Mediation in Construction: An Empirical Investigation on the Evaluative and Facilitative Mediation

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ABSTRACT

Disputes are inherent and inevitable in every construction project. Disputes should be resolved efficiently and effectively to minimise the negative impacts on the project and parties involved. Mediation is a wise choice in resolving construction disputes compared to litigation due to its benefits. However, the utilisation of mediation in the Malaysian construction industry is still low. This may be mainly due to the confidence issue of the construction stakeholders in mediation. The mediation styles that are mainly used in Malaysia are facilitative and evaluative. Both styles are different in the intervention extent of the mediator and thus their suitability and effectiveness in settling construction disputes are different. This paper intends to identify the types of disputes that are suitable for facilitative and evaluative mediation styles in construction and to determine the effectiveness of dispute settlement using facilitative and evaluative mediation styles in construction. The data is collected through qualitative research methods through multiple case studies via semi-structured interviews. The data is analysed by using content analysis. The finding shows that parties are more confident adopting evaluative mediation for settling construction disputes that involve contractual, technical, and tort or negligence disputes compared to facilitative mediation. Evaluative mediation is found to be more satisfactory than facilitative mediation in the aspects of time, cost, parties' relationship, and settlement or outcome in the settlement of construction disputes. This paper informs the construction players in considering which mediation styles for settling their disputes amicably, efficiently, and effectively.

Keywords: Dispute, Mediation, Mediation Styles, Facilitative Mediation, Evaluative Mediation

INTRODUCTION

The involvement of various parties and the complexity of the works involved result in disputes being inevitable and subsequently as an integrated part of the construction industry [5]. Disputes have significant adversarial impacts on the performance and success of a construction project [11], it is crucial to resolve disputes within the site level most economically and amicably. Litigation i.e. the oldest method practiced in the construction industry has turned the industry players to consider alternative dispute resolution (ADR) due to its shortcomings [9]. The most frequently used ADR in the Malaysian construction industry are adjudication and arbitration [4]. But, the disputes are resolved by selecting the 'winner' and 'loser' in both methods. This could result in an adversarial relationship between the disputants and could fail to resolve the dispute amicably. Hence, dispute resolution is best based on interest-based bargaining that focuses on satisfying as many as possible the disputants' needs and interests to reach a mutually acceptable outcome which is a 'win-win' solution with maintaining their relationships instead of based on winning or compromising [13]. Negotiation and mediation are interest-based bargaining ADR. Although, the demerits of negotiation such as repetition of information exchange, the possibility of turning the relationship to

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adversarial due to the interpersonal relations between the negotiators, misunderstanding resulting from faulty signals, and inadequate interpretations [13] could increase the difficulty of resolving the dispute amicably, efficiently and effectively. Fortunately, these demerits could be diminished through mediation by involving a neutral third party [13].

Mediation is an ADR that involves an independent and skilled person called a mediator to assist the disputants in settling their dispute with a mutually acceptable solution through the assisted negotiation and discussion process [9]. And, it is the only true way to achieve a win-win outcome with maintained relationships between the parties [5]. The core objective of mediation is providing the parties with the opportunity to make the decision on their own (self-determination) [8] instead of binding with the decision made by a third party such as the judger, arbitrator, or adjudicator. Mediation can be categorized into a few types which are typical or traditional mediation (without the involvement of other authority), mediation-arbitration (med-arb), and court-annexed mediation. And, mediation can be categorized into a variety of models or styles depending on the extent of its principles, focuses, and premises. Facilitative, evaluative, and transformative mediation models are the most acquainted mediation models in the construction industry [46]. Besides, there is a furious debate between facilitative and evaluative mediation proponents since both are very different in their approaches and underlying assumptions [23].

Mediation has expanded use and gained popularity as dispute resolution in the international construction industry such as in England, the United States of America, Germany, Hong Kong China, Australia, Singapore, and so on due to its benefits perceived and offered to the disputants [9]. Although mediation is not new and there are numerous efforts to introduce and encourage mediation in the Malaysian construction industry, it does not progress at the same pace as the developed countries and yet in very low utilization [2], [24], [25]. There are perceptions that mediation is difficult to come out with a settlement since the process most likely depends on the disputants and they believe that the involvement of a third party might complicate and worsen the problems [24].

In facilitative mediation, the mediator facilitates and guides the disputants until they reach an agreement. If the disputants are unable to achieve a mutual agreement, they can request the mediator to provide his recommendation which is known as evaluative mediation. Facilitative mediation is applied when the disputants can develop a better solution than the mediator since they are more understanding of the disputes [23], [37]. Whereas, evaluative mediation is used when the disputants need direction as the appropriate grounds for the settlement [37]. Facilitative mediation tends to be more integrative and evaluative mediation tends to be more distributive. The selection of mediation styles depends on the disputing matters, the quality or background of the mediator and their familiarity with the technically concerned issues [28]. Mediation is the best option to resolve or settle construction disputes efficiently, effectively, amicably, and rationally as well as to achieve a win-win result with a maintained relationship. Still, there is a lack of study on the suitability of different mediation styles for different construction disputes. This paper aims to identify the types of disputes that are suitable for mediation and the effectiveness of facilitative and evaluative mediation styles as a dispute resolution method in construction

TYPES OF CONSTRUCTION DISPUTES

After reviewing the broad range of literature, disputes may be categorised into three types which are contractual, technical, and tort or negligence disputes.

Contractual Dispute

Contractual disputes are the most significant portion of disputes in construction projects [7]. Contractual disputes include but are not limited to, the definition, interpretation, and clarification of the construction contract [26]. If the formulation of the construction contract consists of some flaws or deficiencies, and

ambiguous language or terms, the contract is at a high risk to create diverse disputes [16], [42]. 'Variation, the extension of time, payment, quality of technical specifications, availability of information, administration and management, unrealistic client expectation, and determination' are the disputes under the category of contractual disputes [27]. The contract document including the drawings always consists of errors due to human errors, changes in client's needs, or unforeseen factors, thus the documents and the work scopes must be adjusted from time to time. For example, the drawings will have some mechanical drafting errors and lack of needed dimension or detail due to the carelessness of the designer or the changes in the client's requirements or unforeseen occurs.

Technical Dispute

Technical disputes often arise during project operations mainly due to uncertainty. Uncertainty exists when there is a distinction between the quantity and quality of information required and the information available [18]. The quality and quantity of information required rely on the complexity of the tasks which are determined by the number of factors that must be coordinated or the performance requirements such as budget and time constraints [26]. Whereas, the quantity and quality of information available are determined by 'the effectiveness of planning that is the collection and interpretation of information before the task' [33]. According to [26], 'the uncertainty may lead to unrealistic client expectation such as unrealistic contract duration, late instructions or information from architect or engineer, overdesign, inadequate site or soil investigation report, error and incomplete technical specifications and many others'.

