	Delay in tendering for the curtain wall Due to the curtain wall unit's late entry, which resulted in a lot of cross-work with the garden and interior decoration, many edges and seams were not handled well.	Project Department	Interfaces have been redrawn in the order of construction	Unreasonable workflow : The time of entry of each unit must be strictly in accordance with the plan to be laid out
		construction phase	Problems with material entry The material plan was poorly thought out, and the factory's start-up just after the Chinese New Year was not timely, resulting in a lot of material lagging behind. The external wall was not dismantled on time, which affected the interior decoration.	Project Department	Send someone to the manufacturer to monitor the progress of material production	Lack of work content : Timely sealing of samples, timely scheduling of production, personal follow-up

- i) Positioning early in the process, the designer does not have material samples in place with clarity at the beginning of the positioning work. Positioning was not completed during the design process. As a result, when left to the final construction stage, problems continue to occur.
- ii) Design drawings are not detailed enough, professional boundaries are not in place, or some omissions will cause delays in the later stages of construction.
- iii) Changes in the design drawings at a later stage are not handled in a timely manner, which may lead to construction stoppages and delays in the construction period.
- iv) Material samples are not easy to determine in the preliminary design, resulting in changes in the ordering process and failure to deliver according to plan, affecting the construction time.
- vi) Changes in personnel at the construction site are also prone to delays in the construction period and should be handled in a timely manner.
- vii) Cross-communication and design coordination among various professions should be completed before finalizing the drawings to avoid secondary design and redesign, which may delay the progress of the project.

- viii) On-site progress supervision is not only for on-site construction but also for material production.

Most of the problems in the case were generated in the early stage, not well resolved, and accumulated in the late stage and seriously affected the delivery of the project. The size and number of problems form the biggest factor in delivery. Therefore, the pre-positioning stage is very important. The following table 5 analyzes the importance of the process management phase. The table 5 shows the impact of the different stages of the project and also shows that the positioning of the interior in the pre-design phase is very critical. As expressed by many experts. Each design, construction, and delivery plays a crucial role in interior design workflows. However, the design phase is often considered the most critical. This phase sets the foundation for the entire project by establishing the conceptual framework and detailed plans that guide subsequent activities. Hence, Sinopoli (2010) emphasized the importance of detailed design and project documentation, which is essential for effective construction and renovation processes.

Table 4. Analysis of implementation by sector

No	Department	suggestion
1	Design Department	Design positioning is extremely important; the need to set the style, grade, cost, project construction risk assessment, and design loopholes should be predicted and prevented to avoid repeated changes in the construction process, resulting in time delays. To ensure the completeness of the drawings, the refinement of design drawings and the refinement of integrated disciplines need to be strengthened within the same timeframe. Material samples need to be provided in a timely manner, and effect samples must be strictly enforced.
2 3 4	Project Department	Construction should be equipped with an understanding of the drawings before the start of construction and the reasonableness of the tender to ensure that the strength of each unit to cooperate with the material samples is complete to avoid unnecessary loss of time. It is recommended that all major material sealing samples require a too-long timeline; otherwise, sealing samples will affect the project's progress. Site management should be a unified output of the project department; other departments can not directly command the site, resulting in contradictory instructions.
5	Operations Department	Project construction was delayed due to the tight schedule and heavy tasks, the approval process of the proposed rapid response, special cases, rapid decision-making, reasonable authorisation of personnel of this cooperation caused by the shortage of personnel, and the delay in the construction period.
6	sectors	For large-scale materials that need to be customised, you should go to the manufacturer for acceptance in the process of material production to avoid the effect of materials arriving that do not meet the requirements and cannot be replaced.

Table 5. Analysis of the Importance of Focusing on th Requirements and Design Development Phases

