

INVESTIGATING FACTOR TO PROJECT OBJECTIVES UNDERACHIEVEMENT IN MALAYSIAN LANDSCAPE ARCHITECTURE PROJECT

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ABSTRACT

Malaysia landscape architecture projects frequently face several difficulties that expose their projects to a high degree of challenges. These challenges will become project issues that eventually affect the achievement of the project objectives. Understanding the factors of project objective underachievement is essential for project practitioners to manage and control their projects in the future. Thus, this study aims to investigate factors to project objectives underachievement in the Malaysian landscape architecture project. Data were gathered through semi-structured interviews with twenty-four landscape architect practitioners from Klang Valley. The interview information was analysed using the content and thematic analysis method. The snowball effect from project challenges to project issues and stakeholders' factors causes underachievement of the landscape architecture project objective. Managing the project affects the organisation's operational and cultural objectives directly, whereas the project outcome issues indirectly jeopardise the achievement of the project's business objectives. The finding will be a lesson learnt for project practitioners to evaluate their current project management practice and recommend issue and stakeholder management applications, enabling the achievement of project objectives.

1. INTRODUCTION

Malaysia landscape architecture projects frequently face several difficulties, including insufficient human resources, insufficient skills and expertise, a lack of knowledge, a limited budget, a lack of interest, insufficient tools and equipment, poor quality planting materials, insufficient landscape personnel training, and a lack of civic awareness and attitude (Ackerman et al. 2019; Muthuveeran, Mohd Tahir, et al. 2022; Wang 2018; Yang, Li, and Binder 2016). The nature of landscape architecture projects is dynamic, complex, and fast-tracked, with a subjective outcome that exposes the projects to many challenges (Godi and Sibelius 2012). These challenges pose risks that will become project issues, thus affecting the project quality, cost, time and scope objectives (Farooq, Thaheem, and Arshad 2018; Loosemore and Cheung 2015; PMI 2021).

Landscape architecture, or the planning and design profession, is often grouped with the construction industry in the statutes on

architecture, town planning, and engineering as a professional construction service (ASLA 2019). Professional landscape architects who act as project managers to manage landscape architecture projects are generally equipped with technical skills and project management knowledge (Muthuveeran, , et al. 2022). Despite their ability, project issues continue to occur due to ineffective problem-solving. Landscape architecture projects are a landscape architectural firm's primary source of revenue. Failure to meet project objectives will harm the firm's financial performance, operations, culture, and reputation. Understanding the root cause factors of the initial project challenges, issues that occurred, and stakeholder factors are crucial to the project objective underachievement (.Muthuveeran, r, et al. 2022). This action is essential for the project practitioner to plan necessary measures to manage and control their project objective achievement in the future.

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1.1 Landscape Architecture Project

Various authors have instituted the definitions of a project in many ways. According to the PMI (2017, p. 542), a *project* is “a temporary endeavour undertaken to create a unique product, service, or result”. Kerzner (2009a) defined a *project* as “a temporary undertaking that has a specific objective and a definite beginning and end”. According to the Project Management Association Of Japan (PMAJ), “A project refers to a value creation undertaking based on a specific, which is completed in a given or agreed timeframe and under constraints, including resources and external circumstances” (PMAJ 2005, p. 10). Meanwhile, BS 6079-2:2000 (2000, p. 10) defined a *project* as a “unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources”.

In the context of the landscape architectural stream, the term *project* is not clearly defined in the literature. Most landscape architecture international associations, professional institutes, and authors describe a *landscape architecture project* from the perspective of landscape architecture professionals’ practice and scope of work. The International Association Landscape Architecture (IFLA) defines a *landscape architecture project* as “planning, design and stewardship of the outdoor environment and spaces, both within and beyond the built environment, and its conservation and sustainability of development” (IFLA Europe 2017). The American Society of Landscape Architects (ASLA) defines a *landscape architecture project* as ‘encompasses the analysis, planning, design, management, and stewardship of the natural and built environments (ASLA 2019). Meanwhile, the Landscape Institute, the United Kingdom (UK) professional body for landscape architecture, defines a *landscape architecture project* as “a blend of science and art, vision and thought...in strategic planning, delivery and management” (LI, 2020).