Tort and Negligence Dispute

Tort or negligence disputes are the disputes that arise between the parties involved in the construction project and the third party for economic loss without a contractual relationship [21]. These types of disputes are always unsolved and go to court for litigation. Tort law is established and enforced to 'secure the protection of all the citizens from the danger of physical harm to their persons or their property' [6]. Tort standards are imposed by law without reference to any private agreement, they oblige each citizen to exercise reasonable care to avoid foreseeable physical harm to others [6]. The third party asserts a negligent misrepresentation claim against the party responsible whether the client, contractor, or design professionals for compensation or remedy upon the loss incurred. Common areas of negligence include inadequate examination of sites, errors in design, and misleading cost estimates [3]. To avoid negligence disputes, professionals should conduct reasonable care and skills to comply with the codes and standards of general practice established by the building profession [3].

TYPES OF MEDIATION

Mediation can be categorized into a few types which are typical or traditional mediation (without the involvement of other authority), mediation-arbitration (med-arb), and court-annexed mediation. Typical or traditional mediation is the mediation initiated by the parties voluntarily or the parties' willingness to conduct the mediation. The mediation is conducted not upon the stress or force of the other third party or authority.

Mediation-arbitration is a hybrid approach between mediation and arbitration, also called 'med-arb'. Med-arb can be voluntary or instructed by the arbitrator (a precondition of arbitration). In med-arb, the procedure commences with mediation first, the mediation process is same as the traditional mediation where the parties try to resolve their disputes or issues in mediation with the assistance of the mediator. If the mediation ends in an impasse or all or some of the issues are unresolved, then the parties will move to arbitration. The decision-making power of the parties is rendered to the arbitrator in the arbitration proceeding, hence the parties are encouraged and motivated to resolve their disputes through mediation. The arbitrator can be the other third party or the mediator to be the arbitrator if he or she is qualified. Then, the

arbitrator will render a binding decision or award on the unresolved issues or as a whole [40], [41]. The settlement of med-arb is final and binding unless it is appealed by the party [1] to the court.

Court-annexed mediation is also called court-assisted mediation or court-referred mediation. It is a mediation where active judges and judicial officers act as mediators to litigating parties after they have filed their actions in court [12]. It is mandated or forced by the court before the litigation proceeding. In court-annexed mediation, the mediation is conducted first and followed by the trial. The active judge of the case acts as the mediator during the mediation process and any settlement reached in the mediation becomes a judgement of the court. If there are unresolved issues, then the judge will render his decision or award judgment in the litigation proceeding [12]. The settlement of court-annexed mediation is final and binding unless it is appealed.

Facilitative Mediation

Facilitative mediation, also known as pure mediation is the basis for all mediation models or styles [23], [32], [39]. It is based on three fundamental assumptions which are 'the parties are reasonably intelligent and potentially able to work with each other if placed in a neutral and safe environment'; 'the parties are capable of understanding their situations better than the mediator and, perhaps, better than their lawyer'; 'the parties can develop better solutions than any mediator might create' [23], [37]. Hence, the principal mission of a facilitative mediator is enhancing and clarifying the communication between parties to assist them in deciding what to do [37].

Facilitative mediation is an interest-based mediation in which it mainly focuses on the needs and interests underlying the parties [10], [39]. Hence, it is more integrative where it emphasizes expanding the size of the pie and allowing each side to get more, a win-win solution [23], [43]. In facilitative mediation, the parties explore the potential solutions or options themselves with the assistance of the mediator and also determine which options will be the mutual agreement or the final settlement for their dispute. It means that the source of the options is derived from the parties themselves instead of the mediator [23].

In facilitative mediation, the mediator is responsible for assisting the parties in evaluating their situations rather than evaluating the disputes for them [23], [31]. In other words, the parties reach a mutual solution through their own efforts with the assistance of the mediator. The facilitative mediator aims to help the parties increase their understanding between them, explore their interests rather than promote a position, create a collaborative and amicable environment, and create a solution that is unique and suitable to their situation [39], [45]. The mediator can perform his role by questioning and direct subtly the parties to explore potential solutions [38], [39]. The facilitative mediator does not advise, suggest opinions, or predict the possible outcome of litigation or arbitration of their case as such advice, opinions, and predictions are improper since they might undermine the impartiality and thus interfere with his ability to function as the mediator [37]. Besides, he may not be qualified enough to give such advice, opinions, or predictions [37]. Indeed, the parties that select and participate in the facilitative mediation expect the mediator's interference as low as possible and suppose him to play the role of facilitating and guiding only in their discussion or negotiation [39]. Thereby, the facilitative mediator refers to process-oriented [7], [39].

Since the facilitative mediator is only responsible for guiding the process without providing any opinion or prediction, he does not need to possess the expertise or knowledge in the subject matter of the dispute of parties [39]. In fact, the parties in facilitative mediation usually prefer a mediator with no experience and knowledge about the subject matter of their dispute to prevent the probability of interjection of evaluative information by the mediator [39]. However, the facilitative mediator is required to be equipped with negotiation facilitation skills or 'process expertise' [29]. The facilitative mediator can recommend the parties invite other outside authorities for professional or legal advice into the mediation [39]. As the focus

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of the facilitative mediator is to facilitate the negotiation, discussion, or conversation between the parties and the nature of interest-based, the facts of the case will not be concerned but instead the interests and desires of the parties. This forward-looking focus expands the potential of non-legal and creative solutions [39].

Facilitative mediation can be categorized into directive (known as 'facilitative-narrow' in the Riskin grid) or non-directive (known as 'facilitative-broad' in the Riskin grid) [37], [39]. In facilitative-narrow mediation, the mediator is responsible for helping the parties understand both sides' legal positions and the consequences of non-settlement; and assists each of them in assessing the potential solutions by asking questions in the private session [37]. Whereas, in facilitative-broad mediation, the mediator aids the parties in understanding their issues and interests rather than encouraging them to examine case positions. Besides, he also helps the parties to develop possible solutions and evaluate them [37], [39]. The settlement reached in the facilitative mediation is explored and developed by the parties themselves with their own efforts and inputs through the facilitated negotiation between them.

Evaluative Mediation

Evaluative mediation is often denied as mediation by the proponents of facilitative mediation due to the extent of the intervention of the mediator in the process. Additionally, it is viewed as an oxymoron since it is inconsistent conceptually and operationally with the values and goals of the mediation process where the mediation 'is not a process designed for having an expert apply some external criteria to assess the strengths and weaknesses of the parties' cases but is a process for orienting the parties toward each other' [23], [43]. The fundamental principles of it are 'the parties want and need the mediator to provide some direction as the appropriate grounds for settlement based on law, industry practice, and technology'; 'the parties assume the mediator is qualified to give such direction by virtue of her experience, training, and objectivity' [37].