Phase 1、 2 Program initiation、 ConceptPhase :RequirementsGatheringReasons for Importance	
No	contents
1 : Defining Project Goals and Scope:	This stage requires in-depth communication with the client to clarify the nature and scope of the project objectives, the relevant work departments involved, to solve the relevant sectoral issues, and to clarify the feasibility of the project, specifications, requirements, etc. to ensure that the subsequent design and construction in line with customer expectations.
2 : Building Strong Client Relationships:	n this stage and the customer to establish good communication and trust, communication is not only a single person for major projects also involves the needs of multiple departments and groups to communicate. Different departments communicate differently. The comprehensiveness of communication is for better project orientation basis for the design direction as a guide. Avoid time delays caused by unnecessary design misalignment. A good start for the project, but also for the designer to establish trust directly affect the smooth progress of the project.
3:Budget and Time Management:	Understanding the client's budget and timeline requirements early on helps in effective project m Understand the client's budget and schedule requirements as early as possible to effectively allocate design priorities and reasonably plan the project cycle. Issues such as comprehensive positioning of the effect of the product will help to carry out effective project management in the later stages, avoiding budget overruns and schedule delays, and substandard project results.
Phase 3 Design Development Phase: Reasons for Importance	
1:Ensuring Feasibility of Design:	The main task at this stage is to draw detailed construction drawings and prepare construction documents, not only for the project itself or cross overlapping boundary design to solve the problem, etc., comprehensive detailed construction drawings to ensure that the design can be successfully realized in the actual construction.
2:Detail Refinement:	This phase includes refining and refining the design plan, and secondary deepening of the design for special projects. This includes the selection of materials, color coordination and functional implementation based on the budget range, and the use of equipment to ensure that the results meet the contractual expectations of the project.
3:Project Coordination:	In the design and development stage, designers need to work closely with the construction team, cross-communication of various disciplines, and comprehensively assist the project to solve potential problems between the design and the actual construction and risk avoidance, to ensure a smooth construction process.
Phase 4Implementation PhaseReasons for Importance	
1 : Quality Organizational management	Primarily the management of the various construction organizations during the project phase. Safety, quality and effectiveness of the project production process. Minutes of meetings during implementation, handling of project changes, quality rectification and supervision issues, etc.
2 : Program and Budget Management	The rationality of the project plan in the process of project production, avoiding project delays, and seeing danger issues. Reasonable coordination and settlement of costs to assist in the smooth production of the project.
Phase 5Completion Phase Reasons for Importance	
1 : quality control and acceptance :	The main focus is on the post-implementation phase of the project in terms of acceptance of quality, equipment, furniture, etc., which involves internal, external, and third-party acceptance. Ensure the smooth delivery of the project.
Phase 6 Program Handing Over Reasons for Importance	
1 : Handover 、 after-sales service :	After-sales service after the project is delivered to the customer, assist the customer to solve the use problem, solve the maintenance and rectification problem.

Meanwhile, "Work Process in Establishment Work Development Plan for Interior Design Project Delivery; Kahn (2021)" discussed how a well-established design process positively impacts the execution and completion phases, ensuring time and cost efficiency. Sosen(2022) "Consulting Business Workflow and Design Performance Metrics for BIM-Based Construction Design in Nigeria" highlighted the role of BIM in enhancing design accuracy and collaboration, leading to

better construction outcomes.Konis and Selkowitz (2017) mentioned "A Performance-Based Design and Delivery Process" that stressed integrating performance evaluation in the design phase to improve energy efficiency and occupant satisfaction. Lastly, Hubbard and Debs (2022) emphasized "Development of an Introductory Course in Design Phase Management for Constructors," underscoring the significance of managing the design phase to ensure a cohesive and

efficient workflow throughout the project. Miller (2021) emphasized that although every phase holds significance, the requirements gathering and design development phases are crucial due to their critical influence on the project's foundation and implementation. During the needs-gathering phase, effective communication with the client and elucidation of needs establish the appropriate direction and expectations for the project. Meanwhile, during the design development phase, meticulous design and construction preparation guarantee the successful realization of the design proposal. As such, the efficacy of these phases directly influences the overall result and client contentment.

Meanwhile, "Work Process in Establishment Work Development Plan for Interior Design Project Delivery; Kahn (2021)" discussed how a well-established design process positively impacts the execution and completion phases, ensuring time and cost efficiency. Sosen (2022) "Consulting Business Workflow and Design Performance Metrics for BIM-Based Construction Design in Nigeria" highlighted the role of BIM in enhancing design accuracy and collaboration, leading to better construction outcomes. Konis and Selkowitz (2017) mentioned "A Performance-Based Design and Delivery Process" that stressed integrating performance evaluation in the design phase to improve energy efficiency and occupant satisfaction. Lastly, Hubbard and Debs (2022) emphasized "Development of an Introductory Course in Design Phase Management for Constructors," underscoring the significance of managing the design phase to ensure a cohesive and efficient workflow throughout the project. Miller (2021) emphasized that although every phase holds significance, the requirements gathering and design development phases are crucial due to their critical influence on the project's foundation and implementation. During the needs-gathering phase, effective communication with the client and elucidation of needs establish the appropriate direction and expectations for the project. Meanwhile, during the design development phase, meticulous design and construction preparation guarantee the successful realization of the design proposal. As such, the efficacy of these phases directly influences the overall result and client contentment.