Numerous researchers, planners, and project professionals frequently cite the definition by PMI (2017) on the project. Some have revised and redeveloped it to suit their particular context concerning gaining successful projects. PMI (2021) states a project has a clear beginning and end. It may involve only one person or thousands. It may last several days or many years. It may be undertaken by a single organisation or by an alliance of several stakeholders. This research adopts the definition by PMI (2021) to understand the project context but does not exclude the definitions by others.

1.2 Project Objective

Objective definitions for the project can be found in various books, standards, and globally available guidelines. The definitions sourced from professional bodies, project management authors, and government organisations. The project objective is significant in defining the success of a project. Earlier project objective definitions revolve around core time, scope, cost, and quality achievement as posited by Association for Project Management (APM 2006 and PMI 2004). The later project definitions have evolved to immense

objective achievement benchmarked towards business, organisational strategy and goal, financial, operational process, safety and risk, as explained in (APM 2012, Dwyer 2016 and PMI 2017). According to Kerzner (2009a), a successful project is determined by achieving the set project objective, supported by ISO 10006:2003 (2003, p. 26), which posits that “Measurement of performance including...the achievement of project objective’. In another perspective, Dwyer (2016, p. 1/27) explains that “objectives can be considered as project success criteria because they determine whether or not the eventual outcome of the project can be considered a success. The perspective by PMI (2017, p. 34) confirms that “project success should also be measured with consideration toward the achievement of the project objectives”.

The latest 21st-century definition by PMI (2021, p. 98) determines that project objectives as “the intended outcomes, and the environment in which the project takes place...include; Deliverable metrics; Delivery; Baseline performance; Resources; Business value; Stakeholders; and Forecasts”. The performance of a project is measured by the achievement of the project objective. The objective achievement is not limited to the core project objectives (time, scope, cost, and quality) but extends to business, operation, and other objectives. Determining which project objective measures the overall success depends on the project and organisational goal.

1.3 Definition of Project Issues

The definition of project issues depends on the scope and industry. Earlier, Project Management Institute (PMI) defined an issue as “A point or matter that is in question or in dispute, or a point or matter that is not settled or under discussion or over which there are opposing views or disagreements” (PMI 2004). Baker (2007, p. 3) defines an issue as “a gap between your actions and stakeholder expectations”. Meanwhile, the Office Of Government Commerce (OGC) defines an issue as “a relevant event that has happened, was not planned, and requires action” (OGC 2009:98). Piney (2012) considers issues as “obstacles that can block the team from achieving its goals”.

Consequently, PMI defines a project issue as “A current condition or situation that may have an impact on the project objectives” (PMI 2017). PMI’s definition is similar, in substance, to that used within Projects In Controlled Environments (PRINCE2), which defines an issue as “A relevant event that has happened, was not planned, and requires management action. It can be any concern, query, request for change, suggestion or off-specification raised during a project. Project issues can be about anything to do with the project” (PRINCE2 2017:376). Meanwhile, the UK’s APM takes a slightly different view, citing an issue as “A threat to the project objectives that cannot be resolved by the project manager. Issues should be differentiated from problems, which are concerns that the project manager has to deal with on a day-to-day basis.” (APM 2006:48). The latest PMI 2021, p. 241) define project issues as “A current condition or situation that may have an impact on the project objectives”, which this study focused on in search of project objectives underachievement due to project issues.

This study posits a project issue as any situation or event that has affected the achievement of the project objectives. It includes a gap between project output and stakeholder expectations. Stakeholders include all the affected project parties due to the project outcome including the serving landscape professional organisation.

1.4 Project Issues Controllability

According to PMI (2004, p. 238), “a risk may have one or more causes and, if it occurs, one or more impacts”. One challenge leads to a single issue, which in turn, could have just one effect though in reality, it is considerably more complex (Bugayenko 2019; Hillson 2018). Risk-issues meta-language offers a useful way of distinguishing risk from its cause and effect (PMI 2008, p. 29), as described in Figure 1.

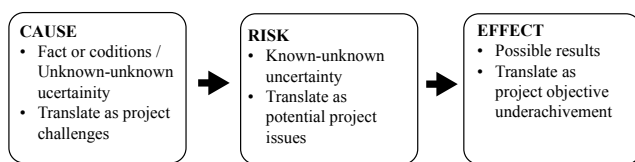


Figure 1: Cause, Risk, and Effect

[Source: Adopted from PMI (2008, p. 29)]

A cause is defined as unknown-unknown uncertainty as a fact about the challenges of the project or its environment, while the risk is a known-unknown uncertainty that could affect a project if it occurs and is translated as potential a project issue (Hillson, 2018). The effect of risk is known as possible results and became contingent potential to a project objective underachievement. Issues are of interest in the context of risk because “a project risk that has occurred can also be considered an issue” (PMI 2008, p. 275). The comparison between risk and issues shows that project issues can be mitigated by managing potential challenges and issues proactively (Baker 2007).