Evaluative mediation is considered to tend to be more adversarial than facilitative in which it tends to be more distributive where emphasizing deciding how much pie each gets, the more the party gets, the lesser the other gets [23]. The settlement is more toward a win-lose settlement than a win-win settlement compared to facilitative mediation. This is because the parties are more focused on the positions, arguments, and compromise rather than on interests and collaboration compared to facilitative mediation [23], [43]. Even though evaluative mediation focuses legal rights of the parties and evaluates each party's claim, it is not an adversarial dispute resolution approach where the settlement is not binding and determined by the parties instead of the third party [23], [29]. Unlike facilitative mediation, the source of the options or the potential solutions is derived from the mediator. In other words, 'the parties look to the mediator for the answers to their problems' [23].

The evaluative mediator more focuses on the underlying substance and cause of the dispute without ignoring the parties' interests [7], [23], [39]. In evaluative mediation, the mediator is subjected to recommend, point out the weaknesses and strengths of the case, predict court outcomes, and evaluate case components for the parties [39]. It is assumed that the parties want and need guidance from the mediator about the appropriate grounds for settlement [37]. Besides, it is believed that the main barrier to resolution is the unrealistic opinions of parties on the value of their claims [39]. Hence, the mediator plays the role of an 'agent of reality' to assist the parties in reevaluating their positions more realistically and exploring potential resolutions [7]. Thereby, the evaluative mediator 'provides new information, helps the parties realize the costs and risks of litigation, and points out weaknesses and strengths of each side either in private caucuses or with both parties present' [39]. The 'reality check' through honest assessment always reaches the parties to the resolution, thus it is always appropriate to apply evaluative mediation for a complex case [39]. With the sharing of knowledge (opinion or recommendation) and the guidance of the evaluative mediator on the

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issues and merits, the parties benefit [29].

Due to the broader legal focus and the role of the mediator to give recommendations and opinions related, the evaluative mediator is not only required to have guiding conversation skills but also must possess a legal background and substantive experience with the subject matter of dispute [39]. The evaluative mediator must have the experience, training, and objectivity to be considered qualified and competent to give his recommendations and opinions [36], [39]. The requirement for a mediator to perform as evaluative is wider than facilitative in the mediation process.

Similar to facilitative mediation, evaluative mediation also can be categorized as directive (known as 'evaluative-narrow' in the Riskin grid) or non-directive (known as 'evaluative-broad' in the Riskin grid) [37], [39]. According to Riskin, the task of the evaluative-narrow mediator is to 'urge the parties to settle or to accept a particular settlement proposal or range'; 'propose position-based compromise agreements'; 'predict court or administrative agency dispositions'; 'try to persuade parties to accept mediator's assessments'; 'directly assess the strengths and weaknesses of each side's case usually in private caucuses and perhaps try to persuade the parties to accept the mediator's analysis' [37], [38]. In evaluative-broad mediation, the mediator needs to 'explain the goal of mediation can include addressing underlying interests'; 'encourage the real parties, or knowledgeable representatives of corporations or other organizations to attend and participate in the mediation'; 'ask the parties about their situations, plans, needs, and interests'; 'speculate the underlying interests and ask for confirmation' [37], [38]. The evaluative-broad mediator also offers predictions, assessments, and recommendations, but more focuses on the underlying interests [37], [38]. The settlement reached in evaluative mediation can be the solution explored by the parties as in facilitative mediation or refer to the recommendation by the mediator based on his/her knowledge and experience in the practice upon mutual agreement between both parties.

RESEARCH METHODOLOGY

The research methodology adopted was qualitative research through conducting multiple case studies with semi-structured interviews with the participants of construction mediation case studies including the mediator(s) and both disputants (or parties' representatives). This is because the research objectives require a rich, detailed, and vivid description of the respondents' experiences, thoughts, and perceptions of the construction mediation process they are involved as well as any other relevant information [30]. Besides, the data collected from the case study is from the real-life context or strong in reality and contemporary which can identify the real perceptions and experiences of the respondents in participating in the construction mediation process [30].

Research Process

The case studies selected should fulfil five requirements or characteristics which are (1) the mediation cases should be the construction mediation in which the disputes to be resolved should be construction-related disputes; (2) the construction mediation cases should be the cases that arose in the Malaysian construction industry; (3) the construction mediation cases should be the cases that registered under Malaysian mediation institutions including AIAC, CIDB, and MIMC to ensure the standard and the quality of the mediation process and the practice of the cases; (4) the mediator served for the construction mediation cases should be the mediator accredited under the Malaysian mediation institutions to ensure he is a qualified and competence mediator; (5) the outcome of the construction mediation cases can be positive which achieved the mutual agreement and successfully settle the disputes or negative which no mutual agreement was achieve and both parties decided to withdraw from the mediation and proceed their disputes with other dispute resolution approaches such as arbitration or litigation. Figure 1 presents the five stages of the study methodology.

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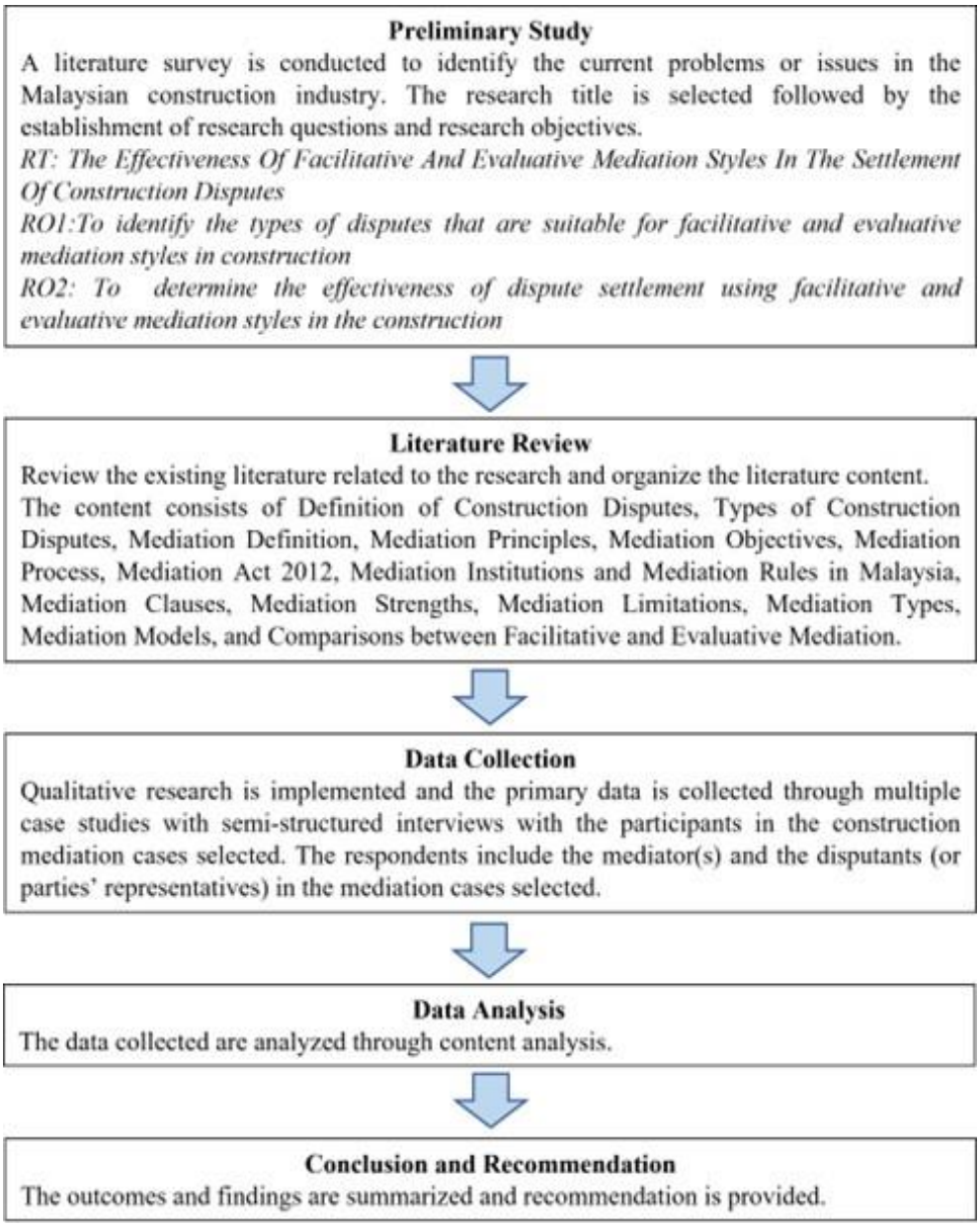