SUMMARY

Based on these experiences and observations, pre-positioning and design are integral to the overall workflow framework. The importance of pre-positioning is also crucial. Nevertheless, the role of the whole process in the project should not be overlooked. As emphasized by Borden and Meredith (2016), these two authors explore materials and performance techniques in the design and construction process, emphasizing the impact of each step from design to delivery on the outcome. Note that each step affects the outcome. Boake (2017) also emphasized case studies in project development, exploring multiple case studies of interior design projects. From initial design concept to project delivery, the author emphasizes the importance of each process step, the steps of the process, and provides real-life examples from practice. Chen (2013) particularly pointed out the important role of pre-positioning in the design process. He emphasized that the pre-positioning process is an important method for the smooth delivery of projects in the modernization and internationalization of interior design in China.

Interior designers inevitably encounter the wide-ranging professional and managerial skills essential for successful project delivery. Effectively managing the interior design process is crucial and demands careful attention.

REFERENCES

- Borden & Meredith, 2016. *Process: Material and Representation in Architecture*. Routledge. ISBN: 9780415522649
- Chen, Y. J. 2013. *History of Contemporary Chinese Interior Design*, China Construction Industry Press, ISBN:9787112151721
- Creswell, J. W. 2018. *Research study design: qualitative, quantitative and mixed methods*, ISBN-10: 1506386709
- Eisenhardt, C.M. 1989. *Building Theories from Case Study Research*, School of Management, *Dio:10.5465/amr.1989.4308385*.
- Gao, M.C and Y. Ou. 2010. "Interior Design Process Interior Design Process Management." *Tongji University Press*,
- Hudson J. 2021. *Interior architecture: from simplicity to construction*, Laurence King publication, ISBN: 978-1856696893
- Hudson, J. 2021. *Interior Architecture: From Introduction to Construction*. *Laurence King Publishing*. Doi: [org/9.33455/2217-4546-0810-34](https://doi.org/9.33455/2217-4546-0810-34).
- Konis, K, Selkowitz, S, 2017. "Simulation-Based Performance Analysis of High-Performance Buildings Informs Effective Design and Delivery Processes" *From, Energy and Buildings*, Doi: [10.1016/j.enbuild.2017.05.022](https://doi.org/10.1016/j.enbuild.2017.05.022)
- Miller, 2014. *Interior Design Project Management: Principles and Practices*. Wiley & Sons publication, ISBN: 978-0471284314
- Miller, B, A. 2022. *Interior Design Project Management: Principles and Practices*. *Fairchild Books*. 978-1-5013-6349-8.
- Ni, B, Mustapha, A, A, Noorhani, N, M 2024. *Delivery Process Framework for Interior Design Project in China*, *SSRG International Journal of Civil Engineering*, ISSN: 2348-8352/ <https://doi.org/10.14445/23488352/IJCE-V11I17P110>
- Piotrowski, C. 2022. *Professional Practice for Interior Designers*. Wiley.
- Sosen, 2022. "Consulting Business Processes and Design Performance Indicators for BIM-based Building Design in Nigeria" *From, The Design Process*, Doi: [11.1115/j.workstudy.1d.202202.021](https://doi.org/11.1115/j.workstudy.1d.202202.021)
- Stake, 2022. *The art of the case study*, SAGE publication, INSS:9787519296582
- Stake, R, E, 1995. *The Art of Case Study Research, Handbook of Qualitative Research*, ISBN-13: 9780803957671
- Yin 2020. *Case studies: design and methodology*, SAGE publication. ISBN-13: 9781506336169
- Yin, R, K. 2020. "Case Study Research: Design and Methods." *from swlyt*, Inss: 9781506336169
- Yin, R, K. 2018. *Case Studies Case Studies and Applications*, swlyt, ISBN-13: 9781506336169
- Zhang, J, L, Wang, Y. L., 2023. *Research on Management Problems and Countermeasures of Construction Decoration and Decoration Project*, *Computer Fan Journal*, 2023(8):139-141.
- Zhang, M, 2020. *Building Decoration Project Management Issues and Planning*, *Modern Property Journal*, Do: [10.3969/j.issn.1671-8089.2020.35.150](https://doi.org/10.3969/j.issn.1671-8089.2020.35.150)
- Zhu, B, Z. 2018. "An Introduction to the Design Management Process for Interior Projects." *Bookmark 20*.