Hence, project issues are controllable and prevent them from happening by managing them earlier. Challenges and issues identification allows the project to study the project context and environment that cause the issues to occur. Posited by S.Muthuveeran et al. (2021), prevention actions by managing the challenges earlier are crucial in preventing project issues from happening. Leaving the project to face the project challenges without any systematic management approach will result in project issues later, which will affect the achievement of the project objectives.

1.5 Discussion

Landscape architecture project management is a continuous process that involves managing and taking care of natural and manmade landscapes. It needs an appropriate and systematic project challenges and issues management system with clear and well-defined goals, objectives, and targets. One major aspect of landscape architecture projects involves planning, design, and implementation. In tandem with rapid urban development, urban landscape architecture projects undergo various challenges, and yet the projects are

needed for urban wellbeing. These challenges pose a potential issue known as a risk that will eventually become issues to the underachievement of project objectives.

Project challenges, risks, issues, and objectives are interrelated and controllable. Challenges from internal or external factors can create a potential risk to a project. If unmanaged, the potential risk will become issues that will affect the achievement of the project objectives afterward. Hence, challenges should be anticipated at the earliest instance during a project’s lifecycle to understand the potential risk. Risk is to be managed systematically to control the issues in achieving the project objectives.

Thus, this study aims to investigate factors to project objectives underachievement in the Malaysian landscape architecture project. First, the study reviewed the common project challenges that caused project issues. Second, the study investigates the occurrence of the project issues toward project objectives. Lastly, the research looked at the stakeholder factors that caused the project issues.

2. METHODS

The research methodology included exploratory case analysis. The research comprises four stages: a preliminary study, data collection, analysis, and interpretation. First, the researcher conducted a background study on the research’s history, needs, gaps, and goals. Second, twenty-four professional landscape architects in the Klang Valley were interviewed via semi-structured interviews. In line with the exploratory study, open-ended questions using an aide-memoire give them leeway and freedom for their responses (McNamara 2017). The researcher recorded audio recordings and project documentation, transcribed the text, and used *ATLAS.ti 9*, a documented and organised research software. Third, the content analysis identified and described the codes, categories, and topics (Mayring 2014). In addition, the thematic analysis was conducted to understand the data and create thematic maps linking various themes. The research explored the relationship between subject themes and determined the patterns (Maguire and Delahunt 2017). Finally, this study discovered the mapped and reported interpretations that analyse the current project objective achievement in Malaysian landscape architecture projects. The conclusion was based on the study objectives.

Twenty-four interviewees responded based on the predetermined sampling criteria for the landscape planning project. The following are the requirements of the interviewees: 1) individuals from landscape architecture consultancy firms who are professional landscape architects; and 2) their current organisation held managerial and decision-making positions, indicating that they influence the policy and practice on the ground. All interviewees had more than ten years of experience in the sector. In a whole cycle of landscape architecture projects in the urban region of Klang Valley, Malaysia, they have been involved in various project sizes, locations, and scopes. Each interviewee was assigned an alphanumeric code (L01 to L24) for easy identification. The information of the interviewees shown in Table 1.