Fig. 1 Research process

Selection of the Case Study

The case studies selected should fulfil five requirements or characteristics which are (1) the mediation cases should be the construction mediation in which the disputes to be resolved should be construction-related disputes; (2) the construction mediation cases should be the cases that arose in the Malaysian construction industry; (3) the construction mediation cases should be the cases that registered under Malaysian mediation institutions including AIAC, CIDB, and MIMC to ensure the standard and the quality of the mediation process and the practice of the cases; (4) the mediator served for the construction mediation cases should be the mediator accredited under the Malaysian mediation institutions to ensure he is a qualified and competence mediator; (5) the outcome of the construction mediation cases can be positive which achieved the mutual agreement and successfully settle the disputes or negative which no mutual agreement was achieve and both parties decided to withdraw from the mediation and proceed their disputes with other dispute resolution approaches such as arbitration or litigation.

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There are four (4) cases selected for this research of which two (2) cases are facilitative mediation cases and two (2) are evaluative mediation cases for making the comparison between both mediation styles. All the cases are construction mediation registered in Malaysia. The respondents for this research are the participants involved in the construction mediation case studies selected. The respondents include the mediator and disputants (or parties' representatives). The data collected is analyzed through a content analysis where the transcripts are reviewed carefully and in detail, and the important keywords or descriptive statements in the transcripts related to the research objectives are identified and assigned to the appropriate and related propositions. After that, those data are reported, presented, analyzed, illustrated, explained, and discussed to answer the research questions and achieve research objectives. Figure 2 illustrates the case selection process.

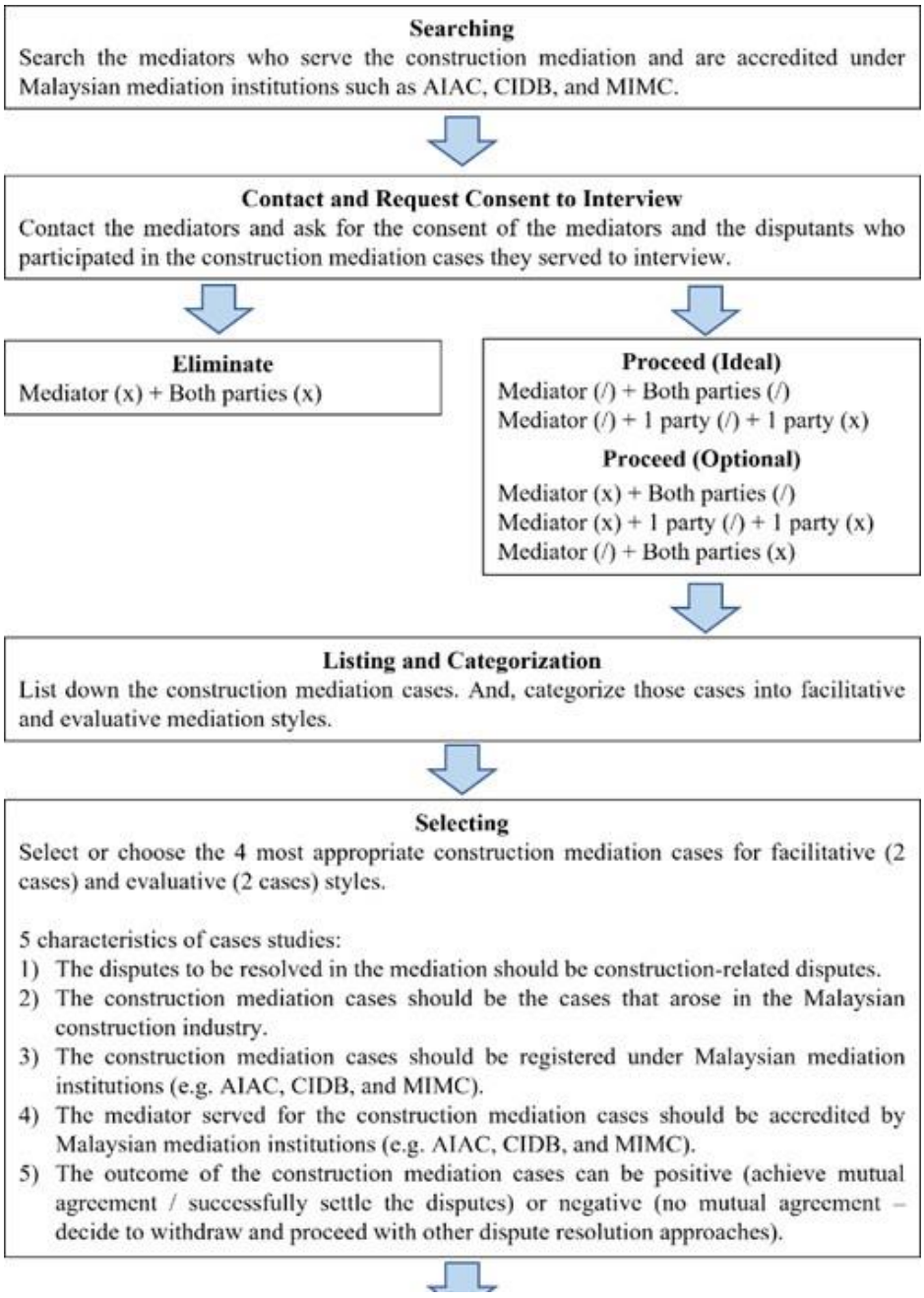

Fig. 2 Case selection process

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Respondent Selection and Interviews

The respondents for this research are the participants involved in the construction mediation case studies selected. The respondents include the mediator(s) and disputants (or parties' representatives) whether clients, contractors, architects, engineers, quantity surveyors, project managers, or others involved in the construction mediation case studies selected. The mediators should be accredited under Malaysian mediation institutions such as AIAC, CIDB, and MIMC as they are trained, competent, and expert in serving construction mediation. Hence, the data collected from them will be valuable. There are no criteria that should be fulfilled by the disputants, the only requirement is they should be the participants in the construction mediation case studies selected for the researcher to obtain information about their experiences, perceptions, thoughts, and opinions about the construction mediation process they participated.