Table 1: Interviewees' Information

Interviewees	Interviewees' Position	Interviewees' Background		Interviewees' Organisation Background		
		Education	^a Years of experience	^a Years Established	^a Headcount Size	^a Total Ongoing Project
L01	Director	Abroad	Expert	Established	Small	Medium
L02	Proj. Director	Local	Intermediate	Established	Small	Medium
L03	Director	Abroad	Expert	Established	Small	High
L04	Director	Local	Expert	Established	Small	Medium
L05	Principal	Local	Intermediate	New	Small	Low
L06	Director	Local	Expert	Established	Small	Low
L07	Director	Local	Intermediate	New	Micro	Medium
L08	Director	Local	Intermediate	New	Micro	Low
L09	Director	Abroad	Expert	New	Small	Low
L10	Director	Abroad	Expert	Intermediate	Small	Medium
L11	Associates	Local	Intermediate	Established	Small	Medium
L12	Head Contract	Local	Intermediate	New	Small	Medium
L13	Director	Abroad	Expert	Intermediate	Small	Low
L14	Director	Local	Intermediate	New	Small	Medium
L15	Director	Local	Expert	Established	Small	Medium
L16	Director	Local	Intermediate	Intermediate	Micro	Medium
L17	Principal	Local	Intermediate	Intermediate	Small	Medium
L18	Director	Local	Intermediate	New	Micro	Low
L19	Proj. Director	Abroad	Expert	Established	Small	Medium
L20	Director	Local	Intermediate	New	Small	Medium
L21	Director	Abroad	Expert	Established	Small	Medium
L22	MD.	Local	Expert	Established	Small	Medium
L23	Director	Local	Intermediate	New	Micro	Low
L24	Director	Local	Intermediate	Intermediate	Small	Medium

Notes: ^a Beginner (< 10 years) / Intermediate (10 < 20 years) / Expert (> 20 years)
^b New (< 10 years) / Intermediate (10 < 20 years) / Established (> 20 years)
^c Micro (< 5) / Small (5 < 30) / Medium (30 < 75): Malaysia's Small and Medium Enterprises (SME) classification
^d Low (< 20) / Medium (20 < 40) / High (> 40)

3. RESULTS AND DISCUSSION

In the semi-structured interviews, 24 landscape architects were asked about the project's common challenges that caused to project issue's occurrence, the project issues' impact on to project objective and stakeholders' factors to project issues. The showcard method elicited and improved responses on project issues and objectives in landscape architecture projects.

3.1 Project Challenges Leading to Project Issues

Project challenges were studied to understand the sources of project issues and, eventually, the impact on projects if not managed. Interviewees were requested to provide their opinions on several challenges commonly faced by practising landscape architects. The study obtained (listed in Table 2) 177 coded challenges responses that were further coded into 59 group challenges and it further categorised the 59 challenges into 10 areas mainly poor client engagement, costing constraints, managing difficult clients, time constraints, site coordination, payment issues, managing a complex project, constant design changes, local industry practices and culture, and insufficient skillful worker.

Table 2: Interviewees' Feedback on Landscape Project Challenges

Interviewees	Landscape Project Challenges	
L01, L04, L15, L21, L23, L24	Client failed to understand landscape architect's roles	Poor Client Engagement
L14	Difficult to confirm budget consultancy service and project cost	
L14, L15, L21	Landscape scope is predetermined	
L10, L24	Treated as a small trait - disregard their opinion and solution	
L15	Landscape is often only needed due to the authority's requirement	
L04, L19, L21, L23, L24	Treated as "beautification" and "cosmetic" works	
L24	Client focusing on cost rather than value	
L01, L05, L11, L20	Client did not fully recognise and adhere to landscape architect's advice and recommendation	
L11, L17	Design is subjective - difficult to please clients	
L04, L08	Clients' over expectation and demand instant project results	
L13	Forced to engage beyond the service scope	
L04, L05, L06, L17, L21, L23	Low budget allocation - below market overall project cost ratio	Costing Constraints
L08	Landscape budget is already fixed before seeking advice	
L04, L13, L20, L23	Budget does not tally with client's project outcome expectation	
L09, L20, L23	Landscape architect running business on financial pressure	
L02, L09, L12, L14, L21	Cutting of the budget allocated earlier is agreed	
L02, L09	Client attempts to seek maximum project profit	
L23	Cost transfer practice due to over budgeting in other scopes	
L03, L09, L10, L19, L20, L24	Client practising price competition in engaging landscape architect's services	Managing Difficult Client
L14	Unfavourable condition of the contract	
L06, L09, L24	Perception that contractors' credibility are the same, tendency to award project to the lowest priced tender	
L04, L09, L12, L17, L19	Slow in decision making	
L04, L12, L19	Too many tiers of approval in client's organisation	
L04, L09, L12, L13	Bureaucratic procedure	
L05, L12, L17, L19	Client indecisive and afraid to take ownership	
L04, L06, L13, L14, L17, L19	Client's internal political issues - changing hand of administration and high turnover	
L04, L06, L17, L18	Client's personality issues, self-interest and lack of professionalism	