The semi-structured interview is applied as the research instrument in this research. The rationale is to obtain in-depth information about the respondents' experiences [44] since they are allowed to express any of their points, thoughts, experiences, and feelings privately and freely [44]. The semi-structured interviews are conducted based on predetermined questions, but it is not required to be followed exactly or completely where other additional questions, modifying the wording of the questions, the changing order of questions, and exploring new paths are allowed during the interview process [44]. The semi-structured can prevent digressing from the research questions.

The semi-structured interviews were used to acquire the case studies summary and achieve both research objectives. The interviews were conducted in the remote form where through online video conferencing platforms i.e. Google Meet as it is suitable for the geographical limits between the researcher and the targeted respondents of this research as well as due to the merit less time-consuming and cost-saving compared to the face-to-face interview [30]. And, the semi-structured interviews are conducted by the researcher with each respondent separately to encourage them to express their opinions and thoughts freely in the absence of the other participants of the mediation participated.

The interview was divided into two parts. The first part is to acquire the data about the case summary and the second part is the interview questions. The interview questions are divided into three sections. Section A is the background interviewee section. Section B is to achieve the first research objective which is to identify the types of disputes that are suitable for facilitative and evaluative mediation styles in construction. Section C is to achieve the second research objective which is to determine the effectiveness of dispute settlement using facilitative and evaluative mediation styles in the construction.

Content Analysis

Content analysis was used to analyze the content and features of the qualitative data and quantify the qualitative information by sorting data and comparing different pieces of information to summarise it into useful information [14]. It was used to determine the frequency presence of certain words, themes, or concepts of the qualitative data. Therefore, the use of content analysis is suitable for analysing the perspectives and thoughts of the respondents in the form of the transcript which is lengthy and in-depth descriptions

First, the transcripts are reviewed carefully and in detail. Meanwhile, the important keywords or descriptive statements in the transcripts related to the research objectives are identified and assigned to the appropriate and related part of the framework as shown in Table I. Then, based on data in Table 1, a summary table is generated for both objectives. After that, those data are reported, presented, analyzed, illustrated, explained, and discussed to answer the research questions and achieve research objectives.

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TABLE I: Transcript Proposition

Case Code	
Type of dispute	Contractual/ Technical/ Tort or negligence
Type of mediation	Traditional/ Med-arb/ Court-annexed
Mediation style/ mode	Facilitative/ Evaluative
Dispute summary	Summary of the case
Final settlement/ outcomes	Summary of the final settlement
Effectiveness of Mediation	
Time	Descriptive statement from the transcript
Cost	Descriptive statement from the transcript
Parties' relationship	Descriptive statement from the transcript
Settlement/ outcome	Descriptive statement from the transcript
Others	Descriptive statement from the transcript
Better choice between facilitative and evaluative mediation in settling construction disputes	
Contractual disputes	Descriptive statement from the transcript
Technical disputes	Descriptive statement from the transcript
Tort or negligence disputes	Descriptive statement from the transcript

FINDINGS

Background of the Respondents

Table II illustrates the background or general information of the respondents. It includes the respondents' professions, the role that the respondents play in the mediation, the quantity of facilitative and evaluative mediation they have served or participated in, and the training they participated in.

TABLE II: Background of the Respondents

Code	Profession	Role	Facilitative cases	Evaluative cases	Training
R1	Architect, mediator, arbitrator, adjudicator	Mediator	0	5	Evaluative (RICS)
		Party's solicitor/ consultant	0	0	
R2	Lawyer, mediator, arbitrator, adjudicator	Mediator	2	0	Facilitative & Evaluative (RICS)
		Party's solicitor/ consultant	15	3	
R3	Quantity surveyor, managing consultant, mediator	Mediator	0	0	Evaluative (RICS)
		Party's solicitor/ consultant	1	0	
R4	Quantity surveyor, mediator, adjudicator	Mediator	0	20	Evaluative (RICS)
		Party's solicitor/ consultant	0	0	

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Background of the Case Studies

TABLE III: Summary of the Case Studies

Code	Mediation			Nature of disputes	Settlement achieved in mediation
	Style		Types		
	Facilitative	Evaluative			
CS1		/	Traditional	Tort or negligence	Yes
CS2	/		Med-arb	Contractual and technical	No
CS3	/		Court-annexed	Tort or negligence	No
CS4		/	Traditional	Contractual	Yes

1. Case Study 1:

CS1 was in regard to a tort or negligence dispute and the mediation style applied in the case is evaluative mediation (commence with facilitative then change to evaluative upon the request of the parties). It is a traditional mediation and was initiated by Party A. Party A (a government agency – the landowner) owns a land with four-storey existing building. The adjacent land is under construction for a proposed high-rise building undertaken by Party B (a contractor). The construction of the basement has caused heavy soil erosion and resulted in severely critical structural cracks to the property owned by Party A. Party A then engaged a valuer for valuing the damages and quantify the cost needed for the repairing work. The dispute was successfully resolved or settled through mediation in which the final settlement was jointly redeveloping the land owned by Party A through a collaborative partnership or joint venture with a portion to be given in-kind while the rest is profit-sharing

2. Case Study 2:

CS2 was in regard to a contractual and technical dispute and the mediation style applied in the case is facilitative mediation. It is a mediation-arbitration which is the pre-requisite of conducting arbitration. Party B (the contractor) claimed for extension of time (EOT) and variation orders (Vorster). But, Party A (the employer) rejected the EOT claimant and counterclaimed for liquidated and ascertained damages (LAD). Besides, Party A also rejected the VO claimant by Party B. So, the dispute arose. The dispute failed to be resolved through mediation due to the incorporation between both parties, the thought of parties just going through the mediation since it was the precondition to arbitration, and the inability to reach a common ground since they just focused on their self-interest. They just left the mediation during caucuses and settled their dispute through arbitration.