Interviewees	Landscape Project Challenges	
L04, L05, L14, L15, L21, L23, L24	Late appointment of landscape architect's service in the project lifecycle	Time Constraint
L13, L15, L19	Short period of time to prepare the design proposal	
L02, L06	Contractor forced to mobilise even though the site is not ready	
L06, L11, L23	Contractor given a short project duration completion without additional time permitted	
L01, L17, L24	Client does not recognise and overrule landscape architect's decision	
L02, L03, L17, L20, L21	Interferes in project control and disregards landscape architect's advice	
L02, L03, L14, L15	Landscape architect is forced to oblige with instructions despite diverging from the contractual content	
L02, L05, L08, L20, L21	Coordination constraints with other professionals and contractors	Site Coordination
L06, L19	Late site hand over	
L06	Site disturbance by other works	
L05, L21	Not supportive and lack of communication with others	
L08	Crossover scope and activities	
L02, L05, L06, L21, L22	Unpredicted site condition	
L05, L22	Site does not tally with given drawings	
L12, L14, L16, L17, L18, L19	Paymaster delaying consultants' and contractors' services payment	Payment Issues
L22	Underpaid for their services - no standard on fees	
L03, L10, L24	Managing big scale projects	'Managing Complex Project
L05, L11	Complex and limited space at site for landscape work	
L13	Project is split into a few parcels	
L06, L15	Fast track and design & build project	
L21	Complex site information given by others	
L04, L05, L09, L17, L18, L19	Change in design and scope without additional fees paid	Constant Design Changes
L09, L17, L19	Indecisive and change of mind	
L17, L22	Poorly established service contract agreements	
L17, L18, L20	Local project culture	Local Industry Practices and Culture
L10, L14, L24	Poor landscape awareness and appreciation	
L10	Current construction business slowdown - cost conscious project sponsor	
L09, L17	No abortive charges to additional works - norm in local practices	
L19, L22, L23	Poor local construction ethics and professionalism - disobey the law and unethical price tendering	
L09, L17	No statutory Act to protect landscape architect's profession and scope	

Interviewees	Landscape Project Challenges	
L05, L19	Lack of credible landscape architects - onsite project experience, lack of basic engineering, architecture & contractual knowledge; and unable to manage project independently	Insufficient Skilful Worker
L02, L19, L23	Not skilful and poor delivery by contractor - relying on foreign workers, lack of manpower and experience	

The interviewees' responses revealed that they were aware of and repeatedly faced similar challenges in all projects. Summarised in Figure 2, observed that the most common challenges faced by the interviewees are related to the client factor, namely poor client engagement, dealing with demanding clients, limited project control, and cost-time restriction causing project issues. This denotes to reviewed common project challenges posited by (ASLA 2019; IFLA Europe 2017; Landscape Institute 2020) stating that clients-related project challenges and issues from managing difficult client expectations, poor client-consultant engagement, limited costing again value expected and unrealistic client time constraints expectation are common challenges endure by landscape architectural project.

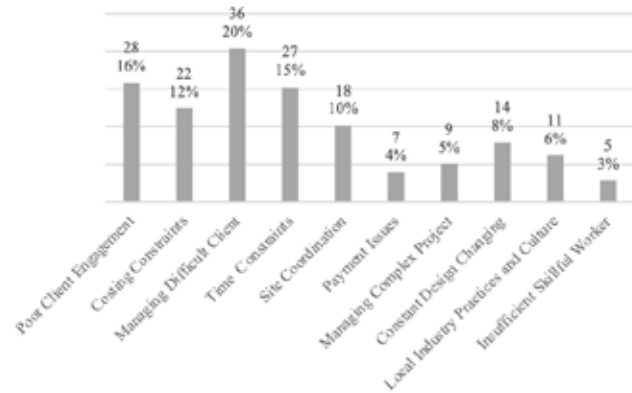


Figure 2: Summary of Landscape Architecture Project Challenges

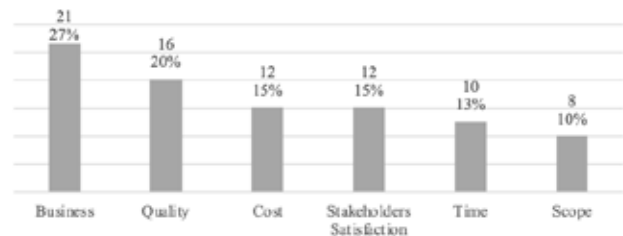
3.2 Effects of Project Issues on Project Objectives

Interviewees were requested to provide their opinions on the issues arising from the project challenges they faced. The research listed in Table 3, obtained 79 coded issues responses, coded into 38 group issues, and further categorised them into 6 affected project objectives based on the interview feedback.

Table 3: Interviewees' Feedback on Landscape Architecture Project Issues and Affected Objectives

Interviewees	Landscape Architecture Project Issues	Affected Objectives	
L09, L23	Project complexity and scope put the business under financial pressure	Business	
L05	Additional Variation Order (VO) works not paid		
L04, L09, L13, L17	Constant design change disrupts business operations		
L09, L18	Prolonged professional services from the agreed contract		
L13	Professional fees are underpaid		
L12	The project scope is reduced, affecting the service fees		
L09	Project stopped halfway		
L02, L17	Project outcome affects the business reputation		
L04, L05	The project did not follow the initially planned process		
L05, L13, L21	Internal operation disruption due to project undertaking		
L09, L18	Demotivated project team	Quality	
L02, L06, L08	Poor workmanship by the contractor		
L06	Contractor rushing to complete due to a tight deadline		
L13, L15, L17	Low-quality material due to cost-cutting		
L06, L10	Planting damaged		
L03	Mechanical element malfunctioned		
L08, L14, L24	Underspecification		
L17, L24	Defect and redundant appearance		
L11	The degraded environment due to erosion		
L03, L12, L19	Rework cost due to defect		Cost
L05, L07	Additional work instructed by the client without payment		
L02, L10, L11, L22	Additional work and design changes are unpaid		
L05, L21	Site damages by others lead to additional project cost		
L09	Complying with authorities' instructions for changes	Stakeholders Satisfaction	
L01, L04, L11, L13, L17, L20	Client dissatisfied with project's physical outcome		
L03, L11, L22	Poor consultant servicing		
L02, L17	Poor design realisation due to too many amendments		
L01	Holding back project CMGD approval and refused to close the project		
L22	Contractor stopped working		Time
L06 L20	Late site mobilisation and site not ready		
L05, L08	Poor contractor scheduling		
L22	Frequent site instruction and additional work		
L10, L11, L13	Short timeline given		Scope
L03	Prolonged CMGD clearance		
L05, L13, L20	Extensive VO	Scope	
L14	Damages to completed works - replacement not following the specification		
L02, L10	The client changed their mind	Scope	
L13, L17	Cost-cutting practice by the client from the agreed sign-off proposal budget		

Figure 3 identified that the issues affecting the business objective are the most prominent followed by core project objective underachievement namely quality, cost stakeholders, time, and scope. Constant design changes, effects on business reputation, disruption in internal operation, and demotivated project teams are the most common issues affecting objective business achievement. Meanwhile, poor contractor workmanship, planting damage, and material under-specification affect the quality objective. For the cost objective, unpaid fees to landscape architecture for additional works and design change are the most prominent causes. Lastly, extensive Variation Order (VO) and clients' constant design and planning changes affect the scope objective.

**Figure 3:** Summary of Affected Project Objectives

Found clients related project challenges and issues from managing difficult client expectations, poor client-consultant engagement, limited costing again value expected, and unrealistic client time constraints expectation posit by ASLA (2019), IFLA Europe (2017), and Landscape Institute (2020) are the prominent reason that cause underachievement of landscape architecture project objectives. The underachievement of project objective lead causing poor business objective realisation, followed by remaining core project time, scope, cost, and quality objective achievement. This is similar to the conception of project objectives by PMI (2021) that the intended outcomes objectives in which the project takes place include deliverable metrics, delivery, baseline performance, resources, business value, stakeholders, and forecasts. Hence, Malaysian landscape architecture projects often fail to meet the core project objectives of time, scope, cost, and quality, which further cause stakeholders' dissatisfaction.

3.3 Stakeholder Factor Leading to the Occurrence of Project Issues

Interviewees were requested to provide their opinions on stakeholder factors that led to the 79 coded project issues. Finding from interview feedback listed in Table 4, the study obtained 25 stakeholders' reasons for the 79 coded project issues and further categorised them into 5 project stakeholder categories.