3. Case Study 3:

CS3 was in regard to a tort or negligence dispute and the mediation style applied in the case is facilitative mediation. It is a court-annexed mediation mandated by the court before the litigation proceeding. In December 2019, Party A (the contractor) appointed D1 (the agent) to ship two pieces of machinery from Port A to Port B. D1 then subcontracted the shipping services to D2 (the shipper) who in turn hired Company X, a charterer of tug and barge owned by D3 (the carrier). During the shipment, D3 encountered a very rough sea and severe wave washed on the deck of the barge which caused the barge to list. A machinery's main body and some of its accessories were lost while the other machinery's main body was damaged and some of its accessories were lost. Party A took legal actions against D1, D2 and D3, who were all the parties to the Bill of Lading of this shipment, claiming damages for the loss and costs incurred. During the case management in July 2021, the Court encouraged the parties to attempt a settlement before

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the trial in August 2021. D3's counsel proposed to resolve this by way of mediation. The Contractor, D1 and D2 thereafter agreed with the proposal and the parties proceeded to appoint a mediator. However, no settlement was reached. There was no caucus between the mediator and Party A and no final joint meeting conducted by the mediator with all the parties. They will settle their disputes through litigation. The failure may be due to the mediator not playing his role effectively as the gap between both parties was too big and the disputes couldn't be resolved through mediation but through litigation in his view.

4. Case Study 4:

CS4 was in regard to a contractual dispute and the mediation style applied in the case is evaluative mediation (commence with facilitative then change to evaluative upon the request of the parties). It is a traditional mediation and is initiated by Party A. Party A (the contractor) claimed payment for variation orders or VO but was rejected by Party B (the employer) due to the claim-supporting method used by Party A was not accepted by Party B. The total VO sums in dispute were around a few hundred thousand ringgits. The dispute was unresolved for a duration of six months to a year. Then, Party A decided to appoint a mediator to resolve the dispute through mediation and was agreed by Party B. This was only one of the disputes between both parties that had not been resolved during that time. The dispute was successfully settled through mediation and the final settlement was the disagreeable quantum of the VO sums reduced from a few hundred thousand ringgit to approximately RM20,000.

5. Discussion

The result shows that evaluative mediation is more appropriate and suitable in settling construction disputes including contractual, technical, and tort or negligence disputes than facilitative mediation where all respondents agree with that. This is mainly due to the related necessary specialized knowledge, skills, and experience are required to equipped to settle construction disputes efficiently and effectively. An evaluative mediator as an expert with such a background is capable of guiding the parties in reaching a common ground and settlement by providing them with their real positions, as well as more feasible and realistic settlement options for their disputes. Hence, this will correct the parties' wrong expectations, increase the willingness of the parties to resolve their disputes in mediation to avoid any potential impacts from failing settlement, raise the possibility of settling the disputes successfully in mediation as well as speed up the settlement process [28], [39]. Conversely, the parties often face more challenges and enter into deadlock which subsequently fails to settle their disputes through facilitative mediation since they lack the related knowledge and are unfamiliar with the field.

The result also shows that facilitative mediation is overall ineffective in settling construction disputes since a mutual settlement failed to be reached in all the facilitative mediation case studies. However, the result shows that evaluative mediation is effective in resolving construction disputes where the settlement is successfully achieved in all the evaluative mediation case studies. The result also supports the findings of the first research objective where evaluative mediation is more appropriate and suitable for settling construction disputes. Besides, the result proves the importance and the effectiveness of the recommendations and suggestions by the mediator who is the expert in that field in assisting the parties in reaching a final settlement in mediation. The effectiveness of mediation in this research is based on the aspects of time, cost, the parties' relationship, and the settlement or outcome of mediation. Basically, mediation is effective in terms of cost and time due to the lesser consumption and flexibility of time and cost compared to other dispute resolution methods. This result is consistent with other studies [19], [34], [35]. Even though the mediation environment is amicable and it is an interest-based method, the parties' relationship is rarely maintained as before the disputes arise or enhanced which is in contrast to the literature reviews [22], [35], the parties normally remain as opponents even settlement is reached since they are already in fighting mode before mediation. However, the parties' relationship can be maintained or enhanced in the case where the settlement reached is related to their future or current interests or profits so

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they will struggle to improve their business relationship such as in CS1. The effectiveness of the settlement depends on whether there is a final settlement achieved at the end of mediation.

Types of Disputes Suitable for Facilitative and Evaluative Mediation Styles in Construction

Construction disputes can be categorized into three categories i.e. contractual, technical, and tort or negligence disputes. All these types of construction disputes are more appropriate and suitable to be settled through evaluative mediation compared to facilitative mediation. Construction disputes arise mainly due to technical issues, contractual issues, monetary issues, rights, and obligations issues, as well as rules and regulations related issues which require necessary related specialized knowledge, skills, and experience in that field to be involved to solve the disputes. In facilitative mediation, the mediator is responsible for facilitating the negotiation between the parties, and the parties are responsible for exploring potential solutions and reaching a common ground on their own inputs and efforts based on their non or limited background in that field. The mediator is prevented from providing any of his or her opinions, suggestions, and recommendations, hence the parties often fail to reach a common ground and fail to settle their disputes in mediation due to their wrong expectations, unrealistic options, uncooperative, and focusing self-interest resulting from the lacking knowledge and experience in that field.

Conversely, the mediator can express his or her views and opinions as well as suggest recommendations and potential options upon request of the parties in evaluative mediation. The mediator appointed to resolve construction disputes usually possesses a construction industry and/or law background such as an architect, engineer, quantity surveyor, lawyer, and so on. Therefore, the mediator as an expert in that field is competent to suggest potential options that are more realistic, feasible, and satisfy both parties' interests. Besides, the parties have the chance to realize and understand their actual positions and legal merits. This can prompt or push the parties to be more willing to compromise or accept the options suggested by the mediator or explored by themselves. Hence, the process of reaching a common ground and achieving a mutually acceptable final settlement can be accelerated. Thus, disputes can be settled efficiently and effectively with less time and cost consuming. Accordingly, evaluative mediation is more appropriate and a better choice for settling construction disputes than facilitative mediation.

1. Contractual Dispute

Contractual disputes are the most significant portion of disputes in construction projects [17], [26]. Contractual disputes include the definition, interpretation, and clarification of the construction contract [26]. If the formulation of the construction contract consists of some flaws or deficiencies, and ambiguous language or terms, the contract is at a high risk to create diverse disputes [16], [42]. 'Variation, the extension of time, payment, quality of technical specifications, availability of information, administration and management, unrealistic client expectation, and determination' are the disputes under the category of contractual disputes [27]. The contract document including the drawings always has errors due to human errors, changes in client's needs, or unforeseen factors, thus the documents and the work scopes must be adjusted from time to time. For example, the drawings always have some mechanical drafting errors and lack of needed dimension or detail due to the carelessness of the designer or the changes in the client's requirements or unforeseen occurs.