Table 4: Interviewees' Feedback on Stakeholder Factors for the Occurrence of Project Issues

Interviewees	Reasons for the Occurrence of Project Issues	Stakeholder Factor
L01, L03, L07, L17, L23	Direct instruction and overrule project decision	Client
L01, L02, L03, L09, L14, L16, L17, L20	Poor perception and understanding of the landscape architecture scope	
L02, L05, L20, L23	Landscape architect not given full authority	
L02, L10, L19	Not well informed on project detail	
L07, L09, L13, L14, L24	Cost cutting and change of scope to the minimal practice	
L09, L15, L20	Low budget allocation	
L01	Prolonged work completion approval	
L12, L20, L24	Slow decision making	
L01, L19, L20	Delayed payment	
L01, L13, L20	Client's internal bureaucracy	
L06	Over expectation and seek immediate result	
L02, L03, L08, L10, L17, L23	Contractor failed to meet expected project quality and scope - unskilful, lack of manpower, and rushing to meet deadline	Landscape Contractor / Supplier
L01, L03, L06, L24	Unethical contractor - tendering lowest price and cutting corners	
L02, L03, L13	Incompetent local plants suppliers to supply the required specification	
L05, L13	Incompetent landscape architect to manage the project	Landscape Professional
L05, L17, L22	Fail to understand the existing site condition	
L04, L17	Poorly managed client's needs and expectation	
L10	Internal issues within landscape architect organisation	
L07, L14	Change in local authority's planning policy	Authority
L15	Change in submission procedure	
L13	Late approval from the authority	
L05, L06, L08, L10, L20	Poor project integration with others	Others (Main Contractors, Architects, Engineers, etc.)
L02, L05, L22	Poor communication and project information sharing between projects parties	
L06, L10, L20	Delay and late site handover	
L02, L05, L11, L20	Damage caused by contractor to completed work	

Figure 4 indicates that clients are the prominent stakeholder factor that causes project issues to occur, contributing to 39 out of 79 project issues. This reason is primarily due to clients' direct instructions and overruling the decisions relating to project cost, time, and scope management, leaving the interviewees unable to adhere. The research observed that these issues are related to the challenges of poor client

engagement discussed earlier. The clients failed to appreciate and understand the landscape scope, causing constant interference with the landscape architecture project decision and process.

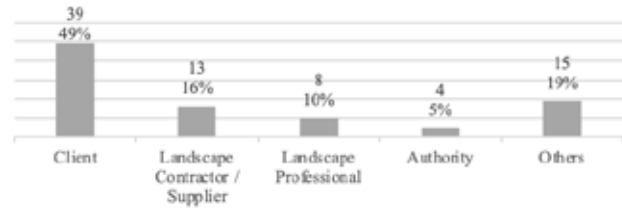


Figure 4: Summary of Stakeholder Factors

The study also found that different stakeholders affect specific project objective issues. The authorities primarily affect the cost objective, and other stakeholders (architects, engineers, and contractors) are mainly concerned with the project scope objective. The client factor primarily affects the business objective. Meanwhile, contractors and suppliers primarily affect the quality objective; landscape professionals primarily affect the business objective.

3.4 Discussion

The underachievement of landscape architecture firms' business objectives caused by the project performances was observed caused by two factors, depicted in Figure 5. First, the outcome of the affected project objective is caused by several project issues. The findings show that 27% of the 79 recorded project issues directly affected the organisations' business objectives. Additionally, a combination of project issues affected the projects' stakeholder dissatisfaction and quality, cost, time, and scope objectives, thus indirectly affecting the business objectives. Second, the process of running the project itself. Several methods of managing the projects impacted the organisations' financial position. Functional disturbance and organisation culture further added to the underachievement of the organisations' business objectives. A combination of these two factors caused most landscape architecture firms to suffer in achieving their business objectives.

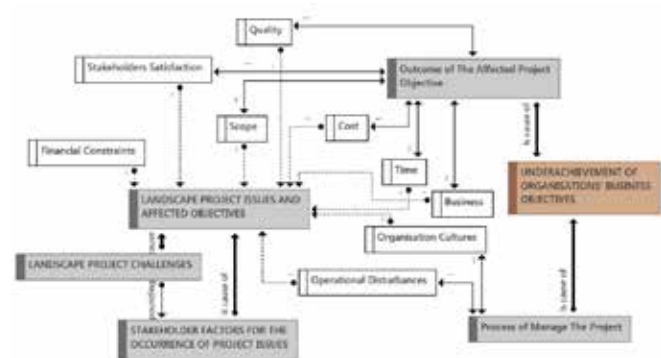


Figure 5: A Network View of the Interrelated Project Factors causing Underachievement of Organisations' Business Objectives