Based on the result, evaluative mediation is found to be more suitable and appropriate than facilitative mediation in settling contractual disputes. Contractual disputes arise often due to the parties wanting to protect and defend their rights or entitlements provided under the contract. Most of the parties lack related knowledge and experience, thus their suggestions are always unrealistic and not feasible. Additionally, their suggestions normally only focus on and satisfy their self-interests without considering the other party's interests. Thus, a common ground between them is difficult to be reached with their own efforts and input. Opinions and recommendations of an expert who is equipped with the related specialized knowledge and

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experience are very crucial in facilitating the negotiation between the parties and accelerating the process of reaching a common ground. In evaluative mediation, the mediator can suggest potential solutions that can satisfy both parties' interests when they are in a deadlock based on his or her knowledge, expertise, and experience. The parties have the chance to be more understanding and realize their actual positions or legal merits in their case in evaluative mediation. Thus, this will prompt the parties to be more willing to mutually accept the potential solution that is realistic and feasible. Therefore, evaluative mediation is a better choice than facilitative mediation in settling contractual disputes efficiently and effectively in the Malaysian construction industry.

2. Technical Dispute

Technical disputes often arise during project operations mainly due to uncertainty. Uncertainty exists when there is a distinction between the quantity and quality of information required and the information available [18]. The quality and quantity of information required rely on the complexity of the tasks which are determined by the number of factors that must be coordinated or the performance requirements such as budget and time constraints [26]. Whereas, the quantity and quality of information available are determined by 'the effectiveness of planning that is the collection and interpretation of information before the task' [33]. According to [26] and his colleagues, 'the uncertainty may lead to unrealistic client expectation such as unrealistic contract duration, late instructions or information from architect or engineer, overdesign, inadequate site or soil investigation report, error and incomplete technical specifications and many others'. Furthermore, errors in cost estimating may also lead to technical disputes.

Evaluative mediation is found to be more suitable than facilitative mediation in settling technical disputes. Technical disputes arise due to technical issues related to the specifications and technical requirements stipulated in the contract, codes of practice, standards, bylaws, rules, and regulations by professional institutes or authorities. An evaluative mediator as an expert in the construction field with related necessary experiences and knowledge could provide some more realistic and practical recommendations and suggestions that the parties are unable to think about due to the lack of knowledge and experience as well as unfamiliarity in such a field. Hence, the parties will be more willing to cooperate and compromise to reach a common ground and resolve their disputes after hearing constructive inputs from the evaluative mediator. Therefore, evaluative mediation is more appropriate and is a better choice for settling technical disputes compared to facilitative mediation where parties resolve the technical disputes on their own.

3. Tort or Negligence Dispute

Tort or negligence disputes are the disputes that arise between the parties involved in the construction project and the third party for economic loss without a contractual relationship [21]. These types of disputes are always unsolved and go to court for litigation. Tort law is established and enforced to 'secure the protection of all the citizens from the danger of physical harm to their persons or their property' [6]. According to Barnett, 'tort standards are imposed by law without reference to any private agreement, they oblige each citizen to exercise reasonable care to avoid foreseeable physical harm to others' [6]. The third party asserts a negligent misrepresentation claim against the party responsible whether the client, contractor, or design professionals for compensation or remedy upon the loss incurred. Common areas of negligence include inadequate examination of sites, errors in design, and misleading cost estimates [3].

Based on the result, evaluative mediation is found to be more suitable than facilitative mediation in settling tort or negligence disputes. The issues related to tort or negligence in Malaysia are governed by the law of torts. So, it still requires specialized knowledge and experience in the field to resolve the tort or negligence dispute. Lacking such background, the parties have difficulty to resolve the disputes themselves. With the opinions, suggestions, and recommendations of the evaluative mediator, the process of reaching a common ground can be accelerated and achieve a final settlement since the parties can realise their real position and

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are provided with some realistic options. Therefore, evaluative mediation is a wise choice and more appropriate than facilitative mediation in settling tort or negligence disputes.

The Effectiveness of Mediation as a Dispute Resolution Process in Construction

The effectiveness of mediation in this study is evaluated based on the aspects of time, cost, parties' relationship, and settlement or outcome. Mediation is effective in terms of time and cost regardless of facilitative or evaluative. The mediation process is less time-consuming compared to other dispute resolution approaches. It is usually completed within one day a week or a few weeks including the pre-mediation process. Furthermore, unlike litigation and arbitration where there is a gap between the time the dispute arises or the assertion of the claim and the hearing, mediation can be conducted immediately once the dispute arises. Moreover, the cost needed for conducting mediation is much cheaper than other dispute resolution methods since it normally only includes the registration fee, administrative costs, mediator's fees, venue rental, and other related expenses. And, mediation can be conducted online instead of physically, thus more time and cost savings can be achieved.

The parties' relationship is difficult to be maintained as previously before the dispute arises or enhanced even if a settlement has been reached although it is an amicable and interest-based dispute resolution method. This finding is in contrast with the literature reviews. This is because the parties normally remain as opponents since they are already in fighting mode before the stage of mediation. However, the parties' relationship can be maintained or enhanced in the case where the settlement reached is related to their future or current interests or profits so they will struggle to improve their business relationship such as in CS1. For the settlement or outcome aspect, the mediation is effective if there is a final mutually agreeable settlement achieved. Therefore, evaluative mediation is more effective than facilitative mediation in settling construction disputes since it can increase the possibility of achieving the settlement, accelerate the process, and increase the possibility of a win-win solution which subsequently will maintain or enhance the parties' relationship. This finding supports the finding of the first objective in which evaluative mediation is more suitable than facilitative mediation in settling construction disputes since it is more effective.

1. Case Study 1 (CS1)

The mediation is overall effective in its process and outcome. It is less time-consuming which is only one day to conduct the mediation process in resolving the dispute compared to other dispute resolution approaches. This allows the impacts of the dispute to be minimized. Besides, mediation is also cost-effective since the parties are only liable for the mediator fee, mediation-related expenses, and the cost of the final settlement. The win-win solution reached through mediation contributes to an effective settlement or outcome of mediation where both parties expand and share the pie. Hence, the parties' relationship is maintained or considered enhanced due to the joint venture relationship that resulted from the settlement reached. The effectiveness of the mediation case is mostly devoted to the evaluative style since it allows the mediator to provide his recommendation based on his valuable experience and expertise which is the suggestion of a joint venture that speeds the settlement process and results in a win-win solution agreed upon by both parties at the end. Table IV shows the transcript recorded for the effectiveness of mediation by Respondent 1 (R1).

TABLE IV: The Effectiveness of Mediation in Construction Dispute According to R1

Effectiveness of mediation	
Aspects	Evidence (R1)
Time	–
Cost	–

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Parties' relationship	–
Settlement/Outcome	"Is effective because the place is in the middle of CDB, the central business district. Make it a block of the two-storey building there, at this of day, there is no economy of scale."
Others	

2. Case Study 2 (CS2)

Mediation is time-effective since it only consumes a short duration compared to other mediation cases. Besides, it is effective in terms of cost as it is cheaper than the other methods. The settlement or outcome of mediation is ineffective since there is no settlement reached. The parties' relationship can be considered ineffective even if the environment is amicable, but the parties' relationship is usually unable to be returned or repaired as the previous one since they are already in fighting mode when they reach the mediation stage. Table V shows the transcript recorded for the effectiveness of mediation by Respondent 2 (R2).