Malaysia's landscape architecture firms face difficulty in achieving project objectives beyond core project objectives only (time, scope, cost, and quality) but extend to business, operation, and other objectives as posited by APM (2012), Dwyer (2016), and PMI

(2021). This scenario causes projects to underperform and further effecting firms' business objectives. Undertaking more landscape architecture projects exposes landscape architecture firms to more significant business risks. Based on the current project objective issues, Malaysia's construction firms predominantly suffer from cost, quality, and time issues. This scenario is understandable as landscape architecture firms' business depends on project undertaking as the primary source of business income. Any project consequences will have a severe impact on the organisation's business. Most landscape architecture firms are small-medium-sized organisations that depend heavily on one or two big projects to survive. As stated previously, landscape architecture project commonly faces design constraints is identified as a major issue faced by landscape architecture practitioners (Capouya et al. 2012; Godi and Sibelius 2012; Schatz 2003), followed by personnel stakeholders issues and contractual issues (Goh and Abdul-Rahman 2013). Any constraints to the project outcomes consequentially expose the landscape firms to risk. This scenario contrasts with the client's perspective, especially developers' risk exposure to landscape architecture project outcomes, mentioned in Abdul-Rahman, Wang, and Mohamad (2015), Omer, Adeleke, and Chia (2019) and Taofeeq, Adeleke, and Lee (2020). A landscape architecture project outcome may not severely affect their business objective, as they might focus more on planning, infrastructure, and building.

Project issues generally can be prevented from happening if the project can predict and treat the issues beforehand. Concerning the experienced project challenges and identified stakeholder factors, the project issues were generally predictable. The research found of the project issues that happened were predicted earlier by the interviewees. However, despite their ability to predict the issues earlier, they did nothing to treat those issues, which were allowed to happen and left to the project operation team to handle.

Similarly, the findings show that project practitioners were able to predict the project issues but did not react effectively to prevent those issues from happening. Baker (2007), Bugayenko (2019), Hillson (2005), and PMI (2008) posited that project issues are controllable with early prevention actions through issue anticipation and management. In sum, the project issues are controllable by the ability of the projects to predict and treat those issues beforehand. The findings show the projects' ability to predict the issues earlier and to suggest practical treatment actions. However, project issues still occurred because of low reaction to the predicted issues despite the ability to treat them.

4. CONCLUSION

The study indicates that the issues affected all the core project objectives, leading to poor performance. The identified project issues that affected the business objective are common in landscape architecture. The project process issues directly affected

the organisations in financial, operational, and cultural aspects. Meanwhile, the project outcome issues of time, cost, quality, scope, and stakeholder satisfaction indirectly affected the achievement of the business objectives. The problems identified were caused by challenges, primarily due to human factors, namely low client engagement, managing demanding clients, limited project control and decision-making, and coordination with other project parties.

The project could anticipate the challenges that were bound to happen, learn from previous project issues, and understand the stakeholders to take better control of the project issues. The research found that the project issues were repetitive, and issues anticipated through the project managers' experience and forecasting. The challenges, issues, and stakeholder factors were interrelated; hence further attention was needed to control the issues from affecting the project outcomes.

Issues should be controlled earlier by adopting a systematic process to predict the potential project issues, evaluate the consequences, and treat the issues systematically, to achieve the project objective. Extensive project issues are unavoidable and repetitive, affecting the achievement of project objectives. Project issues are generally controllable beforehand by early prediction and effective treatment to minimise the impact of the issues later.

This study strengthens lesson-learned knowledge regarding the management project issues that affect objective achievement, improves project practitioners' work culture, and prepares them for future endeavours. Thus, the study recommends implementing issues management to manage issues from affecting project objective achievement. Controlling project issues and working with stakeholders enables the achievement of project objectives, thereby enhancing project performance. Stakeholder management is another system potentially required to manage the landscape architecture project stakeholders. This management system application will resolve project issues more quickly and more manageably. It will directly strengthen the landscape environment to improve dwellers' quality of life.

Future research is recommended to find the link between project challenges and issues with the project objective's success and how the application should improve the project delivery output. A deeper study should be conducted on the stakeholder's preferences and factors related to project objectives and expectations. This is to improve landscape architecture project decision-making, as it is a crucial aspect of the project output delivery.

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