TABLE V: The Effectiveness of Mediation in Construction Dispute According to R2

Effectiveness of mediation	
Aspects	Evidence (R2)
Time	"Certainly, certainly. Usually, mediation won't drag on for too long and most in two days. And, if you take into account the preparation, at most, in a more complicated setting, it's probably five working days, that's about a week. But, if you are talking about adjudication in Malaysia, it's 90 to 105 working days. So, that's about four to five months' time. Arbitration, even worse, two years' time. The court, computing the appeals, probably you are looking for about five to six years. So, definitely, mediation is a much time-efficient method."
Cost	"It's much cheaper as well/" "It's not even one-tenth of the cost of arbitration."
Parties' relationship	"The environment is usually amicable. And, a lot of time, they just don't talk to each other even if they are in a common room outside. So, yes, it's definitely amicable, no sharp things, I can assure you. But, in terms of whether parties will return to their original relationship, I don't so. Again, the only reason, at least as far as the cases that I've dealt with and as far as the Malaysian case is concerned, most of them are already in fighting mode when they reach the stage of mediation."
Settlement/Outcome	"Yes, it's ineffective as no settlement was reached." "To be honest, I think if it doesn't involve dollars and cents, then it will be easier to resolve, a lot of time."
Others	–

3. Case Study 3 (CS3)

The mediation is ineffective overall. In terms of time, the mediation process is too short since the mediator didn't conduct the mediation as standard which consists of a first joint meeting, private meetings or caucuses with each party, and a final joint meeting. Conversely, the mediator didn't conduct any caucus with Party A and there was no final joint meeting to conclude the mediation. The mediation is cost-effective as its cost is much lower than the other. Since the mediator didn't play his role properly and effectively,

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there was no common ground reached and no settlement was achieved in the mediation. Hence, the outcome or settlement is ineffective. The parties' relationship remains as opponents and thus is ineffective. Table VI shows the transcript recorded for the effectiveness of mediation by Respondent 3 (R3).

TABLE VI: The Effectiveness of Mediation in Construction Dispute According to R3

Effectiveness of mediation	
Aspects	Evidence (R3)
Time	"It was very ineffective due to the too short duration for conducting the mediation." "I would say the mediator took a too short time for the mediation. Because there are two hearings or two meetings, each meeting he just took less than two hours. And, there was no caucus arranged with my client, and then no joint meeting before the mediator concluded his decision."
Cost	"This one I have no comment because I'm not aware of the fee paid to the mediator. I believe since the time was so short, the fee shouldn't be so high. Normally, the mediator is paid on an hourly basis."
Parties' relationship	"It's ineffective since parties remain as opponents." "Still the same, the parties remain as opponents because the mediator did not attempt to find any common ground or mutual interest between the parties, so the relationship is still the same." "Yes, maintained the same before they came to mediation, and remained as opponents."
Settlement/Outcome	"Yes, ineffective. To me, it's a failure since no settlement was reached."
Others	–

4. Case Study 4 (CS4)

The mediation is ineffective in terms of time in this case since it took six months to settle the dispute which is inconsistent with the quantum of the issue and the time needed. Based on the cost aspect, it is effective since mediation is a less cost-consuming dispute resolution method. However, the parties' relationship is inefficient as their relationship is not maintained or enhanced but as opposed after the mediation. This is because they are already in this dispute and fighting mode for six months to a year. And, this dispute is only one of their ongoing unresolved disputes. The settlement is effective since the final mutually agreeable settlement was reached and satisfied by both parties. The parties' relationship remains as opponents and thus is ineffective. Tables VII show the transcript recorded for the effectiveness of mediation by Respondent 4 (R4).

TABLE VII: The Effectiveness of Mediation in Construction Dispute According to R4

Effectiveness of mediation	
Aspects	Evidence (R4)
Time	"This one is a bit lengthy because commonly it takes maybe two months to settle RM20,000 payment disputes, but it drags the other four months. So, it's too lengthy."

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Cost	"They reach a settlement between a dispute a few hundred thousand ringgit then they agree to the differences and come down to approximately RM20,000." "I would think that it is effective because finally is settled rather than the parties going into arbitration or litigation."
Parties' relationship	"Both of them just maintained as opponents because this is only one of their disputes."
Settlement/Outcome	"Yes, it is effective since the settlement was reached just a bit lengthy."
Others	–

CONCLUSIONS

In conclusion, this paper employed a qualitative approach, utilizing multiple case studies through semi-structured interviews in remote form to explore the effectiveness of facilitative and evaluative mediation styles in construction dispute resolution. The findings shed light on the types of disputes suitable for each mediation style and their overall effectiveness in achieving settlements. The study's first objective, identifying the types of disputes suitable for facilitative and evaluative mediation, revealed that evaluative mediation was deemed more appropriate for contractual, technical, and tort or negligence disputes in the construction industry. This preference stemmed from the need for specialized knowledge, skills, and experience to efficiently address construction-related complexities, which evaluative mediators, possessing a background in construction or law, could provide.

The second objective, determining the effectiveness of dispute settlement using facilitative and evaluative mediation styles, indicated that evaluative mediation proved effective in resolving construction disputes, with successful settlements achieved in all evaluative mediation case studies. On the other hand, facilitative mediation was overall ineffective, failing to reach a mutual settlement in all cases. The research emphasized the importance of expert recommendations and suggestions in evaluative mediation, underscoring their role in guiding parties to a common ground and accelerating the settlement process.

Further analysis categorized construction disputes into contractual, technical, and tort or negligence disputes, revealing evaluative mediation as more suitable for each type. Contractual disputes, arising from rights and obligations issues, were effectively addressed through evaluative mediation, allowing parties to understand their legal merits and reach realistic settlements. Technical disputes, often rooted in uncertainty, benefited from evaluative mediation's capacity to provide realistic recommendations based on the mediator's expertise. Similarly, tort or negligence disputes, governed by tort law, were found more effectively settled through evaluative mediation due to the need for specialized knowledge in the field.

The overall effectiveness of mediation in construction dispute resolution was evaluated based on time, cost, parties' relationship, and settlement outcomes. Mediation emerged as a time and cost-effective method compared to other dispute resolution approaches, with the process usually completed within a short duration and at lower costs. However, maintaining or enhancing parties' relationships remained a challenge, as the adversarial nature of disputes often persisted even after settlement. The research underscored the effectiveness of evaluative mediation in achieving settlements, emphasizing its potential to accelerate the resolution process and foster win-win solutions, contributing to the maintenance or enhancement of parties' relationships. In conclusion, the research advocates for the strategic use of evaluative mediation in construction dispute resolution, considering its effectiveness in addressing the specific complexities and challenges inherent in contractual, technical, and tort or negligence disputes in the industry.

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